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The Online World resources handbook

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The Online World resources handbook

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[Faster access](#) to the handbook

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PREFACE

The Online World resources handbook deals with practical aspects of using the rapidly growing global on-line information resource, in which the Internet plays an increasingly important part.

The book is distributed in a form designed to be easily accessible with the maximum range of computers, printer types, and search programs. In this way, it is compatible with most electronic reading devices for the blind. Many frills, such as fancy formatting, extraneous characters or tags, have been omitted to achieve this.

The main subject of the handbook is what you can get out of the global online resource.

Expect an outline, not a comprehensive list or directory of all available offerings. We explore selected applications across network and service boundaries to show how selected needs may be satisfied. In the process, we give information about how to reach many interesting offerings.

The applications range from entertainment and the bizarre to databases and special services for professionals and organizations.

You are not expected to live in the United States or Norway. Focus is on international offerings available through major services and networks like the Internet, Usenet, CompuServe, and others. These services can be accessed from almost anywhere.

Talking about the Internet, we must still assume that many readers are unable to get full interactive access at an affordable price, and therefore only have access to these offerings by electronic mail.

I wrote The Online World for anybody interested in knowing more about this "Global Village", they be parents or youth, teachers, students, business people, social workers, psychologists, young, or old.

You can read it like a novel to get an idea of what goes on, as a practical guide book to databases and news sources, or a book of reference. It is meant to be both tutorial and practical, so there are lots of actual commands and Internet addresses listed herein. However, you do not have to be a computer expert or an experienced "onliner" to find it useful!

The hypertext version can be used as a navigation tool, and the [TOW mailing list](#) as a awareness service.

While not a textbook on data communications, it contains information to help novices get started. For an introduction to telecommunications, read [appendix 2](#) and [3](#) before continuing with [Chapter 1](#).

Warning: New services are born every day, while others are closing down. Most services in this book are probably still around when you read it, but the text certainly needs to be updated regularly. Therefore, all feedback is welcomed with thanks!

Please [tell me](#) what you like, what you don't, what you think I have missed -- or have got hopelessly wrong.

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If archiving this book for use in a library, please include all files. Use the name ONLINE34, as in ONLINE34.ZIP, or ONLINE34.LZH. This will provide consistency for future updates.

How to read the book

You may read the handbook using any web browser or search program. My favorites are:

Using Windows 95/98

Internet Explorer 4.0 for browsing, and AltaVista Discovery for searching (see [Chapter 14](#)).

Print versions of The Online World

The Online World handbook is not meant for any specific area of the world. Local versions are being printed and published in various countries through local partners.

These versions of the book are adapted to local conditions, and contain many local examples and references.

The following local versions of the book have been printed:

English/Canada

"The Online World - How to Profit from the Information Superhighway" by Mike Weaver and Odd de Presno. Publisher: Productive Publications, P.O.Box 7200, Station A, Toronto, Ontario M5W 1X8, Canada. ISBN: 0-920847-89-7.

German

"ONLINE-world," by [Dr. Karl Sarnow](#) and Odd de Presno. 312 pages. ISBN 3-88229-035-8. Publisher: Verlag Heinz Heise GmbH & Co KB, Helstorfer Strasse 7, D-3000 Hannover 61, Germany. Fax: +49-511-53 52-129. Price: DM 58.

Icelandic

"Netheimar" by [Lara Stefansdottir](#), [Lars H.Andersen](#) and Odd de Presno. 280 pages. ISBN 9979-60-112-4 Published December 1995.

Norwegian

"Ut i verden fra egen skjerm," Norwegian text, Datatid A/S, 1992. 220 pages. ISBN: 82-90628-67-6.

Do you want to become a partner?

If you are interested in becoming the [coauthor](#) of a local language version of the book for your country, please write me at presno@eunet.no to discuss.

Saltrod (Norway)

Yours,

Odd de Presno

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*) Photo by [Bernhard Ertl](#)



The Online World resources handbook PART 1: AN ONLINE WORLD

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Chapter 1: Will going online make me rich?

There are so many sources of information and services out there, and each of them has to be searched or used separately. Therefore, half the battle is figuring out where to look.

Information is abundant, even overwhelming. At risk of drowning in that vast sea, anyone navigating the online world needs to know what is available, and how to find and use it.

Getting there takes time, but the potential rewards are interesting:

- [Knowledge is power.](#)
- The value of critical information is increasing, and information is now available for [everybody](#)!
- A large personal network gives you [a punch](#).

So, [how to use the resource](#) to my advantage?

You will also discover that using the online resource can be quite [fun and entertaining](#). After all, there is more to life than business and work.

Knowledge is Power

My wife has a rare and dangerous kidney disease. One day her doctor joined us on an online research session to look for experiences and advice in other countries. We sat down in my office in Norway. I turned on my personal computer and started a communications program.

After some keystrokes, we could hear the attached modem dial the number of [CompuServe](#), a North American information utility. (A modem is a piece of equipment that converts computer signals to and from sound codes, so data can be sent by phone.)

It took just a few seconds to make the connection. A greeting scrolled over our screen, followed by a menu of available choices.

For an introduction to practical telecommunications, check out [appendix 2](#) and [3](#) in this book.

We selected "Health," and "Database for Rare diseases" from a new menu. Here, we

found the address of a foundation for "cysts in kidneys," which is the name of her disease. My wife made contact. Since then, she has received regular reports of research results and experiences gained in the field. (The organization is called The [Polycystic Kidney Research Foundation](#).)

We sent a request for help to an electronic forum for doctors. This resulted in several useful pointers. We searched a magazine database for medical articles containing the word "kidney." Paper copies of the most interesting finds arrived by mail a few days later. My wife gave them to her hospital doctor as background reading.

Kenya Saikawa is paralyzed. He communicates with his PC and modem using light key strokes and Morse code. Online communications allow Kenya to be in regular contact with people outside the walls of his Tokyo hospital.

We met online in a "Handicap Club" on a computer center called [TWICS](#) in Tokyo. He was there to exchange experiences with others with disabilities. I called in by modem from Norway. Geographical distance is no problem in the online world.

[CompuServe](#)'s Cancer Forum has a similar function. *"It's a blessing that I can visit here 24 hours a day,"* one visitor said. *"When I'm unable to sleep at night, I often sit down by the PC to read and write messages to others."*

The forum works like a family. The file library is full of information about cancer. Members can go in there and pick up whatever they want to read.

Dave Hughes from Old Colorado Springs, Colorado in the United States has had a long career as a professional soldier. He has fought in places like the Yalue river in Korea and Vietnam's jungle. When he retired, he became a political online force.

"I'm using the new tools of the individual mind to change the world," he says. Native American Indians are among those, who have benefited from Dave's energy and knowledge. He has helped them show their culture to the outside world in a graphical form.

Vladimir Makarenkov from the Crimea in the Ukraine is manager in a company called VINKO. In early 1993, he distributed an offer of partnership with foreign companies through a mailing list for traders on Internet. VINKO is into aluminium processing. He wrote:

"From our own production we can offer some one metals and aniline dye for cotton, viscose, wool, silk, leather. We are interested in deliveries of chemical production (gamma acid, H-acid) and not quickly deteriorating foods (food concentrates, canned food etc.)."

George Pavlov is Planning and Reporting manager with an American computer manufacturer. Daily, he logs on to online services to monitor industry product announcements and daily news from several electronic sources. It helps him stay ahead of rapid technological developments.

Chairman Bill Gates of [Microsoft](#) says messaging is his most important application personally. He spends as much as five times more time in electronic mail as in spreadsheets or word processing, and claims *"it's probably the most mission-critical application for Microsoft in running the company."*

IBM relies on the Internet to give users and developers around the world a way to retrieve documentation, technical interface specifications, fixes and upgrades.

Eduardo Salom heads Software Plus SA in Buenos Aires, Argentina. He discovered the online world in 1988, and uses it to find information that can help his company develop industrial applications.

The Norwegian civil engineer Kai Oestreng regularly calls specialized online computer clubs to discuss his computational needs, fetch programs and monitor developments.

Mary Lou Rebelo was born in southern Brazil. Today, she is married to a Japanese and lives in Tokyo. She teaches Portuguese and works as a translator. The modem enables her to keep in touch with others around the world interested in Portuguese and Spanish language and culture.

Sheena Macleod teaches in a primary school in Lusaka, Zambia. She integrates the online world in her teaching to motivate her students. Her classes are involved in international projects with schools all over the globe.

In August 1991, the "Old Stalinists" made a coup d'etat in the Soviet Union. The news media were silenced, but they forgot the country's many bulletin boards. Early one morning, a foreign caller picked up the following messages from a Moscow BBS:

From: Valery Koulkov
 To: All Msg #560, 00:42am
 20-Aug-91
 Subject: Moscow, August 19, 23:00

Some news from the square news RSFSR white building, 23:00. Local inhabitants are very welcome for the people guarding 'white building', they carry food and some garments to the square. Approx. 8 tanks stand by the house under the RSFSR flags! There is an information that 'white house' is surrounded by the soldiers from Vysshee Desantnoye uchilische from Ryazan. The people are not so desperate than some hours ago. There are more and more people.

From: Stas Stas
 To: Alexey Zabrodin Msg #562, 02:53pm
 20-Aug-91
 Subject: Russia In Agency news

I have sent two files RIA4.txt & ria5.txt
 It's msgs of Russia Information Agency
 Spread it as much as you can!!!

From: Andrew Brown
 To: All Msg #563, 06:31pm
 20-Aug-91
 Subject: What's happening?

I am a journalist on the London Daily newspaper *The Independent*, and I am trying to discover whether this technology, like fax machines, is being used for independent communication now that the censors have clamped down on everything else.

Can people describe what is happening, and what they see? Something similar was done on Compuserve during the Gulf War, by subscribers who where in Israel and were able to describe Scud missile attacks without censorship.

Andrew Brown

Select: 564
 From: Valery Koulkov
 To: All Msg #564, 00:52am
 21-Aug-91
 Subject: Moscow events

There is shooting near the American embassy and RSFSR state building. Informer said (by phone) that he saw several victims shot and killed under the tanks. there is fire near the RSFSR building. Moscow, August 21, 1:15 am

Telecommunications played a role in this historic event. While CNN televised the coup, it was not the images, but the words of men like Yeltsin that held sway for Russian citizens. Within hours of Yeltsin's statement in defiance of the coup leaders, handbills reproducing his statement papered the walls of the Moscow metro and Leningrad houses.

Another one: On Friday, Feb. 26 1993 at 12:18 p.m., a bomb exploded in the World Trade Center in New York City, U.S.A. **Four minutes** later, the Dow Jones News Service flashed this headline: *NYC Fire Dept. Says Fire At 3 World Trade Center.*"

Then there is this Norwegian friend of mine, Svein-Erik Dahl, photographer by profession. His passion in life is playing bridge. Each night, he logs on to [BPLive](#). Here, he fights other enthusiasts of the green table until the early morning.

"..for many companies the information coming in from the outside is of far more significance than the internal knowledge of staff." (Neil Infield, Information World Review, England, November 1997.)

A resource for everybody!

Online communication is not just for the privileged or those with a special interest in computers. It is for you, me, everybody.

There is much to learn in the "online land," and the medium is fascinating. It makes learning fun. You can learn about your hobbies, your profession, life in other countries, languages, other people's views about whatever, and more. Often, you will find reports about experiences and know-how that it is hard or impractical to get in other ways.

Some go online to learn how to do things better. Teachers want to give their students a better and more motivating learning environment. Architects, engineers and companies want increased competitiveness and sales. They seek timely information about competitors, technologies and tools, partners and trends.

You can take a Masters Degree in Business Administration while sitting in front of your computer at home. You can join online seminars arranged by local or foreign educational institutes. You can even study at night, when the rest of your family has calmed down.

Some build their own educational programs supported by databases, online forums and associations of various kinds.

You may feel helpless in hospital, or when visiting your doctor. Knowledge about your disease will make you better equipped to handle the situation.

The online resource is just keystrokes away, and knowledge is power.

To get this power, you must know what you can get from the online world. This book is filled with examples of what are available, and practical tips about how to use the many offerings.

A large personal network gives strength

Most of us belong to one or several networks. They consist of persons that we can call on when we need help. Your network may be private, like your family. You may be member of associations, or part of a group of people with common interests within a company or organization.

The modem allows you to be part of more personal networks than you can possibly cope with in the "real world." Besides, it's easier to develop personal networks in the online world.

We have used words like "clubs" and "associations." By this we mean groups of people interested in helping **You** and in participating in what **You** happen to be interested in. That is what networking is all about.

Today's communications technology lets us network with people in other countries at a very low cost. Many describe it as networking "beyond time and space." Write a message and send it to someone in your network. It arrives in his/her "mailbox" within minutes (sometimes seconds), and stays there until the recipient wants to read it.

This built-in ability to send messages to other people's electronic mailboxes reduces the power that time and geographical distances have over our lives.

A friend in a remote country gets out of bed nine hours after you, but keeps going well into what, for you, is the next morning. No problem. You can send letters when you are awake, and receive replies when asleep. Pick up and read your friend's messages the next day or when you feel like doing it. This is how two people as far apart as Arendal, Norway and Auckland, New Zealand could be involved in the development of this book.

Sometimes "real time" discussions are important. Consider the cancer forum example above. You can call there any time, day or night, seven days a week. Whenever you feel like it. You will always find someone to chat with who understands and shares your problems.

So, how do I use the resource to my advantage?

There are millions of online databases out there. These infobases are repositories of electronic information. They contain full-text and reference books, magazines, newspapers, radio and TV shows, reports, and more. In the online world, you will find information about almost anything.

There are also hundreds of thousand online forums or conferences where people

call in to read messages and information, or just have a good time.

The entrepreneur sees the online world as a new, profitable playground. Many have made it their profession to search for information for others, and they earn a good living doing so.

Others advertise and sell products and services by modem. Some set up their own services to sell knowledge and know-how, be it of aqua culture, wine production, marketing, or about the petroleum offshore market.

In business, it pays to be one step ahead of the competition. Early warnings of customers' needs, competitors' moves, and emerging opportunities can be turned into fortunes. This can reduce potential losses and help develop businesses in more profitable directions.

Turn this to your advantage. Build your personal early warning system to monitor online information sources and networks.

Have fun

The online world has an abundance of joke clubs, dramatic adventure games with multiple players, and large archives filled with computer game software. You can transfer these programs to your personal computer and be ready to play in minutes.

Others may feel more entertained when things get "interesting." Surely, those calling Moscow in August 1991 for news about the coup must have had a strange sensation in the stomach.

Some online users react quickly when dramatic events occur. They go online to read [news directly from the wires](#), from Associated Press, TASS, Reuters, Xinhua Press, Kyodo News and all the others.

Usually, online news comes directly to you from the journalists' keyboards. Often, you heard it here first.

Others prefer to socialize. They meet in online "meeting places" to debate everything from Africa and the administration of kindergartens to poetry, LISP programming, and compressed video for multimedia applications.

Some claim that increased use of online networking in a country can effect social changes within politics, economics, communication and science. It can support democratic tendencies, the transition to a market economy, the formation and support of businesses, the spreading of interpersonal and mass communication, the forging of invisible colleges among scientists, and breaking-up of traditional and closed information systems developed in some societies.

No matter whether your application is useful or just a pastime, online services queue up to help give your life a better content.

Some people fear that language might be a problem, and in particular if English is not their first language. Don't worry. There are many other languages used in the online world, and increasing. Besides, you are in the driver's seat. If something is hard to understand, just log off to study the difficult text. Take your time. Nobody is watching. Remember Albert Einstein's words:

A person who never made a mistake, never tried anything new."

Will your being member of the online world make you rich? Probably not. On the other hand, it provides the means to help you achieve such a goal, no matter how you define the word "rich."

Go for it!

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The Online World resources handbook

Chapter 2: The Online World

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This chapter is about the structure and contents of the online world. You will read about Bulletin Board systems, discussion lists, conferencing systems, online databases, packet data services, and network services like FidoNet, and the Internet.

Structure and contents of the online world

- [Database producers and information providers.](#)
- [Online services](#)
- [Gateways and networks](#)
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• Services (contd.)

- [The user interface](#)
- [The data transporters and Internet access providers](#)
- [The user](#)

From papyrus to bits and bytes

Around 1500 B.C., the world's first library was set up in Tell el Amaran, Egypt. Eight hundred years later, the first public library opened in Athens, Greece.

It took another two thousand years for the first full-scale stored-program computer to be invented (The EDSAC. Wilkes, Cambridge, England. 1949), and for people to express ideas like what Nikola Tesla said in an interview with Collier's, January 30, 1926:

It is more than probable that the household's daily newspaper will be printed 'wirelessly' in the home during the night.

Tesla was a famous Serbian electrical engineer and inventor, who devised among other things the alternating-current systems that underlie the modern electrical power industry. He also did notable research on high-voltage electricity and invented wireless communication.

Incredibly enough, hypertext (used in World Wide Web documents) was proposed as early as 1945 (by Vannevar Bush).

In 1954, the first online search service was launched by the Naval Ordinance Test Station, in Michigan, U.S.A. Six years later, MEDLARS, a full-text bibliographic database containing references to medical literature was launched.

From now on, things started to roll faster:

- 1969: ARPANET (U.S.A.), the predecessor to the Internet, starts research into computer networking.
- 1972: [Dialog](#) (U.S.A.) opens their Educational Resources Information Center and National Technical Information Service databases for online searching. ([Appendix 1](#) contains information about the major online services referred to in this book.)
- 1974: [Dow Jones](#) News/Retrieval (U.S.A.) launches a financial information service for stock brokers. The design of a Transmission Control Program, TCP as in [TCP/IP](#), is specified (U.S.A.). [Usenet](#) is set up (U.S.A.).
- 1978: The first [bulletin board](#) opens in Chicago (U.S.A.)
- 1979: [CompuServe](#) (U.S.A.) launches a service for home users. USENET set up.
- 1981: [Minitel](#) (France) and BITNET (U.S.A.).
- 1982: [The Internet](#) is born as TCP/IP is adapted by ARPANET (U.S.A.).
- 1983: ARPANET (U.S.A.), the predecessor to the Internet, starts. [FidoNet](#) (U.S.A.)
- 1991: [The World Wide Web](#) is born (Switzerland).
- 1993: The number of countries reachable by electronic mail through the Internet reaches 137. The World Wide Web explodes (annual growth rate at **341,634%**)!
- 1994: Japanese prime minister comes online.
- 1995: [The Vatican](#) web site opens.

(For more about developments and milestones from 3500 BCE till present, see <http://www.ciolek.com/PAPERS/milestones.html>.)

Thus, the online world was born in the United States. Little happened in the rest of the world until the late 1980s. American companies and users may still appear to be dominating, but they are no longer alone.

There are now millions of public databases available from online systems ("host computers") all over the world. With so many online services, and a large variety of access methods, it is difficult to find our way through the maze of offerings. Telecommunications has therefore often been presented as one of the more difficult things to learn to do on a computer.

The good news is that it was never all that terribly difficult and its getting easier all the time.

It may help to have a picture in your mind of the various parts of this "online world" before we embark on the applications. The book therefore starts with an analogy. Think of it as a "map" of the online world.

The structure and contents of the online world

The online world can be visualized as a cake with multiple layers. The information sources are the bottom layer, and you, the user, the marzipan figure on the top. The online world contains the following tiers:

1. Database producers and information providers
2. Online service companies
3. Gateways and networks
4. The service offerings
5. The user interface
6. The data transport services
7. The User.

If you are a novice, this may seem complex but none of these levels are difficult. It often helps to visualize what level you are dealing with at any given time. Therefore, let us consider them in more detail.

1. Database producers and information providers.

For years, I operated a free bulletin board system in Norway. It run on a small personal computer, and offered shareware and public domain software. Anybody could call this BBS and have programs transferred to their personal computers by modem (see [appendix 2](#) for how to achieve this).

When you called it to "download" (retrieve) a free program, you wouldn't find any made by me. I do not write programs. All available programs were written by others.

When you connect to [Data-Star](#) or [Individual.com](#) to read news, you may find some stories written by these companies. Most of their news, however, has been written by others.

The Associated Press, an American news agency, let online services like [Dialog](#), [CompuServe](#), and Nexis 'resell' their news to their users, and also provide news directly to end users through the Web.

Free Bulletin Board systems, [Data-Star](#), [Dialog](#), [CompuServe](#), Nexis, and Brainwave for [NewsNet](#) are online services. We call those who have provided the news and information on these services for information providers or database producers.

The information providers sell the right to distribute news. What you pay to an online service to read news may be imbedded in its standard access rates. Some services will ask you to pay a surcharge when reading news.

[CompuServe](#) subscribers pay a monthly membership fee for unlimited use of a variety of services like The Associate Press Online News (Hourly News Summaries, Sports, Entertainment, Business, News, This Day In History), UK News Clips, and Deutsche Presse-Agentur Kurznachrichtendienst.

CompuServe pays Associated Press part of what they earn whenever you read their news. There is no surcharge for reading AP news on this service. Some services, like Brainwave for [NewsNet](#), charge per article found and viewed.

Information providers may have subcontractors. Ziff-Davis' Computer Database Plus, a database with full-text articles from magazines like Datamation and Wall Street Computer Review, depends on them.

Datamation pays journalists to write the articles. Ziff-Davis pays Datamation for the right to distribute the articles to CompuServe's subscribers. CompuServe pays Ziff-Davis part of what you pay when reading the text.

Some information providers also distribute information through free bulletin boards. The [Newsbytes](#) News Network, [Boardwatch](#) Magazine, and the USA Today newsletter services (<http://www.usatoday.com>) are three examples.

Rates for reading the same article may differ considerably depending on what online service you are using. If you are a regular reader, shop around for the best price. The cheapest place is the World Wide Web. There, you can read tons of news for free.

2. Online services

The term "online services" refers to the services that are provided by computer systems, large or small, to owners of personal computers with modems.

Their services may include access to electronic mail, online shopping malls, discussion forums, hardware and software vendor support, access to libraries of programs and data, games and entertainment, financial data, stock market quotes, research capabilities, or simply access to other service providers as with many Internet hosts.

You do not always need a phone and modem to "log on." Some services can be accessed through leased phone lines, amateur radio, the Internet, or other methods.

[Appendix 1](#) contains a list of major services mentioned in this book, with addresses, phone numbers, and a short description.

[American Online](#) (U.S.A.), [TWICS](#) (Japan), and [Orbit](#) (England) are commercial. They charge you for using their services.

Some online services are priced like magazines and newspapers with a flat subscription rate for basic services. You can use this part of a service as much as you like within a given period. [CompuServe](#), [America Online](#), and many for-pay BBSes offer such pricing options.

Other online services charge for 'connect time'. They have a rate per hour or minute. Yet others, use a "no cure, no pay." You only pay to send or read mail, or read items found in a database. To check for unread letters in your mailbox is free.

There are all kinds of creative pricing schemes. Some have different rates for access during the day, night and weekends. Others charge users living far away less, while others again charge the remote user more than ordinary subscribers.

Still, most online services are free, and available through the Internet. This is also true for the over hundred thousand bulletin board systems of the world. The owners of these services often regard them as a hobby, a public service, a necessary marketing expense, or do it for other reasons.

Some users fear that using online services will increase their telephone costs dramatically, and especially when using services in other countries. This is often unjustified. Read in [chapter 13](#) and [15](#) about how to keep your communications costs down.

3. Gateways and networks

[CompuServe](#) users select the Computer Database Plus from a menu. This prompts CompuServe to dial another service provider and lets you use this service, as if you were still using CompuServe. You hardly notice the difference. You are using Computer Database Plus through a gateway.

When you search the IQuest databases, you may get a welcome message like this:

```
One moment please...

Connected to 19EASYN

Welcome to IQuest

(c) 1991 Telebase Systems, Inc.
U.S. Patent No. 4,774,655
```

Through another gateway, CompuServe connects you to the online service Telebase Systems, Inc. Telebase lets you go through other gateways to search in databases located on services like BRS, MEDLINE and Brainwave for [NewsNet](#).

While searching, you may get such progress reports:

```
Dialing BRS
Connect BRS
Scanning .... Please wait
Dialing Medline
Connect Medline
Scanning .... Please wait
```

All the time, your modem is connected to CompuServe. You are mentally using CompuServe and not other online services. Technically, you are going through various gateways to reach the information libraries. You pay CompuServe for the privilege. They, in turn, pay a fee to the others.

You can read The New York Times on Down Jones News/Retrieval through gateways from MCI Mail and [GENie](#). (You can also get to it through the Web at <http://www.nytimes.com>.)

Users of BBSes connected to RelayNet or FidoNet can join in global discussions. Participants in other countries also call their favorite local systems. To the individual user, it looks as if they all use the same bulletin board system.

The networks that tie these boards together regularly send new discussion items to the other participating boards. Write "This is not correct!" in a distributed conference on a Norwegian FidoNet BBS, and others may soon read your line on San Bernardino BBS in Colton (California), Wonderland Board in Macau or the HighTech BBS in Sidney (Australia).

[Kidlink](#) is a global project for kids and youth through the secondary school level. It allows kids to discuss through a system of electronic mail.

Part of the dialog takes place by the children sending email to a recipient called KIDCAFE-TOPICS. A message to 'the cafe' goes through the international networks to a host computer in North Dakota (U.S.A.). There, a computer program called LISTSERV distributes copies of the message to names on an electronic address list. (Conferences controlled by a LISTSERV are called 'discussion lists' or 'mailing lists'.)

SciLink in Toronto is one recipient. Messages forwarded from North Dakota are made available for users there as entries in a 'local' conference called KIDCAFE-TOPICS. A user in Toronto can read a message, as if it had been entered locally. If she wants to reply, her answer is sent back to the LISTSERV for redistribution to the world.

Western Michigan University (U.S.A.) is another recipient. Here, another LISTSERV program is in charge of forwarding the mail to yet another list of (local) addresses. We call it a 'mail exploder'.

This mailing exploder has been set up by local administrators to reduce costs as the individual user does not have to receive his own copies of messages all the way from North Dakota. One Michigan recipient may be a local area network that further spreads the messages.

This is how the online world got started. Two systems were interconnected for exchange of electronic mail. Then, another system was added, and another, until it developed into a large network of computer systems.

Some network systems are connected by leased telephone lines. Other networks, like FidoNet, depend mainly on dial-up using regular voice-grade telephone service. Each BBS dial regularly to other computers in the network to send or receive mail and files. They may do it once per day, twice per day, or whatever.

One day, someone got the idea of interconnecting networks. FidoNet was connected to the UUCP network, which was connected to the Internet, which in turn was connected to the Bergen By Byte BBS in Norway, [CompuServe](#), SciLink, MCI Mail, and various local area networks for exchange of email and other offerings.

Today, the online world is a global web of networks. The world is 'cabled'. You, I, and all the other modem users stand to benefit enormously.

4. The services

The most popular online services are electronic mail, chat, file transfers, conferences and discussion forums, news, reading of online journals and grassroots publications, database searching, and entertainment.

The online world has many niches, things that people are interested in and have fun doing.

Electronic mail

is not just like paper mail. Email is faster, easier to edit and use in other applications.

Your mail may be private, or public. It can be 'broadcasted' to many by a mailing list. The principle is the same on all systems.

Typically, an email message is sent to your mailbox in the following form:

```
To: Odd de Presno
Subject: Happy Birthday
Text: I wish you well on your birthday. -Ole
```

The sending system automatically adds your name (that is, the sender's return email address), the creation date, and forwards it to the recipient. If the recipient's mailbox is on another system, the message is routed through one or several networks to reach its destination.

When the message gets to the receiver's mail system, it is stored in her "mailbox" until she logs on and chooses to read it. Besides reading the message, she can print it, save it to a disk, forward it to someone else, or send a reply.

Depending on the mail system, if the reply option is chosen, the address is automatically supplied from the original mail piece and you have the option of including

all or parts of the original message.

Several email services offer forwarding to fax, telex or ordinary postal service delivery. Some offer forwarding to paging services. With these, when new mail arrives in your mailbox, a message with text like 'MAIL from presno@eunet.no' will be displayed on your beeper's small screen.

By the turn of the century, it will probably be difficult to tell the difference between fax messages and email. The services may automatically convert incoming faxes to computer-readable text and pictures, so you can use them in word processing and other computer applications.

Automatic language translation is another trend. You will soon be able to send a message in English, and have it automatically translated into Spanish for Spanish-reading recipients, or into other languages. Conference systems with automatic translation are already being used in Japan (English to/from Japanese).

One day we may also have a global email address directory where you can ask, "What is the address of Nobuo Hasumi in Japan?", and have it supplied. This will be nice since email addresses are more volatile than normal (snail mail) addresses. Now, since they are spread over many different networks and systems, and the sharing of email between systems is still fairly young, this has yet to be set up.

World Wide Web

The Web brought Internet out of the closet. This global information service lets you retrieve and view (and often listen to) multi-media documents from computers all over the world.

The types of documents that you retrieve include news articles with accompanying illustrations, moving pictures (video), music and other sound files, forms that you can fill out and return to start some action (for example, to buy something, or to search a database), and more.

You may think of the Web as a large, living online encyclopedia containing hundreds of millions of documents (called Web pages).

Most people use the World Wide Web with a computer program called [a Web browser](#). The browser is typically run in a Windows environment. To retrieve a document, they submit an Internet address to the Web by clicking on a highlighted word found on their screen, or on a reference found in a listing of addresses. The addresses can also be entered manually. The following address retrieves the author's home page: <http://home.eunet.no/~presno/presno.html>

Usually, the retrieved document is temporarily stored on your disk, and then displayed on your screen. The effect is that you can more quickly go back to the previously viewed page (by clicking a return icon) than if you had to reload the page from scratch.

Instead of menus, WWW uses a hypertext interface with cross links between subjects. When you click on highlighted words, you "jump off" onto another track. Documents can be, and often are, linked to other documents by completely different authors -- much like footnoting, but you can get the referenced document instantly.

For more background information about the Web, see [Appendix 6](#).

'Chat'

Email has one important disadvantage. It may take time for it to be picked up and read by the recipient. The alternative is real-time conferencing, a form of direct keyboard-to-keyboard dialog between users. We call it 'chat'.

Most large systems let you chat with many users simultaneously. Even small bulletin boards usually have a chat feature.

Chat is set up in several ways. On some systems, you see each character on the screen as it is entered by your dialog partners. Other systems send entries line by line, whenever you press ENTER or RETURN. Here, it may be difficult to know whether the other person is waiting for you to type, or if he is actively entering new words.

You will find regular chat areas and conferences throughout the Internet, as well as on commercial services.

In May 1991, [Kidlink](#) arranged a full-day chat between kids from all over the world. Line, a 12-year old Norwegian girl, started the day talking with Japanese kids at the Nishimachi and Kanto International School in Tokyo. When her computer was switched off late that night, she was having an intense exchange with children in North America.

The chats took place on various online services and networks, including Internet Relay Chat (IRC), BITNET's Relay Chat, Cleveland Free-Net (USA, now defunct), [TWICS](#) in Tokyo, the global network Tymnet, and the Education Forum on CompuServe.

The discussions had no moderator. This made the meetings chaotic, but the kids enjoyed it! One-line messages shot back and forth over the continents conveying intense simultaneous conversations, occasionally disrupted by exclamations and requests for technical help.

Speed is a problem when chatting. It takes a lot of time as most users are slow typists.

If an individual message spans more than one line, there is always a risk that it will be split up by lines coming from others. It takes practice to understand what goes on.

Users of SciLink (Canada) use a method they call 'semi-sync chat'. The trick is to use ordinary batch-mode conferences for chatting. Instead of calling up, reading and sending mail and then log out, they stay online waiting for new messages to arrive. This approach allows the entry of multiple-line messages without the risk of them being broken up by other messages. The flow of the discussion is often better, and each person's entries easier to understand.

File transfers

Millions of files are transferred to and from the online services each day: Books and articles, technical reports, graphics pictures, files of digitized music, weather reports, and much more. Retrieval of free or inexpensive software is a very popular service on the Internet, and other free services.

In February 1994, users downloaded 105 megabytes' worth of public domain and shareware programs from my BBS, though it only one phone line and a 9,600 bits/s modem. Add to this the megabytes being downloaded from hundreds of thousands of other bulletin boards. The number is staggering.

If you want to download software, check out [appendix 3](#) for additional information.

Downloading is simple. Just connect to a service, order transfer of a given file, select a file transfer protocol (like XMODEM), and the file comes to you through the phone line.

On the Internet, you may just locate the file with your browser, and then simply click on the file name to transfer it. Often, files are also transferred using a command called FTP (File Transfer Protocol), or by using special computer programs for file transfers.

If you cannot receive files as explained above, check if you can have files sent by email using a technique called UUENCODEing. Here, the file is converted before transfer into a format that can be sent as ordinary mail (into a seven bits, even character code).

When the file arrives in your mailbox, you 'read' it as an ordinary message and store the codes in a work file on your disk. Finally, you decode the file using a special utility program (often called UUDECODE). Read more about this in [Chapter 12](#).

Conferences and discussions

Online conferences have many things in common with traditional face-to-face conferences and discussions. The main difference is that the participants do not

physically meet in the same room. They 'arrive' by modem and discuss using electronic messages.

There are conferences about nearly every conceivable topic, from How to start your own company, Brainstorming, Architectural design, Investments, The Future of Education, to AIDS, The Baltic States, Psychology, and Cartoons.

Instead of calling these discussions "online conferences," some services use terms like echos, discussion or mailing lists, web rings, clubs, newsgroups, round tables, SIGs (Special Interest Groups), and forums. They use other terms in an attempt to make their offerings more attractive and exclusive.

Others refer to "conferences" by using the name of the software used to control the discussions, like LISTSERV, PortaCom, News, Usenet, Caucus, or PARTicipate.

Note that we in many of these conferences are still based on email. However, while private mail is usually read by one recipient only, 'conference mail' may be read by thousands of people from the whole world.

In most online conferences, all participants can talk and discuss SIMULTANEOUSLY. It is almost impossible for one individual to dominate. The number of active participants can therefore be far larger than in 'face-to-face' conferences.

The conferencing software automatically records all that is said. Every character. Each participant can decide what to read and when. He may even use the messages in other applications later. Opinions and information can easily be selected and pasted into reports or new responses.

Some conferences are public and open for anybody. Others are for a closed group (of registered) participants.

Conferences are normally structured by topic and influenced by the participants' behavior. If the topic is limited, like in "The football match between Mexico and Uruguay," it may start with an introduction followed by comments, questions, and answers like pearls on a thread. After some time, the conference is 'finished'. Other conferences go on for ever.

The content and the quality of the discussion are what separates one online conference from others.

How a conference develops, depends in part on the features of the software used by the online service. However, this is much less important than the kind of people you meet there, their willingness to contribute, and the features of the software you're using. Still, let's take look at some differences in features between offerings.

Messages in the PC Hardware Forum on [CompuServe](#) are divided into 11 sections. Section 2 is called Printers' utilities. If you have problems with an old Epson FX-80 printer, send requests for help to "All" (=to everybody) and store it in this section.

CompuServe's subscribers call in from all over the place to join the forum. Some are there to show off competence (read: to sell their expertise). Others visit to find solutions to a problem, or simply to mingle or learn.

A conference with many users increases your chances of meeting others who are compatible and have relevant skills. As always, the quality of the people is the first requirement of a good conference.

On CompuServe, professional 'Sysops' (system operators) moderate the discussion. They earn a percentage of what you pay CompuServe for using their forums. To them, being a sysop is a profession. They spend considerable time trying to make the forum a lively and interesting place.

The Printers/utilities section is not just about Epson FX-80. Its members have hundreds of different printers, each with their own set of user problems. Let's use this to explain differences between some conferencing systems.

Each message in CompuServe's forums contains the sender's name (his local email address), subject, date, and the text itself. We call this the 'bulletin board model'. Messages posted on Usenet, Internet and BITNET mailing lists, and most bulletin boards have a similar structure.

A CompuServe message typically looks like this:

```
#: 24988 S10/Portable Desktops
   22-Jul-91 10:05:38
Sb: #T5200 425meg HDD
Fm: Gordon Norman 72356,370
To: Menno Aartsen 72611,2066 (X)
```

Menno-

Can you share the HD specs on that 425'er...random access time, transfer rate, MTBF, etc.?

Gordon

The problem is that this message may not interest you. Daily, thousands of messages **outside** your areas of interest are being posted. You do **not** want to read all these messages. The good news is that most services that use the bulletin board model allow selective reading of messages. You can select all messages containing a given word or text string in the subject title ('Sb:' above). You can read threads of messages from a given message number (replies, and replies to replies). You can read all messages to/from a given person, from a given message number, and from a given date. There are many options.

Now, let's look at The PARTIcipate conferencing software as it functions diametrically opposite to CompuServe's forum's bulletin board style. PARTI is used on [TWICS](#) (Japan), and some other systems.

PARTI lets the user log on using an alias. For example, she can use the identity 'BATMAN'. You may never get to know the true name of the other person. On the other hand, this allows people to talk about controversial topics, with which they may not want to have their names associated.

Anyone can start a conference. The conference may be public, private or a combination. Combination conferences allow public review of the messages in the conference, but restrict the number of people who can contribute to the discussion.

To start a new conference, simply enter 'write'. PARTI will prompt you with "Enter the text of your note, then type .send or .open to transmit." You can enter the welcome text for your new conference, like I did in this example:

This conference is based on a series of articles about shareware and public domain programs for MSDOS computers, which I wrote for publication in England. Since the editor cheated me and they never reached the printing press, I've decided to make them available online instead of letting them rot on my hard disk. Join to read, discuss or (hopefully) enjoy!"

The conference was presented to the other users of TWICS like this:

```
"MSDOS TIPS" by ODD DE PRESNO, Feb. 23, 1990
about GOOD PD AND SHAREWARE PROGRAMS (7 notes)
```

Few systems of the bulletin board model let users start new conferences at will. New topics must be stored in a given structure. The administrators (sysops) of the services manage the evolution of the 'conference room'. Periodically, old messages may be deleted to make room for new.

On PARTI, all participants read all notes. Selective reading must be done in other ways (by searching conference contents).

These two conferencing models seem to attract different types of discussions. PARTI has given birth to more discussions on topics like the following (from PARTI on The Point, January 1992):

```
"HELLO BEEP" by THE SHADOW on Sept. 17, 1991 at 19:20,
about BEEP'S ADVENTURES IN JAPAN, AND THE LIKE
(840 characters and 22 notes).
```

```
"MEMORIES" by LOU on Dec. 21, 1991 at 12:31,
about .....I REMEMBER WHEN.....
(423 characters and 1 notes).
```

"PUERTO RICO" by PACKER on Jan. 18, 1992 at 20:47,
about PARA DISCUTIR ASUNTOS PUERTORIQUEÑA
(166 characters and 9 notes).

Systems using the bulletin board model rarely have conferences like "MEMORIES." In PARTI, one-note conferences are allowed to stay. In the bulletin board environment, they'll soon disappear.

In larger PARTI conferences, the notes can be read like a book. Often, side discussions appear like 'branches' on a 'tree'. Join and read them, if you want to, or just pass.

The bulletin board model systems and PARTicipate are at two extremes of the spectrum of conference systems. Toward the BBS model, there are systems like Usenet, FidoNet Echo, RBBS-PC, and PortaCom. Toward the PARTI side, there are systems like Caucus. Mailing lists are in the middle.

On Norwegian bulletin boards, the primary language is Norwegian. In France, expect French. Local systems usually depend on messages in the local language. Services catering to a larger geographical area may have a different policy.

English used to be the most common language for international discussions online. Spanish possibly number two. This is changing as connectivity opportunities flourish in the non-English speaking parts of the world. (See <http://babel.alis.com:8080/> for more on languages.)

News

Most large news agencies have online counterparts. Often, you can read their news online before it appears in print. This is the case with news from sources like NTB, Agence France-Presse, Associated Press, Kyodo News Report (Japan), [Reuters](#), Xinhua English Language News Service (China) and TASS. Some news is only made available in electronic form.

News may be read in several ways, depending on what online service you use:

1. From a list of headlines. Click on the title or enter a story's number to receive its full text. The news may be divided into groups, like Sports, International news, Business, and Entertainment.
2. Some services let you hook directly into a news agency's 'feed line' to get news as it is being made available. At 11.02, 11.04, 11.15, etc.
3. News may be 'clipped' and stored in your mailbox twenty-four hours a day, seven days a week. Clipping services search articles for occurrences of your personal keyword phrases while you are offline. In this way, you can watch new products, companies, people, events, and countries, even when you are not online.
4. Some services even let you [search current news](#) articles from hundreds of sources from around the world.

Newspapers used to receive news through the wires before the online user. This built-in delay has now been removed on many services. Industry and professional news is usually available online long before it appears in print or even on television.

Databases

Years ago, most databases were bibliographic. They only contained references to articles, books and other written or electronic sources of information. A typical search result looked like this:

```
0019201      02-88-68
TRIMETHOPRIM-SULFAMETHOXAZOLE in CYST Fluid
from Autosomal Dominant POLYCYSTIC KIDNEYS.
Elzinga L.W.; et al. W.M. Bennett, Dept. of Med.,
Oregon Hlth. Sci. Univ., 3101 Southwest Sam
Jackson Park Rd., Portland, OR 97201.
```

```
Kid. Int.    32:  884-888.  Dec.  1987
```


Subfile: Internal Medicine; Family Practice;
Nephrology; Infectious Disease; Clinical
Pharmacology; Highlights of General Medicine

You had to take the reference to a library to read a printed copy of the article, though some services did let you order a copy online, to be sent you by [snail mail](#) from a copying service.

Full-text searching is now the rule. When you find an article of interest, you can have the full text displayed on your screen at once (often without accompanying pictures and tables, though). The search commands are also much simpler and more powerful.

Just for fun

Many online services focus on your leisure time. They offer reviews and news about movies, video, music, and sports. There are forums for stamp and coin collectors, travel maniacs, passionate cooks, wine tasters, and other special interest groups. Besides, several services are entertaining in themselves.

Large, complex adventure games, where hundreds of users can play simultaneously, are popular choices. Some people sit glued to the computer screen for hours.

Others prefer 'Chat', a keyboard-to-keyboard contact-phone type of simultaneous conversation between from two and up to hundreds of persons. It works like a combination of a social activity and a role- playing/strategy/fantasy/skill-improving game.

Shopping is the online equivalent of the traditional mail order business. The difference is that you can buy while browsing. Some commercial services distribute colorful catalogues to users to support sales. Some distribute pictures of the merchandise by modem.

You can buy anything from racer fitness equipment and diamonds to cars. Enter your credit card number, and the Chevrolet is yours. The online mail order business is becoming increasingly global.

Level 5: The user interface

Part of the character of all online service providers is the way they interact with the user. The term "user interface" refers to how the online service is presented to you, in what form text, pictures and sound appear on your computer.

Most online services offer the first three of these four levels. Some offer more:

1. Menus for novices (as in Gopher menus), or pages with hyperlinks (as on Web pages). The user can select (navigate) by pressing a figure, a letter, or clicking on a word or an icon.
2. Short menus or lists of commands for the intermediate user. The user knows some about how the service works, and just wants a short reminder to help navigate.
3. A short prompt (often just a character, like a "%"), which tells the expert user where he is in the system right now. Those knowing the service inside out, do not need reminders about what word or command to enter at this point.
4. Some services offer automatic and super-fast access without any menus or visible prompts at all. Everything happens in a two-way stream of unintelligent data. The only menus that the user sees, are those belonging to the program running on his personal computer.

Colors, graphics and sound are highly desirable in some applications, like online games and weather forecasts. Even where it is not important, there will always be many wanting it. However, to the professional on a fact-gathering mission, such features may slow down data transfers, and give other problems for the users. Therefore, some prefer clean text with no extras for such applications.

Sports cars are nice, but for delivering furniture they're seldom any good. The same applies to user interfaces. No one is best for all applications.

Level 6: The data transporters and Internet access providers

When the host computer for an online service is far away, the user often faces the challenges of:

1. Noise on the line, which may result in unreadable text, errors in the received material, or inability to maintain a desired transmission speed level.
2. Expensive long distance calls (especially if using a low-speed modem).

There are many alternatives to direct long distance calling. Some offers better quality data transfers and lower costs.

The Internet is a global network offering a very large range of interesting services, such as the World Wide Web, and cost-efficient mail exchange with private and public networks throughout the world. Modem users typically dial up to a computer center in the vicinity that functions as an Internet access provider. Once online, they can access remote services in other countries to retrieve files, read texts, view pictures, talk with others, and more.

Competitively priced alternatives to using modem exist in many countries. (More about this in [Chapter 13](#).)

Level 7: You - the user

This is **you**, your computer and communications equipment. Turn the page to [Chapter 3](#) and read about how to use the online services.

| [Next](#) | [Back](#) | [Top of page](#) | [Index](#) | [Expanded index](#) | [Register](#) |

Search:

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The Online World resources handbook

Chapter 3: Using online services

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The term 'user interface' refers to how information is displayed on your screen when you call an online service. It is about graphics, menus and help screens, and various options to tailor the service to your personal preferences.

The World Wide Web

is essentially a vast repository of files (or documents) stored on computers (often called Web sites) connected to the Internet. The service that lets you get to these files is built to be used by a computer running in a windows environment, but it can also be accessed by non-graphics programs (like [Lynx](#)), and [by electronic mail](#).

Most of the things you can do on the Internet take place in two places at once - your computer and the computer it is connected to over the network.

In general, the software program that you are running on your computer is called the **client** (or, **browser**), and that on the remote computer is the **server**. Do something on your computer, and the client software translates it into a form that the server can understand.

Tell your client to retrieve information at a given [World Wide Web](#) server address, and it will go get it for you. A World Wide Web page can look like anything. It can be a text, like the one you read now, with some words highlighted in a special way. You can "click" on these emphasized words with your mouse to jump off to another track.

Example: If the term "*World Wide Web*" in the paragraph above is highlighted, and you click on this term, then you will receive a definition of this Internet service. Many people think this method is easier than having to "*page forward to [appendix 6](#) for a definition.*" (Yes, appendix 6 does contain general information about the Web.)

In the online hypertext version of this handbook, the term "appendix 6" above is highlighted. Click on it to get there. When you are done browsing the appendix, you can "click back" to this chapter to continue reading. In most browsers, you can do this either by clicking at an arrow pointing leftwards or a similar icon, or by using the browsers' menus.

Some World Wide Web services have hypertext links imbedded in pictures or other graphics. These pointers are impossible to see unless you use a windows program to access the service. However, they work in the same way. Click on these pointers to get to the other tracks, which may be serving text, video, sound, a picture, or whatever.

Web documents

are identified by a coded address called an [URL](#) (Uniform Resource Locator), or Web Page Address. These addresses typically look something like this: **http://www.site.com**.

The prefix "**http://**" must be used to tell the Internet that you want to use the HyperText Transfer Protocol. The rest, "**www.site.com**," is the actual address identifying the web site, and the document you want to retrieve.

Your computer's browser activates embedded graphics designed into the document, unless you have turned this feature off in your software. Some documents even offer motion video clips and sound bites.

One document may have any number of hyperlinks creating an inter-woven system of infinite size and depth. This is how the World Wide Web got its name.

Practical hint: Sometimes, when you click on a hyperlink, your browser tells you the requested file cannot be found though the address seems to be right. What can you do?

Try to locate a workable page by editing the Address field in your browser. The trick is to know that the slash character (/) in the URL signifies the start of a new directory (folder) on the web server.

Start by clicking in the Address field at the end of the URL, and backspace of the file name, then press Enter or Click Go.

If this works, you'll see either a default page for that directory or a list of accessible files. This page might have a search tool that lets you find the page you were looking for.

If this doesn't work, go to the Address field again, and backspace to the next directory level to try again.

Navigating by menus

Many online services use menus to make them easier for novices to use. In its simplest form, a menu may look like this:

```
R)ead messages
Q)uick search available messages
W)rite messages
C)omments to Sysop
D)ownload programs
?) for help
G)oodbye. This is enough!
```

Enter a letter (or ?) to select a function. Enter R to read messages. There is hardly any need to read the documentation to use this service.

Internet's [Gopher](#) services use the following type of menus:

The Online World resources handbook (de Presno)

```
--> 1. Introduction.
      2. The Online World resources handbook/
      3. Retrieving the handbook/
      4. Printed versions/
      5. The Online World Monitor newsletters/
      6. The TOW mailing list/
      7. Press here if you have a Web-browser.
```

Press ? for Help, q to Quit, u to go up a menu

The "/" at the end of a menu item shows that this choice will give you another menu.

Enter '2' to get another menu. Failing the "/", the item will give you a file.

If you access a gopher service using a Web browser, then the item numbers are replaced by icons. The numbers are not needed in a graphical environment. The icons tell you whether the choices are files, directories, graphics, search services, or other things. Click on the item to make your choice.

Similar codes and commands are used on several other online services. Some services also offer commands like "**go service-name**," "**join service-name**" (or just **J**), "**delta service-name**," or just the code or name of the offering as in '**mail**'.

On some services, and especially if a selection requires just a letter or a number, you do not need to press return to make it happen. This method is used on many bulletin boards. Some codes are standard. This is particularly the case with '?', 'H', or Help for more information. Case seldom matters.

Test drive

Several commercial systems let you try the service for free, or at lower rates. You can check it out without paying for the exploratory connect time, and get some free training in how to use the service. Examples: [CompuServe](#)'s Practice Forum (GO PRACTICE).

Note: *You must go to the 'real' databases for results. You cannot retrieve actual information during a test drive.*

Selecting an expert level

Most services regard all new users as novices. The software designers assume that users do not want (or are unable) to read lengthy explanations. They think that most users prefer navigation by going from menu to menu.

Commercial services may support this view for financial reasons, and especially when charging for access by the minute. (Some of them let you read their help screens for free, though.)

Menus are important when browsing new offerings, or accessing services that we seldom use. Frequent users of a service, however, quickly learn how to do things. Menus may soon begin to annoy rather than please. Reading them costs money, and it slows our communications down.

We do not need menus when accessing online services in fully automated mode. Your communications program remembers exactly what to do, and does all the typing for you.

There is no point in paying extra for having menus. You'll not read them anyway. The aim is to access the service at maximum speed and the lowest possible cost.

Most online services can be tailored to your personal needs and preferences. Many let you choose between:

- Full menus
- Short menus
- A prompt line with a list of the most often used commands,
- a prompt character or word (click [here](#) for examples). Prompts can be used by automatic communication script files to trigger the next action.

If concerned about costs, note that you can use expert mode without being a true expert. Just print the menus, and keep them by your keyboard while moving around.

Some users draw 'road maps' of the services to navigate more quickly. Others automate the process using automatic communications scripts.

On the Web, we're speeding up things by creating bookmarks in our browser programs. This allows us to return to a given page directly rather than "click down to it" from the service's home (top or welcome) page.

Tailoring your services

Many online services let you to tailor the way information is sent to you.

Some communications programs, like Internet browsers, also lets you change the way things happen. For example:

- Most Internet browsers let you turn graphics **ON/OFF**. I usually visit World Wide Web pages with graphics viewing set to OFF. When I find something worthy of being seen, I switch the option ON, and reload the page to view. (Click on View, Reload.)
- Many Internet browsers are preset to load automatically a selected Web page upon startup. This may take more time than you like. With Netscape, you can click Options, Preferences, Styles, and mark off "Start with blank page." Alternatively, you can set it to load your personal hotlist of sites from your hard disk. Remember to save the new settings when done!

The need to tailor the online service's prompts and menus differs considerably from user to user. We have all kinds of needs, and use all kinds of computers for communication.

Some screens are large. Other screens can only display a few lines of text at a time. Some users even use pocket calculators and handheld computers with tiny, tiny screens.

If you are satisfied with how things are, skip the next couple of pages and read from "Connecting the first time." If curious of your options, read on for a brief technical overview.

Besides a selection of various types of menus, some online services also let you set the following preferences:

- What menu is to be the first, when you access the service?
- Users of Web browsers can usually do this within their software. For example, users of Netscape Navigator may click on **Options**, **General Preferences**, select the **Appearance** page, mark off "**Browser starts with Home page**", and put in any Web page of choice in this field. They may even let Netscape display a file on their local disks.
- The first menu is to be a tailored menu containing your favorite offerings, and nothing else.
- Colors, graphics, or no colors/graphics.
- Choice of prompt character, or prompt text string. This is useful when communicating by script files. On CompuServe, I have asked the system to add the BackSpace character (ASCII character number 8) to the end of all forum prompts. Since this character is rarely found in messages or other texts, I can safely let scripts depend on this prompt character for unattended communication.
- Preferred file transfer protocol (to avoid a question each time you want to transfer a file).
- Desired terminal emulator, like TTY, VT-100 or VT-52.
- CAPITAL LETTERS or Mixed Case.
- Selection of what ASCII character code to represent the DELETE function.
- How many spaces to insert when expanding TABs in your mail.
- Number of lines per screen, for example, 24 on an IBM PC, or eight on a given handheld computer. Determines whether scrolling is to pause after each screenful or not.
- Determines the number of characters per line (for example, 80 lines on a old PC, or 40 on a handheld unit.)
- Determines if the linefeed character is to be sent or not.
- Determines whether blank lines are to be sent.
- Determines whether the service is to check when you log on to see if you are using special software (as in 'Inquire for VIDTEX' on CompuServe).
- The use of 'echo'. Is the service to return the characters that you enter on your keyboard?
- Use of delay when sending line feeds. (Useful if capturing text to a dumb printing terminal. If text scrolls too fast for the printer, you risk losing some of it.)

Displaying information on the screen

An 'A' is not an 'A' no matter what service you use. When I called Tocolo BBS in Japan with a non-Japanese MS-DOS computer, the welcome text came up like this on my screen:

```
D0:[ BBS      (<^/9] 7.8)
62>] =3      ---> 3  (@^2K.3 03-205-9315)
3]V3 <^6]    ---> 24 <^6] 6D^3 C=D A-3
                        (Wed 9:00-17:00 J R]C I @R 5T=P C^=)
```

You'll need a Japanese ROM (Read-Only Memory) in your computer, a special graphics program, or a Japanese language operating system to have Kanji characters properly

displayed on your screen.

The characters you see on your computer's screen are based on a code. The computer finds the characters to display from a table built into your system's hardware or software.

Most personal computers can be preset to use various tables depending on your needs. When communicating in English, you may want it to show Latin characters. When writing in Japanese, you may want it to display Kanji characters.

Those writing in Norwegian, often want to use the special Scandinavian characters ø Ø æ Å å. If the first two of these Nordic characters read like the symbols for Yen and Cent, you are not set up for Scandinavian characters. If your system is set up correctly, they should look like an 'o' and an 'O' overwritten by a '/'.

To read or create **non-Roman web pages or email**, you may be required to have these special fonts installed in your computer.

The code telling your computer what to display, may also contain information about where to put characters and what colors to use.

An online service may order your computer to display a given character in column 10 on line 2, and to print it in blinking red color. If you are not set up correctly, these codes may show as garbage on your screen rather than as a colorful character in a given position.

If you call a service set to display text in VT-52 format, and your communications program is set accordingly, then you should be OK. VT-52 is a setup that makes a program or a service 'behave' like a DEC VT-52 terminal.

Being able to view VT-52 coded text on your screen, does not guarantee that you can capture this 'picture' to a file on your disk. Your communications program may need special features to do that. If these features are missing, you are in for a surprise. The text in your capture file may look like in this example (on my computer, it came on a single, long line):

```
-----
**H*J*Y"4   Innhold*Y%>
      *Y&4Emneoversikt 1   Brukerprofil      6*Y)
4Stikkord A-]      2   Bruker-      *Y*4 veile
dning      7*Y,4Informasjons-
      *Y-4leverand|rer A-]  3   Teledatanytt*Y.W
      8*Y04Personlig indeks 4*Y2H      *Y3
4Meldingstjenesten 5   Avslutte9*Y64   ]pningsside
*00#      *Y 4TELEDATA 880823-1538*
Y74      NTA01-00a*Y74
      *Y74*Y74
-----
```

The character '*' in this example refers to the ESCape character (ASCII number 27). **ESC** is used to tell your computer that what follows is a VT-52 display command. The codes following ESC say where text is to be printed on your screen (from line number x and column number y).

If your communications program cannot save VT-52 coded text in a readable way, you'll need auxiliary programs to remove or convert the codes. Some communication programs let you take snapshots of the screen, and store the result in a file. This usually gives good results, but it may be a cumbersome approach.

[Minitel](#) (in France and the U.S.) belongs to a group of online services called videotex (or viewdata). They believe that beautiful color graphics, large characters, and menus give them a competitive advantage.

Viewdata services use graphical display standards with names like CEPT, Captain (Character and Pattern Telephone Access Information Network System), Telidon, Minitel, Teletel, GIF (the Graphics Interchange Format), Viewdata, and NAPLPS (The North American Presentation Level Protocol Syntax).

Often, you'll need special terminal machines to use viewdata services. On other services, you must use special software plus an emulator card in your computer.

Many MS-DOS based bulletin boards let you set access defaults to colors and graphics. Most of them use ANSI graphics in welcome texts and menus. Users must set their programs to ANSI (or ANSI BBS) to take advantage.

Capture these welcome texts and menus to a file on your hard disk, and view them with an editor. They are filled with ANSI escape codes, and thus hard to read or search.

The good news is that most conference and forum mail rarely contain such codes.

Many users routinely keep captured online information on their hard disks for later reference. If this is your intention, make sure that text is sent to you in plain ASCII, or in a mode that your software can handle.

If you want 'TTY' or 'ASCII', and these are not on your online services' lists of options, try 'Others' or 'Other computers'. These settings usually identify your computer as unable to handle 'standard' colors, sound and graphics.

Connecting the first time

If you have low cost access to a local Internet provider, or unlimited financial resources, go ahead and call up services all over the world. Learning by doing is exciting.

If your resources are limited and the service is expensive, start by reading user information manual. Go online to capture key menus and help texts. Print them out on paper for further study before going online again for 'real'.

I always hurry slowly during my first visits to a commercial online service. I call up, quickly capture information about how to use it, and disconnect. It may take days to study the material. My goal is to find what the service offers so that I can plan how to use it most efficiently.

The first important command to look up is the logoff command. There is nothing more frustrating than to get an error message after submitting **BYE**. If lost, try "**quit**," "**exit**," "**logoff**," "**off**," "**logout**," and "**G**" in the hope of finding the correct command. These are the most usual variations. You should also try **?** or **HELP**.

If you really can't figure out how to get off a system, just hang up on it (cut the connection). However, be careful. Some systems will continue to charge for a period after you have disconnected by hanging up.

*Note: If you are using a dialup modem to connect to online services, make sure that it is always set to **watch the presence of the carrier signal**. On my modems, this is set by the command: **AT &D2**. If this feature is not set, then you may not get disconnected from the online service until the phone line is physically disconnected from your modem!*

One of the first things that I do, is set my options to expert status, though I am obviously an amateur at this stage.

Often, I also start automating the process during my first visits. I write script files for automatic access and quick navigation to key offerings. Another good strategy is to look for automated offline readers or systems (see [Chapter 16](#) for details).

Others prefer paper and pencil. They write a list of required commands on a piece of paper, like this:

```
Call 0165
At CONNECT:                ENTER @SP ENTER
At the NUI prompt:         Nxxxxxppppp-a170041
At Enter 'dix' and <Enter>: dix
At -- More --:             ENTER
At Your name:              Odd de Presno
At Password:               hemmelig
At What do you want to do:
- when no unread mail      goodbye
- when mail to read        ENTER
```

Put the list by your keyboard before calling the service. Follow it carefully. After a while you may remember the procedure, and can throw away your notes.

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Illustration by [Anne-Tove Vestfossen](#)

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The Online World resources handbook

PART 2: APPLICATIONS

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Imagination is more important than knowledge"
- Albert Einstein

This part of the book is the core of the matter. Here, we want to give you an idea of what is out there.

The bad news is that the online world has too much. We have been forced to make a selection. So, if there are important pointers you feel have been left out, please drop me a line. Maybe it can be included in a future release of the handbook.

Terms used in this book

While references to offerings with terms like "on CompuServe," and "on [TWICS](#)" may be easily understood, you may not be used to our terms referring to resources on the Internet. These include the following:

- anonymous ftp
- gopher
- telnet
- RFC, FYI, FAQ
- archie
- WWW
- WAIS

Do not despair. Explanation is given in [appendix 6](#). You can also search the book for additional information.

Throughout the book, we will use the **URL** (Uniform Resource Locator) format when referring to Internet resources. These codes are basically in the format

method://site.name/filepath

The "method" part tells if the URL points to a hypertext document ([http](#)), a gopher menu ([gopher](#)), an anonymous ftp host for file transfers ([ftp](#)), etc.. Examples:

- **Web addresses**

URL: <http://home.eunet.no/~presno/index.html>

This means: "Connect me to the site *login.eunet.no*, and show me the hypertext *~presno/index.html* file." This URL will give you the Online World resources handbook's World Wide Web home page. The tilde character (~) in the directory name "*~presno*" is a special notation used on Unix systems.

- Read under WWW in [Appendix 6](#) for more, including how to get Web pages by electronic mail!
- **Usenet Newsgroups (conferences)**
Newsgroup: news.newusers.questions.
If you have a special Usenet news reader, you may enter this newsgroup's name to get a list of recent discussion items. Using Web browsers, you must often prefix the name with the code "**news:**" to tell them that you want a given newsgroup. Example: "news:newusers.questions" Your browser program must be set to connect you to an [NNTP](#) server (Appendix 6).
- Note: Few NNTP servers carry all available newsgroups, so newusers.questions may not be on yours. To read messages posted to unavailable newsgroups, visit [Google Groups](#) (Chapter 10).
- **Transfer of files**
URL: <ftp://ftp.eunet.no/pub/text/online.txt>
When given to a Web browser, this means: "Do anonymous ftp to site *ftp.eunet.no*, and get the file */pub/text/online.txt*." This URL links to the text version of this handbook.
- You can also use the contents of this address for [retrieval by email](#), when using Internet's ftp command ('anonymous [FTP](#)'), or special ftp retrieval programs.
- **Gopher information resource**
URL: <gopher://home.eunet.no>
This URL is an Internet Gopher address given in a form that can be used directly by World Wide Web browser programs. You can also use the contents of this address in other ways, like for retrieval by email, or by using Internet's gopher command. Read under [Gopher](#) in Appendix 6 for more.

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The Online World resources handbook

Chapter 4: Hobby, games and fun

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Online services have one thing in common with newspapers, magazines and books. Their offerings vary from provider to provider. The next chapters will focus on the contents of the offerings. [Appendix 1](#) has details about how to access the major service providers.

Often, small online services have interesting offerings in specialized areas, and especially when they are based on local phenomena or events. These services tend to be more personal. They often present their 'wares' in a local language, and offer large collections of free software.

The larger online services have hundreds of thousands of users. Activity is often high. They usually attract interesting (and competent) participants to their conferences and forums, have more free software for download and more news sources and databases to search. In short, they generally give you a wider choice.

In this handbook, we focus on the larger international services, and the Internet in particular. These services are generally available from anywhere without too much effort, and using them comes surprisingly cheap. Therefore, please remember that this book just covers the top of the iceberg. Cheaper services may be found elsewhere, and they may even be better tuned to your particular areas of interest.

Locating game software

There's an overwhelming number of game programs for all types of microcomputers on BBSes, commercial online services, and in Internet archives.

Many games are free. We call them "Public Domain" or "Freeware" programs. Others are distributed free. You do not have to pay to get and try them out. If you want to use them, however, the copyright owner expects you to pay a fee. We call them "shareware" or "user supported" programs.

When the game program has been transferred to your personal computer, you can play without worries about communications costs, or the busy signal on your phone line.

My favorite game is a shareware MS Windows solitaire game (patience) called **Arachnid** created by SP Services, P.O. Box 456, Southampton, SO9 7XG, England. The desired registration fee is UKP 15.00 (English pounds). You can download it from <http://home.eunet.no/~presno/bok/wincard.exe>. The distribution file is 106 kilobytes large.

WINCARD.EXE is a special distribution file, which contains three games and all supporting files. The EXE extension may fool you into thinking that it is a program, and in a way it is. The file is a self-extract file, meaning that you just enter "WINCARD" on an MS-DOS computer to extract the game files from the "package."

Games are usually distributed in special distribution files. All files used by a game (or several games) are put into one file by special software, and compressed in size. This makes retrieval of programs easier and cheaper. You do not have to download many related files individually. The transfer takes less time. (Read in [appendix 3](#) about how to extract programs from distribution files.)

You may want to search the archives of the comp.archives.msdos.announce newsgroup using [Google Groups](#)' Power Search feature.

[GamesDomain](#) is a central reference point for all things "games-related" on the Internet. It also points to information about PBMs, MUDs, MUSHes, Interactive games, and similar offerings.

[GameWeb](#) offers a comprehensive gaming search engine in addition to a cheats database, reviews, demos, patches, game software, tournaments, and links to ranked gaming sites on the Internet.

If you just have email access to the Internet, read this:

*Try **Archie**, a distributed index to all the files available by anonymous ftp on the Internet. The Archie database maintains a list of millions of million files containing over 100 Gigabytes from hundreds of anonymous FTP archive sites. You can search the database by email to find where files are located. Some Archie systems maintain a list of libraries all over the world, while others concentrate on a more limited geographical area. Once Archie has told you where desired programs and files are located, you can retrieve them by telnet, anonymous FTP, FTPmail, and WWW. Read File transfers through the Internet'in [chapter 12](#) for details, and [Appendix 6](#) about how to use Archie.*

Getting programs by email is a three-step process:

1. *Use Archie to find file names and where they are stored,*
2. *Send a message to an FTPmail server to have them retrieved and forwarded to you by email, and*
3. *Use a utility program to convert the file to a useful format. (See Binary files transferred as text codes'in [Chapter 12](#).)*

Chances are that online services in your area also have many programs to offer. Most free bulletin boards have more software than you'll ever get around to try.

Usually, there is a natural specialization between boards. Those using the Unix operating system, have the largest number of programs for such machines. Those running on MS-DOS computers, have more programs for such computers.

Some games are trite and bad. Others are brilliant. There are ladder games, racer car driving, flight control, war, subsea games, electronic versions of traditional games like BackGammon, Yatzy, chess and bridge, educational games for geography, mathematics and history, puzzles, fractal programs that draw beautiful pictures on your screen, psychological tests, text- based adventure games, and more. There is something for everybody.

If you want to get rich in a hurry, go for programs that increase your chances of winning horse race bets, or other "real world" money winning games.

If you are into beautiful girls, fill your hard disk with picture files in GIF, PCX or other graphics formats. (Sorry ladies, there are not many pictures of naked boys around.) There is an abundance of shareware programs that will display the pictures on your computer screen.

Keen users of the more popular games often want to swap tricks and discuss

experiences: Players of SNES, Nintendo, Gameboy, Nintendo 64, and the Virtual Boy regularly meet on [the N-Games mailing list](#). Also, make a note about [GAMES-L](#) - the Computer Games list.

The ancient Chinese **I-Ching** can hardly be called a game. People use it to tell their fortunes. Explore the power of prophecy and how it can affect you. Concentrate on a problem or question facing you now. When you have it well visualized, select <http://www.facade.com/Occult/iching/> to get your reading.

Usenet excels when it comes to games. Here are some newsgroups:

rec.games.board	Discussion and hints on board games.
rec.games.board.ce	The Cosmic Encounter board game.
rec.games.design	Discussion of game design related issues.
rec.games.go	Discussion about Go.
rec.games.misc	Games and computer games.
rec.games.pbm	Discussion about Play by Mail games.
rec.games.trivia	Discussion about trivia.
rec.games.video.arcade	Discussions about coin-operated video games.

With so much going on, it is difficult to stay current on new programs and new versions of old ones. For announcements, check out the Usenet newsgroup called [comp.archives.msdos.announce](#).

It is probably easier to relate to references like #rec.games.video on Usenet, than to TOW@LISTSERV.NODAK.EDU. References to mailing lists are made in various ways throughout the book, as is the case online. This is the basic rule:

On the Internet, mailing lists are 'managed' by programs called LISTSERV, Majordomo, Listproc, etc. These programs handle subscription requests, requests for files, and more. When you see a reference like TOW@LISTSERV.NODAK.EDU, then this means that you MUST send your subscription request to one such program at the LISTSERV.NODAK.EDU site. Mail to the TOW forum, however, must be sent to the address TOW@LISTSERV.NODAK.EDU to be forwarded to the other members. (TOW is this handbook's support forum.)

In this book, we typically provide references to these forums in the following way:

The TOW mailing list (on
listserv@listserv.nodak.edu). The SWONDER mailing
list (on majordomo@darkwing.uoregon.edu).

The subscription/signoff addresses are given in parenthesis, and the forum's name is typically given as upper case text.

You may also find it useful to read about email addresses in [Chapter 7](#), and about LISTSERV in [appendix 6](#).

Computer viruses

Few online users ever live to see or experience a computer virus, but they do exist. So, read this:

A virus is a small, hidden computer program that can cause the loss or alteration of programs or data, and can compromise their confidentiality. It can spread from program to program, and from system to system, without direct human intervention.

The chance of your computer being infected is small, but you are never safe. Therefore, download a program for virus detection and identification, like VirusScan from [McAfee Associates](#). They also have virus disinfection programs.

For background on viruses, start by checking [The AntiViral Toolkit Pro Virus](#)

[Encyclopedia](#) (AVPVE). Consider joining [the VIRUS-L mailing list](#). Usenet has [comp.virus](#), [alt.comp.virus](#), and more.

The good news is that most large providers of computer programs now have sophisticated virus scanning programs integrated into their services.

Chess

First, familiarize yourself with the [Chess Frequently Asked Questions](#) files, and [Chessfaq](#). [The Chess Archives](#) include a Beginner's Page, an Opening Library, Logical Chess: Move by Move, and much more.

To play or watch real-time chess with human opponents, try [the Internet Chess Club](#). Here, you can play 24 hours a day with people from all over the world. Blitz chess and slow chess. Get ratings, watch games, make friends, play in tournaments, study games with people, search their database of Grandmaster games. Scheduled visits from internationally famous Grandmasters. Guest visitors can play unrated games, or watch others play, for free.

Check <http://www.brokersys.com/~kcyong/> for links to Xiangqi, Weiqi (GO), and Taijiquan.

Bridge

The game of bridge is one of the world's most fascinating card games, with the same rules all over the world. For good starting points, link to <http://www.okbridge.com>. If you don't mind paying a membership fee, check out [BPlive](#). Usenet has the [rec.games.bridge](#) newsgroup.

Agreeing on a time for your meeting

Interactive games, like bridge and chess, chat, and use of Internet phone technology, often lead to the inevitable question: "When should we meet?"

If your partners live in your country, a quick "Let's meet at 20:00!" may be enough. It may not be that easy if they live elsewhere. Terms like "My time" or "Your time" are often misinterpreted because of differences in local daylight savings times (also called "summer time").

Local daylight savings times? The [Worldwide daylight saving](#) page may provide an answer.

The solution is to use a time that does not change by season and location. **Greenwich Mean Time (GMT)** is one such number. It has long been used as a basis for standard time around the world, and is also called **Universal Time Coordinated (UTC)**, Zulu time and World Time. Normally expressed in 24-hour time.

The [Time Zone Converter](#) lets you find the time anywhere in the world using our frequently updated time zone database.

Many services provide the time right now expressed in GMT. My favorite is at: <http://www.kidlink.org/cgi-bin/gmt>. The real thing is at <http://www.greenwich2000.com/time.htm>. You may also find [The World Clock Meeting Planner](#) and [World Time Server](#) useful.

Now, just say: "Let's meet at 20:00 GMT." Connect to the Web address above to find out what this means. If your local time right now is 14:00, and GMT is 13:00, then you have a meeting set for 21:00 your time.

Other online games

Why not investigate online adventure games? There are many alternatives. On the World Wide Web, **Nintendo** is at <http://www.nintendo.com>. Among the offerings is a "chat room." Here, online gamers can talk with other gamers, Nintendo's Game Play Counselors, invited guest speakers, and video game celebrities. You'll find BackGammon at <http://www.bkgm.com/>.

On [Exec-PC](#), play Startrek. Select an identity and "play it out" according to its character. If a real aficionado, check out rec.arts.startrek.info on Usenet.

MUD is also a popular game.

Multi-User Dungeons (MUD) is a structured and user-modifiable online environment. It allows users not only to interact with each other, but to do role-playing, build and furnish living areas and interaction areas, extend and create the interactive space, and make rules for using that space.

As programmers create new types of MUDs, new names appear.

These include TinyMud, DUM, MOO, MUCK, MUG, and many others.

For information, including addresses to places where you can try them out, consult [the Frequently Asked Questions files](#). Perform a keyword search for thud."

Then, check <http://www.godlike.com/muds/>

Chat

Chat, or "keyboard talking," is a popular attraction, and in particular on the large online services.

Your first attempt will probably be a strange experience. Your monitor will look like an unfolding screenplay, with you speaking one of the several parts.

When many people talk simultaneously in chat, incoherent sentences seem to fly over your computer screen. It takes some training to be able to read what each of them is saying.

Some users are serious about chatting. Several large companies are heavy users, and it also has educational applications. Although this kind of talking is a slow process, it has advantages. It is easy to document the discussion. People from places geographically far apart can meet and talk at a low cost.

Jokes

[The India Humor, Jokes & Fun Site](#) is filled with jokes, cartoons, funny facts. For **South African humour, jokes and fun**, visit the za.humour newsgroup. For the occasional joke, visit [The Barking Spider](#).

My hobby

There are online forums for most hobbies: collection of stamps and coins, genealogy, music, holiday travels, skiing, purchase of consumer electronics, video, filming, and more.

The people you meet in these "clubs" share your interests. They come there to exchange information and experiences, to listen, swap stamps or coins, participate in club auctions, and exploit favorable group discounts when buying things for their hobby.

The main attraction is the open messages that people write to each other. Many clubs also have libraries filled with special software, like database programs for collectors, and information files.

You'll find links to **stamp collectors organizations** world-wide at <http://www.stampshows.com/clubs.html>. Also, check out the [alt.stamps](#), [rec.collecting.stamps](#) and [rec.collecting.postal-history](#) newsgroups.

[The GoSKI Network World Resort Database](#) lists over 1,500 mountain resorts, with skier and snowboarder reviews, facts, contact information, and snow conditions. It said this about Hemsedal in Norway (1996):

Hemsedal, Norway [IMAGE]
240 km northwest of Oslo
(about 4 hours by train/bus).

Vertical Drop: 800m/2,624'
Lifts: 15 (5 chairs, 10 surface)

Trails: 30
 Marked Runs: 40 km

 Cross Country: 90 km groomed

 Snow Conditions: 32 06 22 55
 Tourist Office: 32 06 01 56

Looking for something special for your kid? What about the [Beginner's Guide to Shortwave Radio](#)?

Music

[Sony Online](#) has an Internet-based service providing data from its music, movie and electronic publishing companies. Here, users can retrieve or watch music video clips, and hear brief sound samples from current and upcoming projects.

[The Musical Instrument Encyclopedia](#) lets you experience a sampling of instruments, complete with images and music samples.

If you prefer classical music, and have a sound card in your computer, point your Internet browser at [The WebMuseum Auditorium](#). Offerings include Johan Sebastian Bach's "Toccat and Fugue in d Minor," Johann Strauss's "Le beau Danube bleu," and Beethoven's "Hymne a la joie." Visit [The Classical Music Pages](#) for background information.

[Operabase](#) hosts a database of 500 opera houses and festivals, searchable by keyword or browseable alphabetically or via clickable maps. Database entries feature full details on each house, including contact and booking information, accessibility, neighboring venues, a link to the house's Website, and details on current, past, and future seasons. Travelling opera fans can click on a calendar icon and receive details of other performances within seven days and 125 km. Strong on North America and Europe.

Then, there's [Ludwig van Beethoven's "home page"](#), [The Asian Classical Music MP3 Home Page](#), and [the Classical Music Navigator](#).

[The Classical MIDI Archive](#) offered Classical Music files in MIDI Format from Composers (January 2000). Let it be said: *J.S.Bach; Beethoven; Brahms; Byrd; Chopin; Debussy; Handel; Haydn; Liszt; Mendelssohn; Mozart; Scarlatti; Schubert; Schumann; Tchaikovsky; [Others > 16th C.]; [Early Music]; [Inspirations and Aspirations]; [Encores...]*, and more.

Select an artist, and enjoy their "homebases": [Frank Sinatra](#), [Michael Jackson](#), [David Bowie](#), [Bruce Springsteen](#), [The Beatles](#).

[The Internet Bandsman's EVERYTHING WITHIN](#) provides "Links to Brass Band related Web Sites, contacts and reference information. Band websites across the world, brass ensembles, people, suppliers, music, books, recordings, organisations, history, humour, and more!" **The Brass Band WWW Page** is at <http://www.smsltd.demon.co.uk/>.

You want to buy music, preferably at a low price. [CDnow!](#) has hundreds of thousands of CDs, cassettes and videos at discount prices, accepts credit card payments, and ships around the world. Search for artist name, like "Bjork" to order this Icelandic artist's "Debut" CD, or "Venus as a boy," and charge it to your credit card. My wife wanted classical music by Albinoni, Vivaldi, and Pachelbel played by the Berlin Philharmonic Orchestra. (By the way, **Bjork** is at <http://www.bjork.co.uk/bjork/>.)

You may buy at even lower prices at [the Used-Music Web](#).

Tablature/chords for guitar is available from several archives. To find **the Online Guitar Archive** (OLGA), check the newsgroups [alt.guitar.tab](#), or [rec.music.makers.guitar.tablature](#) for a list of archive locations.

There are several **Lyric/Music Servers**, including the one at http://www.leeds.ac.uk/music/Menu/mus_archs.html.

For **Chinese music**, visit <http://sunsite.unc.edu/pub/multimedia/chinese-music/>. Choose between Model Beijing Opera, Ceremonial songs and music, Songs during the "Cultural Revolution" (mostly for Mao), Dream Of Red Mansion, Folk songs and local opera, Historical Voices, Pop songs after the down- fall of "Gang Of Four," Post Liberation, Pre Liberation, Current Hits, Chinese traditional music (various

instrumental). Also included are some music from Taiwan and the Hong Kong area.

Mailing lists:

- [The LUDWIG mailing list](#) is about the life and musical compositions of the German composer Ludwig van Beethoven.
- [The CLASSM-L mailing list](#)
- [The Elton John mailing list](#)
- [BLUES-L](#)
- [MILES](#) (about Miles Davis)
- On [SATURN](#), they discuss Sun Ra, the free-jazz big band leader.
- The [U2 \(Wire\) mailing list](#)
- [HEY-JOE](#) - for fans of Jimi Hendrix
- [HWY61-L](#) -the Bob Dylan discussion list
- The [Fiddle Players' Discussion List](#).
- **COMANDO** - [the Mandolin playing and enjoyment list](#)
- The [Guitar Flatpicking](#) list

For an overview of music oriented mailing lists, check the Entertainment | Music category at <http://www.topica.com>.

Usenet has

[rec.music.country.western](#)
[rec.music.bluenote](#) (jazz)
[rec.music.indian.misc](#)
[alt.music.enya](#)
[alt.punk](#)
[alt.rap](#)
[alt.rave](#)
[alt.rock-n-roll.hard](#)
[alt.rock-n-roll.metal](#)
Genesis is at [alt.music.genesis](#)
[rec.music.beatles](#)

and over forty other music groups.

Pets

The web has [Frequently Asked Questions information about dogs](#) page. [The Dog Information page](#) also has interesting information. [The Cat Fanciers Home Page](#) has a plethora of frequently asked questions about all issues cat-related.

Mailing lists:

- [The CANINE-L mailing list](#) covers a wide variety of dog-related topics.
- The [FELINE-L](#) mailing list is for people who have cats as companions in their lives
- [DOM_BIRD](#) is for owners, breeders and farmers of domesticated birds. Topics include anything from the nutritional requirements, to the shows and events held for displaying the many variety of fancy breeds of domesticated birds. If you wish to discuss equipment used for incubating eggs, the veterinary care and management of adults or chicks, or find the best way to handle any aspect of domesticated bird ownership, you can be expected to be welcome.
- [Discussion forum for Horse fanciers](#)

Usenet has:

rec.pets	Pets, pet care, and household animals in general.
rec.pets.birds	The culture and care of indoor birds.

rec.pets.cats	Discussion about domestic cats.
alt.pets.rabbits	Coneys abound.
alt.pets.hamsters	Pretty popular rodent pets
alt.aquaria	Fish and Aquarium discussion
alt.aquaria.killies	Killifish, members of family cyprinodontidae
sci.aquaria	Scientifically-oriented postings about aquaria
rec.pets.dogs.activities	Dog events: showing, obedience, agility
rec.pets.dogs.behavior	Behaviors and problems: housetraining, chewing
rec.pets.dogs.breeds	Breed specific -- breed traits, finding breeders
rec.pets.dogs.health	Info about health problems & how to care for dogs
rec.pets.dogs.info	General information and FAQs posted here
rec.pets.dogs.misc	All other topics, chat, humor,
rec.pets.dogs.rescue	Information about breed rescue, placing and adopting

For more on pets, try [Pets World](#). It has over 1400 pet related links covering 19 subjects (1997).

Wine and food

Some people prefer to fill the stomach rather than their ears. If this sounds right, what about some French culinary art? Visit chef Paul Bocuse at the [Lyon Life Gastronomy](#) page. Learn how to make Truffles Soup Ilysie, and read Paul's wise words about cooking:

Memory and hunger are the main ingredients of cooking. I still think to the roast calf that my grand mother used to make. I still see her digging a small well in the mashed potatoes to pour the sauce whose inimitable taste still makes me salivate. Cooking is the dish that one places on the table, which steams, which smells good, which one serves twice. There is only one cooking, the good one."

While his web address may be hard to remember, not so with the taste of Paul's truffle soup!

Too advanced? OK! Here are some nice [bread](#) and [soup](#) resources.

Visit [the Global Gourmet](#) site. Browse an abundance of recipes in this file archive: <http://gatekeeper.dec.com/pub/recipes/>, and check [the Kitchen Link](#), a cooking index with links to recipes, cooking pages, cookbooks, and more.

However, if your kitchen works like mine, there's some fish you'd like to cook, or some ingredient that you'd like to include in a meal. Visit SOAR, the [Searchable Online Archive of Recipes](#), enter "cod" or "mackerel" to get overwhelmed by excitement. In September 2000, the database contained 67,784 recipes...

[The World Wine Web](#) and [The Wine Encyclopedia](#) has French and English language details about vineyards, viticulture, winemaking and aging by producer and vintage. Wine information by area:

- [South African wines](#) (see [Südafrika Wein](#) for a German language resource)
- [Spanish wines](#)
- [German wines](#)

Mailing lists:

- [OZWINE](#) is for the discussion of Australian and New Zealand wines.
- [Tasting](#) is the Wine Tasting's List

Usenet has [rec.food.cooking](#), [rec.food.recipes](#), [rec.food.restaurants](#), [rec.food.drink](#), and

rec.food.veg for vegetarians. For links to **European recipes**, try <http://www.goodcooking.com/euro.htm>.

Bon appetit!

Outdoor life

As usual, Usenet has a lot. These are some examples:

- [rec.backcountry](#) Activities in the Great Outdoors.
- [rec.birds](#) Hobbyists interested in bird watching.
- [rec.boats](#) Hobbyists interested in boating.
- [rec.boats.paddle](#) Talk about any boats with oars, paddles, etc.
- [rec.climbing](#) Climbing techniques, competition announcements, etc.

Scoutnet offers a list of **scouting mailing lists**. Supplement with the official web site of [the World Scout Movement](#). **SCUBA-L** is the Scuba diving discussion list .

Photo enthusiasts may want to start with [The ACE Indexes "Reading Room"](#). It has links to almost 100 online photo and digital imaging magazines from around the world, describing each in detail. Here is also information on over 500 photographic commerce web sites, including camera stores, and manufacturers.

If you're into 3-d (stereo) photography and closely allied subjects, enroll in the [PHOTO-3D](#) mailing list. Here, they define 3D as the presentation of separate and different single images for the left and right eyes.

There are clubs for all popular outdoor hobbies.

Contact 3d-request@bfmny0.bfm.com"above means that you must write a message to this Internet email address with a subscription request, or to receive further information about how to join. This mailing list does not have automatic subscriptions.

Roots

Tracing family history used to be difficult. In the days before personal computers and data networking, performing the necessary record research in far-flung libraries, courthouses and cemeteries could take a lifetime. Sometimes logistical barriers prevented the proper research from ever being carried out.

With data networking capabilities, researchers can exchange information, tips and family records. Now, a genealogy buff in Toronto or Wien can ask a favor of a comrade in Buenos Aires or Sidney to look up a record or two, check out a graveyard or provide some missing bit of information about local history and family names. Sometimes these networking hobbyists even discover that they are related!

You may want to start with the [Genealogy Beginners Guide](#)'s tips, news, articles and resources to help you research your family history and trace your ancestors.

[ROOTS-L](#), and the many Usenet newsgroups in the soc.genealogy hierarchy (like [soc.genealogy.misc](#) for starters), are all about genealogy. Here, you will get tips about tools and techniques. You can exchange information about ancestors, and find new friends and partners for joint research, and learn about genealogical Web sites.

On the World Wide Web, start with the following genealogy links:

- <http://www.genhomepage.com/> (World-Wide resources)
- <http://www.ucr.edu/h-gig/hist-preservation/genea.html>
- <http://www.sol.no/disnorge/whoarewe.htm> (Scandinavian resources)

Him and Her

Members of the female sex have their favorite meeting places. Usenet has [alt.feminism](#)

and [soc.feminism](#).

[The LIBFEM mailing list](#) describes its purpose as follows:

LIBFEM (liberty & feminism): The mailing list for Liberty and Feminism; individualist feminists -- feminism based on an individual rights approach to feminist issues, supporting liberty, diversity and social cooperation.

The focus of LIBFEM is the classical liberty and individual rights perspective as applied to feminist issues, such as issues about ideology, politics, culture, gender, etc., to create a network for information, discourse, cooperation, encouragement and consciousness raising. There has always been an element of individualism in the various women and feminist movements, although this element seems to have been somewhat neglected in recent movements.

There is also the [FEMISA](#) mailing list, and remember to check this Web site:

<http://www.igc.org/women/feminist.html>

Bisexuals have "[Sappho](#)". There are also [BIFEM](#): *ð social and general mailing list for online and real life Bisexual and Lesbian Women and their friends*, "[BISEXU-L](#)", and others.

Spanish speaking users can subscribe to [ARENAL](#) (Lista de discussion para hispanos/as que desean acabar con la homofobia). Usenet has lots of it: [soc.motss](#), [alt.politics.homosexuality](#), [alt.sex](#), [alt.sex.bondage](#), [alt.sex.pictures.d](#), [alt.sex.motss](#), and [alt.sex.pictures](#).

Conferences called "SEXUALITY" are alive on The [Well](#). CompuServe has a Human Sexuality Adult Forum and a Human Sexuality Open Forum.

Finally, there are many pictures of nudes in all possible and impossible positions. Most of them are childish, some are decidedly pornographic, a few are beautiful and erotic. Then there are [Penthouse Magazine](#) and [Playboy Magazine](#), of course.

The online services' policies vary about what kind of pictures and picture programs to make available. The larger the service, the more conservative they tend to be.

Other hobbies

[The Popular Mechanics magazine](#) (USA) has a great Web site.

[KUNGFU](#) is an open, unmoderated discussion list about Kung Fu and the martial arts. KUNG Fu, Tai CHI and other martial art styles and techniques are likely to be discussed. Click "home" for lots of information from **Kung Fu Online**.

A Barbie Doll fan? Not me, please! However, if interested, hear this:

The official [Barbie Doll](#) web site for fans of all ages! For young girls there are activities to play, create and learn new things. For our collectors we have hundreds of photos, facts and doll information.

Finally, there's the [Harry Potter Home Page](#).

Programs for hobbyists

It is no rule that a service need to have a conference about a hobby, to have interesting programs available for downloading. Programs float around from service to service much easier than conference items. Still, the best programs for a given hobby are normally found on services where hobbyists meet to discuss.

You will find:

- Chess and bridge programs,
- Morse code training programs for ham amateurs,
- Astrology programs,
- Database systems for keeping track of music cassettes or records, video cassettes, books, stamps, coins, etc.
- Information systems for wine lovers,
- Recipe programs (tell me what you've got, and I'll tell you what you can

make), and much more.

On the Internet, search [the Virtual Shareware Library](#) for things of interest .

Online shopping

Online, you can buy almost anything : video cameras, books, music, Bonsai plants, golf equipment, canned cakes from Gimmee Jimmy's Cookies, Levi's trousers, a four-door Nissan Pathfinder SE-V6 car, air tickets for Mexico, and computer equipment (see "Buying computers and stuff" in [Chapter 5](#)).

Shoppers who let their modem do the "walking" are already a few steps ahead of people still stuck shopping the old-fashioned way. Experienced online shoppers know that you can tap a world of stores without ever leaving your keyboard, and that you can browse and buy with very little effort.

Some services present their wares "for your information only." It is like reading newspaper ads. You must contact the seller to buy. Other services have large online supermarkets with many stores, and you can buy while you visit.

There's a directory of links to [U.S. Shopping Mall Retailers](#). [BMW-DIGEST Links](#) is for fans of BMW autos. There's an [ITALIAN-CARS](#) list, and click here for links to [British Cars](#) resources. If you're into [Skoda cars](#), visit their Czech Republic Web site.

Then there is [Alfa Romeo](#) (Italy), the [Porsche Net](#) home page, [Roadsters Muscle Cars](#). [PartsVoice](#) lets you find auto parts online, and [100hot](#) claims a list of the Top 100 Automotive websites. Last, but certainly not least, make sure you visit [the Bugatti pages](#).

Planning your vacation

Click [here](#) for this part of the chapter.

Politics

Start by visiting the [Links to Government Servers and Information](#) page. It is long, but very comprehensive. The [Parliamentary Elections Around the World](#) page offers an extensive database by country on election results and parties.

[The Politician Government Address Directory](#) offers addresses of most nations' leaders and provincial governors on the planet.

These newsgroups are filled with political discussions:

alt.politics.british	Politics and a real Queen, too.
alt.politics.clinton	Discussing Slick Willie & Co.
alt.politics.datahighway	Electronic interstate infrastructure.
alt.politics.economics	War == Poverty, & other discussions.
alt.politics.elections	All about the process of electing leaders.
alt.politics.greens	Green party politics & activities worldwide.
alt.politics.homosexuality	As the name implies
alt.politics.korea	A forum for political issues in Korea
alt.politics.libertarian	The libertarian ideology.
alt.politics.org.misc	Political organizations.
alt.politics.radical-left	Who remains after the radicals left?
alt.politics.reform	Political reform.
alt.politics.sex	Not a good idea to mix them.
alt.politics.socialism.trotsky	Trotskyite socialism discussions.
alt.politics.usa.republican	Discussions of the USA Republican Party.

alt.religion.sexuality	The politics of sexuality and religion.
relcom.politics	Political discussions.
soc.culture.arabic	Technological & cultural issues, *not* politics.
soc.culture.burma	Politics, culture, news, discussion about Burma.
soc.culture.jewish	Jewish culture & religion.
soc.culture.palestine	Palestinian people, culture and politics.
soc.culture.polish	Polish culture, Polish past, and Polish politics.
talk.politics.animals	The use and/or abuse of animals.
talk.politics.china	Discussion of political issues related to China.
talk.politics.drugs	The politics of drug issues.
talk.politics.medicine	The politics and ethics involved with health care.
talk.politics.mideast	Discussion & debate over Middle Eastern events.
talk.politics.theory	Theory of politics and political systems.
talk.politics.tibet	The politics of Tibet and the Tibetan people.
za.politics	Politics in Southern Africa

Amnesty International is at <http://www.amnesty.org/>, and **Greenpeace International** at <http://www.greenpeace.org/index.shtml>.

[The Fourth World Documentation Project](#) documents important documents about the social, political, strategic, economic and human rights situations being faced by Fourth World nations. They have a historical archive of the political struggles waged by Indigenous Peoples in the Americas, Africa, Europe, Asia, Melanesia and the Pacific to assert their rights as sovereign nations.

The European Union's Europa site has a "[European Governments on-line](#)" page. For the fifteen EU member states, it provides annotated links to the executive branch, Ministry of Foreign Affairs, and sometimes other important national civil service sites, as well as several unannotated links to other governmental bodies. For each of the non-EU nations, one annotated link is offered, generally to the main governmental server, executive branch, or Ministry of Foreign Affairs.

Ah, and then, we have: [The White House](#) (U.S.A.), [The Tasmanian Government Web Server](#), [the Australian Commonwealth Government](#), [The Government of Pakistan](#), [Iceland's Althingi](#), [the Japanese Government](#), [the Government of the Republic of Croatia](#), [Albania's Ministry of Foreign Affairs](#), and the [Ministry of Foreign Affairs of the Islamic Republic of Iran](#). For more, try <http://www.soc.umn.edu/~sssmith/Parliaments.html>.

Finally, take a look at the leads in [Chapter 9](#) and [11](#).

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Search:

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The Online World resources handbook

Chapter 5: Home, education and work

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House, garden and finances

Homeowners are logging on to solve their household problems. They check into conferences, forums, newsgroups, and mailing lists for feedback from contractors, architects, and fix-it experts on anything from broken ceiling fans and whistling dryers to rotting decks and other annoyances. They're seeking advice on anything related to house, garden, and finances.

[The CHIMNEYS-L mailing list](#) is about chimney maintenance. Topics of interest include fire prevention, safety issues, new products, trouble shooting, cleaning technics, and anything you can think of about the chimney cleaning industry.

The newsgroup [misc.consumers.house](#) on Usenet is where you can discuss anything related to owning and maintaining a house. For antiques, join a newsgroup in the [rec.antiques](#) hierarchy.

Several software libraries offer shareware and public domain programs to help you plan and maintain your house.

There are also personal inventory programs (to help you keep track of belongings), and programs to help you plan allocation of the space in your home. . .

Other programs will help you prepare tax return forms, plan next year's taxes, calculate interests and down-payments on your loans, and do double- entry money-management (personal book-keeping and checkbook balancing).

To succeed as a private investor, the experts say, you must have a strategy that is appropriate to your unique circumstances, resources for keeping up to date on investment options, and tools for managing the process of investing. It sure is an information-intensive activity and a constant learning process that requires the up-to-date, exhaustive, and anecdotal information that online services are perfectly suited to meet.

Usenet has several newsgroups under the misc.invest hierarchy. Browse them at [Google Groups](#).

House is also home. To bring more "life" into life, some devote themselves to fashion. For links to fashion-related Usenet newsgroups and mailing lists, visit <http://members.tripod.com/~cjlutz/Usenet.html>.

Others consider adopting a child. For information and experiences, check out [the ADOPTION mailing list](#).

Then there is television. [The Interactive Satellite Chart](#) covers all satellite TV channels worldwide with links to broadcasters' home pages.

Select your region of world for a list of reachable satellites. The regions are (1) Europe, Africa and Middle East, (2) North and South America, (3) Asia and South Pacific. Click on a satellite, like Hispasat at 30 degrees W, for a list of TV channels with frequencies, Web links, encoding schemes (if any), sound frequencies, and TV text information.

Some sample TV station pages:

- [Deutsche Welle](#) (Germany)
- [RTL-2](#) (Germany)
- [Swedish TV](#)
- [BBC](#) (United Kingdom)
- [Sky](#) (United Kingdom)
- [Travel Channel](#)
- [Discovery Channel](#)
- [Arte](#) (French/German)
- [Hrvatska Radio Televizija](#) (Croatia)

You will find "Die Tages-uebersicht aller Sender nach Genre" for European TV channels at [Pro Sieben Online](#). Categories include Spielfilm, Information, Unterhaltung, Sport, Serie, Musik.

Check [Zap2it.com](#) for links to your favorite TV show's home page and information. They offer thousands of links to popular programmes, most of them made in the US.

Some sample links:

[The Jeopardy Quiz Show](#)
[Late Show with David Letterman](#)

The Internet Movie Database is at <http://www.imdb.com/>. Addicted TV- viewers can follow [alt.tv.muppets](#) on Usenet, or some of the many other offerings in the alt.tv hierarchy of newsgroups. Read about how to get **that** book in [Chapter 10](#) if you would rather read mystery novels by the fire place.

Other cinema/movie resources:

- [traditional Turkish cinema](#)
- [Russian movie database](#)
- The cinemas of [China, India, Japan, Korea, and Taiwan](#)

WebMuseum features online exhibits at the world-famous art museum Louvre in Paris, France.

When we "visited," they offered French medieval art, a collection of well- known paintings from famous artists, and a tour around Paris, the Eiffel Tower and Champs-Elysees. There are also pointers to museums in other countries around the world.

Many of the pictures are large. "*The Cry*" by Norwegian painter and printmaker Edvard Munch was 110 KB in size, so if you have a dial-up connection and a slow modem to the Internet, it will take a while.

The French government has made its [JOCONDE](#) database of more than 130,000 paintings, prints, drawings, photographs, sculptures, and other pieces of art kept in over 60 museums throughout France available. The database can be searched by topic, artist, location, century, etc.

There are even offerings for "the perfect house wife." Personally, I can think of no better pastime than origami, the traditional Japanese art of folding paper. Try [alt.arts.origami](#). For images showing folded paper procedures/products, check out [alt.binaries.pictures.origami](#).

Oh, I almost forgot [The Internet BONSAI Club](#). Bonsai is the Oriental Art of miniaturizing trees and plants into forms that mimic nature. This conference is for the discussion of the art and craft of Bonsai and related art forms. On Usenet, try [rec.arts.bonsai](#). A FAQ on Bonsai is also available through the nets.

Join [CompuServe's Investors Forum](#) to learn how to play the stock and money markets, and other moneymaking 'instruments'. Discuss investment techniques with others, read reports about economical trends, and retrieve useful programs to use on your personal computer.

Buying computers and stuff

Each month, tons of articles comparing computers, modems, software and gadgets are being published. The good news is that you can find much such information on the Web. Internet's largest collection of free test reports are available through Ziff-Davis' [ZD Net search engine](#). Here, you can search all Ziff-Davis publications in one operation: Anchordesk, Computer Life, Computer Shopper, FamilyPC, Inter@ctive Week, MacUser, MacWeek, PC Computing, PC Magazine, Underground Online, Windows Sources, ZD 3D, ZD Internet Magazine, and Yahoo Internet Life.

A search using the term "seagate" (the hard disk manufacturer) found 320 documents (September 1996). All articles were available in full text. A search using "storage technology" found 9,786 documents. I expanded the term with

"storage technology" and prices

This means that the two first words are to be adjacent, and that the word "prices" is also required in

found documents. This gave 4,672 documents. Finally, I narrowed the query down to

"storage technology" and prices and comparative

The result was 2,155 documents. If you are interested in a specific product, add the name to the list to narrow the query further.

ZD Net's hit report lists the most relevant articles first. Ranging is reported as a percentage after the date. The report started like this:

<u>Magazine</u>	<u>Date</u>	<u>Title</u>
PC Magazine	03-26-96 100	PC Magazine: Server Power (03/26/96)
Computer Shopper	07-00-96 100	Pro Business
Computer Shopper	06-00-96 100	Shopper's Guide to Hard Drives: Room to Spare
Computer Shopper	06-00-96 100	Certified to Plug & Play
Computer Shopper	09-22-96 100	Disk Jockeys

At <http://www.pview.com>, ZD Net also offers a free, personalized news service tailored to include only your favorite topics. Here, you can track information on several subjects, issues, or companies, get relevant news and press releases from over 650 worldwide sources, get links to the most recent ZD Net articles on your favorite topics, and more.

You may also find [the Index to Multimedia Information Sources](#) interesting, and there is usually interesting things to be found in Usenet's FAQ texts. Search the contents of Web FAQ texts at [Planetweb Galactic](#).

There's a list of hardware-oriented newsgroups sorted by categories at <http://www.landfield.com/faqs/finding-groups/pc-hardware/>. Its categories include:

Networking/networks, PC Networking hardware/cards/cables, Home-built personal computers, Laptops & notebooks, Palmtops, Servers, Modems, Printers, SCSI devices, Other peripherals, PCMCIA devices, Acer, Dell, Gateway, Micron, Zenith, Zeos, Technical topics on PC soundcards, Discussion of forsale items (also Macintosh), Monitors/video cards, Modems/fax cards/communication, Hard/floppy/tape drives & media, CD-ROM drives & interfaces, Computer vendors & specific systems, System chips/RAM chips/cache, and Other hardware questions.

[The Boston Computer Exchange](#) is interesting if considering to sell or buy used computers. While those living outside the US may not be prepared to buy from them, it can help find price levels for use in local negotiations.

In some countries, computer prices are high while import duties are low. If this is the case for you, then there may be money to be saved by importing directly from the United States. My experiences are good.

Here are some Internet stores to check out:

- <http://www.internet.net>
- <http://necxdirect.necx.com:8002/cgi-bin/auth/docroot/index.html?nonce=guest>
- <http://www.powerexpress.com> Batteries for portable laptops, cellular phones, and camcorders.

Education, teaching and the exchange of knowledge

Use of modem is opening new worlds of opportunities for students, teachers, and institutions alike at all levels. The list of conferences, forums, clubs, and services focusing on education - in its broadest meaning of the word - is long.

No longer is it hard to find information about educational offerings. On the Web, one starting point is the international [College and University Home Pages](#). In March 1996, it listed 2500 links to universities in 73 countries. Mainly text. You can search by country or name. [The Study Abroad Programs](#) lists programs from over 725 institutions in 110 countries.

There are online courses, workshops, and seminars for students of all ages, databases to help you select a school for yourself or your kids, and all kinds of discussion forums for educators. For examples, check the online distance education catalog of [The Open University](#) in England. It offers undergraduate and post-graduate courses (some leading to M.Sc.) for study via the Internet.

There's a British ["Internet Learning Resources Directory"](#) page with special interest lists for the visually handicapped, foreign language resources, Internet demographics, and current awareness.

Usenet and the Internet have long traditions in education. There are offerings for teachers within all subject areas, from finance and accounting, through history, languages and geography to technical subjects on all levels.

[Wigglebits.com](#) offers a basic and easy-to-follow guide for teachers and students who want to construct a Website for their school or personal use. It covers topics such as a basic introduction to HTML, using a Web editor, standards, bandwidth, search engine placement, and animation.

This is a selection of other mailing lists to suggest the span of topics:

- [Civil Engineering discussions](#)
- [DRUGABUS](#) - Drug Abuse Education Information
- [The Lesson](#) - Contains over 30 pages of lesson plans, site and software reviews and computer education related content.

Here are some Usenet conferences:

- [comp.edu](#) Computer science education
- [sci.edu](#) The science of education
- [comp.ai.edu](#) Applications of Artificial Intelligence to Education

The [HOME-ED](#) mailing list is for discussion of all aspects of home education. This includes reasons for homeschooling, how to help a child learn to read, learning experiences of homeschooling families, and how to design or select a homeschooling curriculum. There's a home schooling resource page at <http://www.midnightbeach.com/hs/>.

[The EDUPAGE newsletter](#) is a twice-weekly summary of news items on information technology, provided by a consortium of colleges and universities "seeking to transform education through the use of information technology." Compact and informative. I like it! Typical example:

FROM CYBERSPACE TO OUTER SPACE

Internet users can now reach out and touch the Endeavour space shuttle, through NASA's Web site: <http://astro-2.msfc.nasa.gov>. Information available includes Endeavour's exact location over Earth, stellar observations by Astro telescopes and sky charts, crew and ground control team photos, snapshots of the cockpit, and taped conversations from four of the astronauts. More than 350,000 requests for shuttle information have poured in since Endeavour's lift-off last Thursday. (St. Petersburg Times 3/6/95 A1)

Edupage is translated into [Estonian](#), [French](#), [German](#), [Hungarian](#), [Spanish](#), and [Portuguese](#).

Here are some other interesting links:

- [Canada's SchoolNet](#)
- [U.S. Department of Education](#)
- [AskERIC](#) Educational Resources Information Center

You will find many similar offerings on the commercial services and free bulletin boards.

There are many private conferences in the online world. All conferences referred to in this book are open for anybody to join, unless explicitly told to be private.

Language learning

If you're looking for a dictionary, check [the handbook's chapter 10](#). Here, we will indicate the tons of language learning offerings on the Internet, including:

[BASQUE](#) -- Basque, Spanish, French, and English

Moderated discussion about Basque Culture and related topics. The list is mirrored to the [soc.culture.basque](#) newsgroup.

[The Vocabulary Builder](#) will help you to increase your Spanish Vocabulary. Select a group. Click at each picture to hear the Spanish word. All sound files are in the WAVE format. Categories include: Food, Transportation, Sports, Animals, Verbs, Days, Months, Clothing, Weather, Numbers, and Telling Time.

[CAUSERIE](#) -- French

For more in French, check [The Algerian Scientific and Technical Information Research Center](#) (CERIST).

[The Learning Chinese Online page](#)

[Kanji a day](#) is a free daily newsletter delivering a Kanji with few examples to your mailbox.

[GAELIC-L](#) -- Irish, Scottish, and Manx Gaelic.

[BTW-L](#) -- Italian

This is a "distribution-only" mailing-list for ByTheWIRE, a biweekly newsletter written entirely in ITALIAN that covers topics related to the global Internet.

[UN INDICE](#) suddiviso per soggetto dello spazio Web italiano. Italian.

[Tamil.Net](#) -- "to use the common interest in Tamil language and culture to unite Tamils from all over the world."

[The Spanish Language Page](#)

Information on dictionaries, grammar, translation, forums, literature, conferences, Spanglish, etc.

[WELSH-L](#) -- Welsh (also Breton, Cornish)

If English is a foreign language, reading interesting articles online is in itself a great master. Learning to write it, however, is not equally easy. Often, you find yourself trying to find a word that properly expresses your meaning.

The [English as a Second Language page](#) may be worth your visit. It has links to help on grammar, idioms, dictionaries, online conversation practice, listening training, and more. For more on English grammar, see www.edunet.com/english/grammar/index.html.

[Casey's Snow Day Reverse Dictionary](#) may not be able to help in such cases, but it is worth a try. It tries to determine matches between a query (the definition that you type in) and definitions in the dictionary.

For a starting point for resources of foreign languages to English, try [Human Resources](#). Languages covered include Arabic, Chinese, Czech, French, German, Hebrew, Italian, Latin, Middle English, Portuguese, Russian, Scandinavian Languages, South Asian Languages, Spanish, Swahili, Tagalog, Turkish, Yiddish, as well as links to other "foreign" language learning resources and home pages. [Languages Online](#) is worth checking out, and in particular if interested in Albanian, Chinese, Croatian, German, Italian, Latin, Polish, Russian, and Spanish.

For lists of Spanish language Web servers and Internet resources, try these pages

<http://mel.lib.mi.us/humanities/language/LANG-spanish.html>

<http://www2.mmlc.nwu.edu/mmlc/language/spanish/>

[The Human-Languages Page](#) is a super resource for anyone interested in foreign languages. Their database contains links to over 1.900 Internet resources about more than 100 different languages (2000).

It lists regional databases across the world where information about foreign language Web pages, mailing lists, and newsgroups is stored. It has links to Schools and Institutions, Linguistics Resources, Text & Book Archives, Languages and Literature, Commercial Resources.

Offerings include dictionaries (like "English-German Dictionary"), tutorials (like "Let's Learn Arabic," and "Travelers' Japanese Tutorial"), literature, other references and resources.

Languages covered include Aboriginal languages, Afrikaans, African, Arabic, Bulgarian, Catalan, Chinese, Croatian, Danish, Dutch, English, Esperanto, Estonian, French, Gaelic, German, Greek, Hawaiian, Hebrew, Indonesian, Hindi, Italian, Japanese, Klingon, Kurdish, Latin, Lojban, Mongolian, Maori, Native american languages, Nepali, Persian, Philippine, Polish, Portuguese, Rasta/patois, Romanian, Russian/eastern european, Sardinian, Scandinavian, Serbian, Slovak, Slovene, Spanish, Swahili, Swedish, Tagalog, Tamil, Thai, Tibetan, Turkish, Urdu, Viennese, Vietnamese, and Welsh.

For a competitor's offerings, check [Language and Translation links](#). You may also find the [Multilingual E-Translation Portal](#) interesting.

The Yamada WWW Language Guides offers a [Font archive](#), which gives access to downloadable fonts for a broad range of languages. It also has links to an annotated list of [language-related news groups](#), and to [language-related mailing lists](#).

Also, make a note about [The Ethnologue](#) for the languages of the world. This is a catalogue of more than 6,700 languages spoken in 228 countries. Its Name Index lists over 39,000 language names, dialect names, and alternative names.

These Chinese language-related information pages

<http://www.webcom.com/~bamboo/chinese/chinese.html>

<http://www.cnd.org:8022/WWW-HZ/WWWChinese.html>

[China Study Resources](#) (USA)

point to Chinese-language-related resources, has links to viewing and listening to Chinese on the web, language study courses, educational and viewer software, FTP sites, and more. If you really want to go there to learn Chinese Language, China Business (taught in English), and Martial Arts, check <http://www.worldlinkedu.com/>.

[Joyo'96](#) provides information about written Japanese online tutorials: 144-page katakana tutorial,

Japanese Ministry of Education's Joyo Kanji complete with etymology, stroke order, movies, and mood music. Links to books, software, and free stuff.

There's a [Teach Yourself Russian](#) page (requires installation of KOI-8 fonts) . The [Russian Dictionary With Sounds and Images](#) page has pictures of animals and food paired with Cyrillic text and recordings of a native speaker pronouncing the words.

If you understand French, and take an interest in "de la Francophonie," check out the Web pages of [l'Agence de Coopération Culturelle et Technique](#) (ACCT) in Paris. Try <http://stp.ling.uu.se/call/french/> for an online course in French.

Even if you're not in secondary school, you may enjoy [the Latin America Data Base](#). This resources for educators has several databases of lesson plans, resource materials, teacher partners, a photo archive of images of Latin America and the Caribbean, lists of links to embassies, and 100 other Internet sites dealing with Latin America or teacher materials. It covers various subjects, including Spanish, Social Studies, Science, Mathematics, Art and Language Arts.

[Language-Learning.net](#) has a Language Course Finder, a database of over 6,000 schools in 80 countries teaching 70 languages.

Learning online

takes different forms in different programs. In some, students simply read lecture notes and readings, and interact with their professors via email. In others, especially at the graduate level, the exchange of comments among students is the highlight of the learning experience.

Unlike students in face-to-face classes, online students usually have ample time to review "class discussion" and ponder their contribution before entering it. The result is often a high quality of interaction.

Example: Kidlink

Many parents and teachers regard the online world as a learning opportunity for their kids. Some of them turn to [Kidlink](#), a global service for youth through secondary school. This free service is operated by a grassroots network of volunteers.

The aim is to get as many youth as possible involved in a global dialog. To help youth build a global personal network.

Before joining the discussion, each youth must respond to the following four questions:

1. Who am I?
2. What do I want to be when I grow up?
3. How do I want the world to be better when I grow up?
4. What can I do Now to make this come true?

The kids can write in any language. [Click here](#) for further instructions.

Once they have submitted their responses, they are invited to 'meet' the others in one of the many KIDCAFE forums. There, they can discuss anything from pop music to how it is to live in other countries. The cafes are split up by language. There are cafes in many languages, including English, Portuguese, Japanese, Spanish, Icelandic, and Norwegian. Click here for a glance at the action:

English: <http://listserv.nodak.edu/archives/kidcafe-individual.html>

Portuguese: <http://listserv.nodak.edu/archives/kidcafe-portuguese.html>

The service also has forums for collaborate projects between schools, a private "chat" network (IRC), an art gallery, and support forums for educators. Schools all over the globe integrate it with their classes in languages, geography, other cultures, history, environment, art, etc.

[Kidlink](#) grew from an idea in 1990 to children participating from 176 countries (by November 2006). The work is supported by a multi-lingual platform for collaboration and [public mailing lists](#).

Gateways to knowledge

Visit [The United Nation Publications's CyberSchoolBus](#) site. Imagine the United Nations as a vast land of resources you can travel through. You can stop on the way and pick up information on water pollution or on housing and urban problems, you can drop in at any one of the four major UN conferences, say the one on population held in Cairo, or you can visit all of the peace-keeping sites around the world. You can also take a tour of the UN and then stop by the bookstore to order instructional materials, charts and posters.

[Exploring Ancient World Cultures](#) is interesting to students of all ages. This introductory, online, college- level 'textbook' of ancient world cultures is constructed around a series of pages consisting of: The Ancient Near East, Ancient India, Ancient Egypt, Ancient China, Ancient Greece, Ancient Rome, Early Islam, and Medieval Europe.

The home pages contain essays by subject specialists, an anthology of readings from the period, a chronology, bibliographic resources, hypertext links to related sites, and computer graded

quizzes. You can also navigate the site by topic across cultures. You can click on a year and culture, and then another culture, to compare cross-cultural developments of the same period.

We dived into Ancient China, retrieved the chronology of rulers, and got lost in pictures of the Great Wall. Did you know that it is over 5,000 kilometers long?

The [Gateway to World History](#) page has links to documentary archives, and online resources. You can search for resources by keyword or by subject.

Here are some other places to try:

[African History - African Cultures](#)

[Ancient history search engine](#)

<http://www.msstate.edu/Archives/History/>

[Discovery Channel Online](#)

[EMuseum](#)

[Geography](#), and [Country Rankings and World Statistics](#)

[History of China](#)

[History of India](#)

[Plant Image Gallery](#)

[Rulers](#) - lists of heads of state and heads of government going back to about 1700.

[The European Schoolnet Schools Projects](#)

[Questacon](#) is a hands-on science centre in Canberra, Australia.

Study, reference, and research link categories on [Study Web](#) include: Agriculture, Animals & Pets, Architecture, Business & Finance, Communications & Media, Computer Science, Criminology, Delete, Education, Family Science, Fine Arts, Geography, Government & Politics, Grammar & Composition, Health & Nutrition, History, Home & Garden, Literature, Math, Medicine, Mental Health, Metaphysics, Music, Philosophy, Reference, Religion, Science, Social Studies & Culture, Teaching Resources, Transportation, Writing & Writers.

Parenthood

The [misc.kids](#) newsgroup is for parents, soon-to-be parents, and others interested in children. They discuss issues about pregnancy and child rearing, ask for advice from others on many parenting concerns, and seek and provide support and encouragement about raising kids. Check the Kids FAQ at <http://www.cis.ohio-state.edu/hypertext/faq/usenet/>

The [alt.parents-teens](#) newsgroup is for parent-teenager relationships. [TWINS](#) is a mailing lists for issues related to twins, triplets, etc.

Your personal network

Network is a word with many meanings. It can be a system set up to transport data from one computer to another. It can be an online service with many conferences, and a friendly connection between people (like in "old boys' network"). Here, we use it in the latter meaning of the word.

We use our personal networks more than most of us think. We have a chain of people who we call on to ask for advice, help, and invite to participate in projects or parties. When they ask us for help, we lend a hand.

The online world has some interesting characteristics. One is that most participants in online conferences already have received so much help from others that they feel obliged to pay back. They do this by helping others.

Those who help, know that helping others will be rewarded. The reward, however, may not come from the persons that they help. The contributions help maintain and develop the online world as one giant personal network.

A typical example: In [CompuServe's](#) Toshiba Forum, I read an open message from a user who had bought a 425 megabyte hard disk for his laptop computer. I also wanted one, but before placing an order, I wrote to check if he was still satisfied with the unit.

The happy user did more than reply. He told about other vendors and offered to help return my computer after the upgrade. He made it clear that he had no financial interest in the companies selling the upgrade. By the way, we had never been in touch with each others before that date.

The online world is full of such examples. The list of what people do to help others is indeed very long.

In most conferences and forums you'll get help. Just like that. There is always someone prepared to help. Still, it is wise to invest to increase the odds of getting quality help when you really need it. This is what to consider:

Your best long range strategy is to be visually present in conferences that matter to you. 'Being visually present' means that you should contribute in discussions and help others as much as you can. You see, **positive** contributors get a lot more friends and a disproportional amount of help from others.

For example, you may contribute by telling others about your interesting finds in the online world. Keep that up over a stream of weeks or months, and you may find that others start sending you things, quite unprovoked.

Helping others is what it takes to build a personal network. One day you may need it. It will give you an incredible advantage! I have seen people get jobs, partners and clients through such contacts. The online world is full of opportunities.

Watch your words

Written communications are deprived of the body language and tone of voice that convey so much in face-to-face meetings and even in telephone conversations. Therefore, it makes sense to work harder to build in humor, sarcasm, or disagreement to avoid that your words come across as stupidity, rudeness, or aggressiveness.

One way of defusing misunderstanding is to include cues as to your emotional state. One technique is to use keyboard symbols like :-). We call them emoticons (Emotional icons. Pictorial representations of the emotions of the moment).

What :-) means? Tilt your head to the left and look again. Yes, it is a smiling face.

Here are some other examples to challenge your imagination: ;-) (Winking Smiley), :-((Sad), 8-) (User wears glasses), :-o (Shocked or surprised), and :-> (Hey, hey).

A bracketed <g> is shorthand for grin, and <g,d&r> means grinning, ducking, and running. Some people prefer to write their emotional state in full text, like in these two examples: *grin* and *evil smile*.

Do not misunderstand. You still should not allow yourself to write the most appallingly insulting things to other people, and then try to shrug it off with a <smile>.

Watch your words. They are so easy to store on a hard disk.

Religion

Usenet offers

soc.culture.jewish	Jewish culture & religion.
soc.religion.christian	Christianity and related topics.
soc.religion.eastern	Discussions of Eastern religions.
soc.religion.islam	Discussions of the Islamic faith.
talk.religion.misc	Religious, ethical, & moral implications.
alt.pagan	Discussions about paganism & religion.
alt.religion.computers	People who believe computing is "real life."
clari.news.religion	Religion, religious leaders, televangelists. (Validation required for access to Clarinet .)

[ISLAM-L](#) is a non-sectarian forum for discussion, debate, and the exchange of information by students and scholars of the history of Islam. For links to software, FTP archives, and network resources such as online academic conferences and newsgroups related to Islamic topics, check <http://www.islamicity.org/>. [MUSLIMS](#) is The Islamic Information & News Net, and there is a [Muslims Internet Directory](#).

At <http://www.the-quran.com/index.html>, you can have the entire Holy Quran (the Koran) recited over the net. It is also available for downloading. There is also a link to translations into English. For other translations, see <http://www.arabiaweb.com/religion/quran.shtml>

[The Buddhist Studies WWW Virtual Library](#) is a comprehensive directory of Buddhism. It has links to sources of information about Buddhist studies networked resources, major Buddhism WWW sites, Buddhist texts and translations, databases, newsletters and journals, organizations, art, and more.

[The Rangjung Yeshe Tibetan-English Dharma Dictionary](#) is a compilation of Buddhist terminology and translation terms to bridge the Tibetan and English languages. [The Dictionary of East Asian Buddhist Terms](#) is a digital dictionary containing over 5000 terms from Chinese, Japanese and Korean Buddhism.

For Hinduism or Sanatana Dharma, check [Hindunet](#) and [Dharmacentral.com](#).

[The Catholic Kiosk page](#) is devoted to cataloging Catholic resources on the Web. Links include parish and diocese information, educational and research resources, prolife pointers, and subject menus on various Catholic subjects. [The WWW Bible Gateway](#) offers seven translations of the book in six languages, and a contents search service.

For **Scientology**, try http://www.scientology.org/scn_home.htm.

[BELIEF-L](#) is where personal ideologies can be discussed, examined, and analyzed.

[PAGAN-HOME](#) is for those wanting to explore paganism and neo-paganism.

You can search the Book of Mormon, the Quran, King James' Bible, the BUDDHA-L mailing list, and other religious resources at http://www.ub2.lu.se/auto_new/auto_39.html. For more, check the [Virtual Religion Index](#) at Rutgers University, and this [Religions](#) page.

Philosophy, etc.

Check [The Chinese Philosophy Page](#). For more links to Su Tzu, Kong Fu Zi - Confucius, Tao, Lao Tze, Chinese Classics, and other old Chinese masters, take a look at <http://www.gac.edu/oncampus/academics/philosophy/lchinese.html>.

The talk.religion.newage newsgroup focuses on esoteric and minority religions & philosophies. Yogabasics.com offers a basic introduction to yoga and its history, an illustrated guide to yoga postures, introductions to and links for information on Pranayama and the seven Chakras, free yoga .mp3s, free yoga music radio, and a forum. The Kundalini Yoga web site is at <http://www.kundaliniyoga.org/>. If you know what New Age is about, then try [The New Age Directory](#) for a long list of links.

Job-hunting

Unemployment is a global problem, and losing a job is usually a bad experience. Job-hunting is the solution. If you have a job, you may be looking for something better.

There are many forums and conferences devoted to job-hunting. If your potential employers have an email address, you can send dozens of job resumes - while reading the newspaper!

The Web service at <http://www.discribe.ca/yourhbiz/howto/helpint.htm> offers **"Helpful Hints for Home Businesses."** You may also find these Web resources interesting:

<http://www.overseasjobs.com/resources/>

<http://www.dbm.com/jobguide/>

<http://www.washingtonpost.com/wp-adv/classifieds/careerpost/parachute/parafram2.htm>

Home based business opportunities may exist within areas such as desktop publishing, desktop video, high-tech equipment repair, import and export management, and professional practice management. Learn from others in forums or conferences on related topics.

For some, the biggest challenges of being out of work is losing that day-to-day contact with the people in their industry. The online world is an excellent way to stay in touch. Whatever your industry, there are places online to hang out, learn the latest developments and stay connected.

Being a member of an online forum does not mean that you are overtly looking for a job - an activity that your current employer may not appreciate. By being there, however, you have put yourself out there to be discovered. The discovered candidate is always more interesting than one who sends in his resume along with 300 other applicants' resumes.

The good news is that many organizations are also having problems finding qualified candidates for their vacant positions, and that some of them are turning to the online world for help. This is what one of them did (from an online announcement):

Because it is difficult to locate qualified candidates for positions in special libraries and information centers, and to help special librarians and information specialists to locate positions, the student chapter of the Special Libraries Association at Indiana University has formed a LISTSERV, SLAJOB, in connection with the Indiana Center for Database Systems.

The LISTSERV, available on both the Internet and Bitnet, will help special libraries and information centers in the sciences, industry, the arts and within public and academic libraries to have a central location for announcing special library and information science positions.

The LISTSERV is available to individuals or organizations that have an Internet or Bitnet network connection. For those on the network, subscribe by sending an email message to:

listserv@iubvm.ucs.indiana.edu

Leave the subject line blank and then type the following in the message of the text:

subscribe SLAJOB [firstname] [lastname]

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Illustration by [Anne-Tove Vestfossen](#)

Search:

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The Online World resources handbook

Chapter 6: Your personal HealthNet

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- [The Visible Man](#)

Health is a concern in most families. Where a family member or a friend is suffering from cancer, AIDS, a serious disability, or a rare disease, finding help is urgent.

Fortunately, there are many sources of information for those who want to know more.

First, you should check out the online world's health-related clubs and forums. In these, you can meet others with a given disease or problem 24 hours a day. Those who cannot sleep at night, are free to log in any time to "talk" with others.

The members of these forums often feel part of a community. As in communities everywhere, people share both the good times and the not-so- good times. Many online communities have pulled together during crises, sharing the grief caused by the death of a fellow forum member, a loved one of a member or, occasionally, a celebrity.

While the social aspect of joining a forum is important, it may be equally important to learn about other people's experiences with alternative treatment methods, doctors, medicines, and to get practical advice.

Second, you should check out Usenet's Frequently Asked Questions texts on medicine-related topics. The FAQs represent information that newsgroup participants find essential in their disciplines. For example, the diabetes FAQ presents collected wisdom about diabetes resources. Read about how to retrieve these texts in [Appendix 6](#) (under FAQ).

Here are some examples to illustrate the width of the offerings in the online world:

Emergency medicine

Practicing First Aid without proper coaching can be as dangerous as not doing it at all. A little knowledge can be a dangerous thing! The tips found on these links are not meant to be a substitute for attending a professional First Aid Course!

- <http://www.redcross.org/hss/facpr.html> (General)
- <http://www.familyinternet.com/babycare/dkfirsta.htm> (Babies)
- <http://www.pe.net/%7Eiddpc1/emergenc.htm> (Dental)

AIDS

[The U.S. National Institute of Allergy and Infectious Disease home page](#) is a rich resource of AIDS related information. **The World Health Organization's** Global Programme on AIDS is at <http://www.unaids.org/>, and the Official **American Medical Association's** (AMA) AIDS resource at <http://www.ama-assn.org/special/hiv/hivhome.htm>.

[EGIS](#) claims to be the largest HIV/AIDS web site in the world. Its **Today's HIV News**, also available via email subscription, provides the latest news on treatment, statistics, policy, and research.

This Hong Kong page at <http://www.iohk.com/UserPages/mlau/aidshome.html> has general information on AIDS, treatments and infections information, organizations, many links, etc.

Usenet has newsgroups like [sci.med.aids](#) (AIDS: treatment, pathology/biology of HIV, prevention), [bionet.molbio.hiv](#), [sci.med.aids](#). For more information, see <http://www.aids.wustl.edu>.

HIVNET is an international network for HIV and AIDS information and discussion. For information, try one of these links

<http://www.hivnet.nl/>
<http://hivnet.fhcrc.org/>

Example: Kidney disease

In [Chapter 1](#), I told you that my wife has a rare disease called Polycystic Kidneys. Let me provide more details about what happened during the "online health trip" to CompuServe with her doctor:

The command "GO HEALTH" gave us the following menu:

1. HealthNet
2. Human Sexuality
3. Consumer Health
4. NORD Services/Rare Disease Database
5. PaperChase (MEDLINE)
6. Information USA/Health
7. Handicapped User's Database
8. Disabilities Forum
9. Aids Information
10. Cancer Forum

Another menu, listing available "PROFESSIONAL FORUMS," had choices like AAMSI Medical Forum and Health Forum. We also searched several medical databases.

Menu selection five gave us The National Library of Medicine's database (MEDLINE), full of references to biomedical literature.

This database had more than five million references to articles from 4,000 magazines from 1966 and up to the time of our search (1991). In 1994, it had grown to seven million references. Easy navigation by menus. Easy to search.

Those with no medical training may find it difficult to understand the information retrieved from [MEDLINE](#). If this is the case for you, consider using databases of consumer health information, such as HealthNet or Health Database Plus on [CompuServe](#).

The AAMSI Medical Forum (MedSIG) is sponsored by The American Association for Medical Systems and Informatics (AAMSI). It is for professionals within health care, people within associated technical fields, and ordinary CompuServe users. Its members meet to find, develop and swap information.

MedSIG has a library with programs and information files. This is an example of what you can find there:

ATLAS.ARC

21-Sep-88 30161

Keywords: STEREOTAXIC STEREOTACTIC STEREOTAXIS
ATLAS THALAMOTOMY MAP FUNCTIONAL GIF

This contains several of the most useful stereotaxic maps from the Schaltenbrand and Wahren Atlas in GIF format. If you can get GIF into your CAD or drawing program, you can scale the maps to fit your individualized patient's AC-PC distance, thereby generating a customized map for your patient.

CompuServe offers many programs for reading GIF files, and converting GIF files to other graphical formats.

Through IQuest, we searched medical databases. Simple menus helped define relevant search terms. When done, IQuest searched selected databases for us, and presented the selected articles on our local computer screen.

We used the "SmartScan" search mode in the "Medical research" area. IQuest searched several databases with a minimum of manual intervention.

First, it reported that the following databases would be included in the search:

BRS databases:

- Ageline - Contains references to and abstracts of materials on aging and the elderly. Covers psychological, medical, economic, and political concerns.
- AIDS Database - Includes critically selected articles covering all aspects of AIDS, (Acquired Immune Deficiency Syndrome), and AIDS-related research.
- AIDS Knowledge Base - Provides an online textbook of the most current information on AIDS available from San Francisco General Hospital.
- Combined Health Information Database - For professionals, patients, and the general public, CHID contains references to a variety of materials on arthritis, diabetes, health education, digestive diseases, and high blood pressure. Provides abstracts.
- Embase - Includes extensive abstracts of articles related to biomedicine from medical journals worldwide. About 40% of the references are online only.
- Rehabdata - Covers articles, books, reports, and audiovisual materials dealing with the rehabilitation of the physically and mentally handicapped. References only.
- Sport Database - Indexes publications dealing with sports, including training, medicine, education, and history. Drawn mostly from English and French with technical articles from other languages.

Dialog databases:

- BioBusiness - Deals with the business aspects of biotechnology and biomedical research. Draws from BIOSIS and MANAGEMENT CONTENTS.
- BIOSIS Previews - Provides international coverage of all aspects of biological science.
- Cancerlit - Monitors articles from journals and other technical publications dealing with all aspects of cancer research throughout the world. Includes abstracts.
- Clinical Abstracts - Covers human clinical study articles of major importance selected from leading medical journals. Includes all aspects of clinical medicine. Corresponds to Abstracts in Internal Medicine. Abstracts available.
- Life Sciences Collection - Abstracts technical literature in the life sciences from journals and other scientific publications worldwide.
- Medline (1966 - to date) - Indexes articles from medical journals published worldwide. Corresponds to Index Medicus, International Nursing Index and Index to Dental Literature. Includes abstracts in roughly 40% of the records.
- SciSearch - Monitors worldwide literature across a wide range of scientific and technological disciplines. Produced by the Institute for Scientific Information (ISI).

Next, we entered our search term: "LIVER AND CYST/". The search word "CYST/" signified "cyst" should match any words starting with these four characters.

While searching, IQuest gave the following progress report:

```
Scanning BRS databases.

Accessing Network.....Completed.
Accessing Database Host.....Completed.
Logging on.....Completed.
Logging on (second step)....Completed.
Selecting Databases.....Completed.

Each period equals one line
of scanned data. This may take
several minutes.....
```

It reported in the same way while "Scanning Dialog databases."

When the search results were presented, we quickly browsed the article abstracts, ordered two articles to be sent us by mail, and typed BYE.

CompuServe reported "Off at 09:12 EST 17-Nov-88 Connect time = 0:35." The two articles arrived in Norway by mail a few weeks later.

The trip, including visits in medical forums, took 35 minutes. The cost, including local telephone and network charges, was US\$95. Of this total cost, the extra cost of searching through IQuest amounted to US\$54.00. We all felt that the costs were well justified.

A note about costs: The online tour was done manually, using full menus. We discussed our search strategy while connected. This is more expensive than logging off to plan the next moves. Also, note that the extra cost of searching IQuest (\$54) was not time dependent. Note that the cost of doing an equivalent search today may well be lower.

Since then, I first promised to donate one of my kidneys to her when the time came. This prompted me (in 1993) to join a mailing list for "Organ transplant recipients and anyone else interested in the issues" ([the TRNSPLNT mailing list](#)).

In October 1995, came D-Day. We were both enrolled at the Rikshospitalet in Norway. Her two kidneys were taken out, and my left kidney was put in there instead. The time at the hospital was critical, and we almost lost her. However, in late spring things started slowly to pick up again!!

If you're facing a transplant, visit [The TransWeb](#) - Transplantation and Donation page. It is well- informed and useful with information of interest to patients as well as professionals.

Alcohol

Has your life been affected by someone else's drinking? [The Al-Anon & Alateen WWW Server](#) is offered by a world-wide organization for the families and friends of alcoholics. Alateen is for teenagers.

If you are concerned about someone else's drinking, or were raised in an alcoholic home, then this resource may be for you. It offers a self-help recovery program for families and friends of alcoholics whether or not the alcoholic seeks help or even recognizes the existence of a drinking problem. Information is provided in several languages.

Cancer

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Anyone can get cancer. Since incidence rises with age, most cases affect adults in mid-life or older.

Researchers estimate that if everything known about the prevention of cancer was applied, up to two-thirds of cancer could be prevented (source: The American Cancer Society).

Subscribe to the [CANCER-L](#) discussion list. A while ago, a member from Brazil

posted the following message on CANCER-L:

"A close friend was just diagnosed with acute leukemia of a type called calapositive pre-B linphoplasic. It is supposedly an early diagnosis since he is not anemic. We are very shocked but he is reacting quite bravely and all he wants is to have access to literature on his condition. Are there any new genetic engineering developments effectively clinically available? What is the present state of knowledge about this specific form of leukemia?"

He was diagnosed three hours ago, is 48 yrs old, and will start chemotherapy tomorrow. He was informed that chemotherapy is quite effective in this type of leukemia. But we wonder if there isn't a possibility to use gene therapy.

Any help will be greatly appreciated. - Dora."

Dora had several helpful replies. This came from the United States:

"In response to the request for information on treatment for leukemia, I recommend that you access CancerNet, the National Cancer Institute's mail server on the Internet which provides current information on treatment for leukemia. To request the Contents List and Instructions, send a mail message to

cancernet@icicb.nci.nih.gov (Internet address)

Leave the subject line blank, and in the body of the mail message, enter HELP. When you receive the Contents list, request the statement for Adult Acute Lymphocytic Leukemia (cn-101024).

There are also News and General Information items, under the Heading PDQ Database Information in the Contents List which provide information on centers which have access to Physician Data Query, NCI's database of cancer treatment information which includes clinical trials information for leukemia. - Cheryl."

Chronic Myelogenous Leukemia Online Support Group is an information list and online support group for patients, caregivers, and medical professionals.

CancerNet is the U.S. National Cancer Institute's international information center. It offers a quick and easy way of getting recommended treatment guidelines from the National Cancer Institute's Physician Data Query system. Languages are English and Spanish. Check these links:

<http://cancernet.nci.nih.gov>

<http://www.icic.nci.nih.gov/icichome.htm>

<http://imsdd.meb.uni-bonn.de/cancernet/cancernet.html> [Germany]

Other links:

National Cancer Center, Japan

International Agency for Research on Cancer (IARC) in France

The World Health Organization (WHO)

The International Union Against Cancer - in English and French

OncoLink

The German Cancer Research Center

(Deutsches Krebsforschungszentrum) - in German and English

healthfinder - in Spanish and English

Check **Breast Cancer Information Clearinghouse's** *After Diagnosis: Common Questions & Expectations of Cancer Patients and Their Families.*

Oncology Tools - hosted by the US Food and Drug Administration (FDA) Center

for Drug Evaluation and Research - offers information related to cancer and approved cancer drug therapies for consumers, patients, and health care professionals.

[The Medical Information Archives](#) links to an index of archived messages from Usenet groups dealing with cancer.

The Online **Leukemia** Support Group is for for patients, caregivers, and professionals who are interested in and involved with all types of leukemia. Archives of Leukemia can be accessed from <http://www.rwneill.com/publishing/> and <http://reference.com>. See <http://www.egroups.com/list/leukemia/info.html>.

You should also check the [HEM-ONC](#) listserv site.

Diabetes

The patient oriented [Diabetes FAQ](#) has been collected among members of the [misc.health.diabetes](#) newsgroup. Also, check these resources:

[Diabetes Symptoms](#)

<http://www.ability.org.uk/diabetes.html>

<http://www.diabetic.org.uk/index.htm>

<http://www.niddk.nih.gov/tools/faq.htm>

[The Diabetes News Page](#) provides the latest news on diabetes and related subjects, and has informative links. [Diabetic World](#) provides information on English and Spanish.

[The DIABETIC mailing list](#) is where diabetic patient can exchange ideas, comments, gripes, fears, or whatever, related to his or her condition. Expect to find lots of "real world" accounts about living with diabetes.

Disabilities

Online conferences give equal access to all persons. Everybody is treated the same way, regardless if they sit in a wheel chair, have a hearing impairment, stutter, cannot speak clearly, have difficulties in thinking or acting quickly, or just have a different looks.

You need not worry about typing errors. Those who read them will never know whether it is because you never learned how to write on a computer, or if it is because you have difficulties in controlling your movements.

You alone decide if others are to know about your personal disability. If you want it to be a secret, then it will remain a secret.

Nobody can possibly know that you are mute and lame from the neck and down, that computer communication is your main gate into the outer world, and that you are writing messages with a stick attached to your forehead. Therefore, joining the online world has changed the lives of many people with disabilities.

Computer communications have opened a new world for those who are forced to stay at home, or who thinks that it is too difficult to travel. Those who can easily drive their car to the library, often have difficulties in understanding the significance of this.

Usenet has [alt.education.disabled](#). It covers all areas of disabilities, technical, medical, educational, legal, etc. [CompuServe](#)'s Disabilities Forum has sections called: General Interest, Develop. Disabilities, Emotional Disturbances, Hearing Impairments, Learning Disabilities, Vision Impairments, Mobility Impaired, Rights/Legislation, Education/Employment and Family Life/Leisure.

The [AUTISMTALK](#) mailing list is devoted to the developmentally disabled, their teachers, and those interested in this area.

The [BLIND-L](#) list focuses on "Computer Use by and for the Blind." [BLINDFAM](#) is for blind people and their families. Sighted people are welcome to take part if any member of their family has a visual impairment.

[DEAF-L](#) is the "Deaf Discussion List," and [DEAFBLND](#) the "Deaf-Blind Discussion List."

[DEAF-MAG](#) is a weekly Deaf Magazine. The Central Institute for the Deaf is at: <http://cidmac.wustl.edu/>, and there's a [Deafdigest](#).

[BACKS-L](#) discusses research on low back pain disability. You'll find many disability-related information and links at <http://www.eskimo.com/~jlubin/disabled.html>,

and interesting information at the [Back and Neck Pain](#) site.

[ADVOCACY](#) is a discussion list dedicated to addressing the issues of people with disabilities in bettering their lives and protecting their rights.

Here are some Web sites devoted to the blind and disabled:

<http://www.nfb.org/default.htm>

<http://www.rit.edu:80/~easi/>

The Internet Mental Health Resources home page (Canada):

<http://www.mentalhealth.com/>, and the US National Institute on Mental Health [resource page](#).

[LD OnLine](#) offers information on learning disabilities, learning disorders, attention deficit disorder, ADD, ADHD, dyslexia, dysgraphia, dyscalculia, dysnomia, speech disorder, reading difficulties, special education, parenting, teaching, psychologists, pediatricians. [The Down Syndrome site](#) informs about symptoms, treatments, causes and incidence..

Drugs

For information about drugs, check <http://www.links2go.com/more/http://www.drugtext.org/>. It offers an abundance of links to information about drug abuse, drug dependence, and about drugs like Amphetamines, Cannabis, Cocaine/Crack, Ecstasy, Ketamine, LSD, Nitrites/Poppers, Opiates/Heroin, Solvents, Steroids, Tranquillizers.

Emotional support

There are over 200 resources on the Internet offering emotional support. Areas covered include Abuse, Addiction, Anxiety and panic, Attention Deficit, Broken Relationships, Divorce, Depression, Loneliness, Obsessive- Compulsive, Personality Disorders, Schizophrenia, Low Self Esteem, Suicide, etc. Examples

- [The Panic-Anxiety Page](#)
- [healthfinder](#) (in Spanish and English)
- [The American Foundation for Suicide Prevention](#)

If you are already addicted to the Internet, click for "[Netaholics Anonymous](#)."

Getting old

Ageing is focused at <http://alpha.genebee.msu.su/agenews.html>. The page has links to [bionet.molbio.ageing](#), [sci.life-extension](#), and archives of old postings at BIOSCI/bionet.

[The Alzheimer's disease - What's New](#) page brings summaries of the most recent research and news updates. The [Arthritis](#) page is set to help people manage osteoarthritis, rheumatoid arthritis, and the many different forms of this disease.

[Agerline](#) is a database produced by the American Association of Retired Persons. It does an excellent job covering research about older persons, particularly on consumer issues and health care, by summarizing journal articles and the contents of other published reports.

While our "face-to-face" world sometimes makes it difficult for older people to participate in discussions between young people, this is not the situation in the online world. All people are treated the same way. It is impossible for others to know your age, unless someone tells them.

Getting fertile

[The Atlanta Reproductive Health Centre](#) informs about women's health issues such as infertility and endometriosis. An online book for couples describing infertility treatment

is included. A photo gallery illustrates various problems that result in pelvic pain and infertility. Various surgical treatments are shown. Text and graphics explore the latest in high-tech fertility options.

Headache

[ACHE - Understanding Headache](#) is worth a visit for sufferers. Understanding the problem is the first step towards solutions.

The [Migraine](#) page provides answers to: What is a Migraine Headache? How is it treated?

Herpes

"In the U.S. alone, an estimated 40 million adults have genital herpes, and 50 million might have oral herpes (cold sores)," said [the Herpes Education page](#). It covers symptoms, diagnosis, transmission, treatments, medications, self- help, pregnancy, recurrences, current research, personal experiences, diet and nutrition, products, and have pointers to other Web sites.

Also, visit <http://www.racoon.com/herpes/> for more information and links on treatment, support, research.

Complementary and alternative medicine

The US National Institute of Health's **OAM Complementary and Alternative Medicine (CAM)** [Citation Index](#) consists of more than 90,000 bibliographic citations from 1966 to 1997, obtained from the National Library of Medicine's Medline database. Users may perform a search of the bibliographic data or browse through citations organized by CAM system, disease, or method.

"Healthcare in India" offers [Holistic Healing](#), a 20-part series on the ancient art of holistic healing and mind-body integration.

[HOLISTIC-L](#) is dedicated to "providing information and discussion on holistic concepts and methods of living which provide a natural way of dealing with the challenges of life." Here are some topics dealt with in this forum:

- Various Dimensions of Holistic Healing and Health
- States of Consciousness
- Meditation and the role it plays in spiritual/physical health
- The impact of a healthy diet - including Herbs and Vitamins
- Bodywork - such as Rolfing, Trager bodywork, Reichian, etc.
- Acupuncture/pressure
- Hypnosis and Biofeedback
- Visualizations and Affirmations
- Spiritual Healing - Psychic healing methods
- Bioenergetics
- The holistic connection between mind and body
- Honest discussion of topics relevant to personal/spiritual growth - And anything else within context for the betterment of the world.

The following message is typical:

From: Helen Subject: Re: Asthma and Sinus Problems To: Multiple recipients of list HOLISTIC

My condolences to fellow people allergic to cats. Cats and strawberries are two of the most allergenic substances. Behavioral changes have proven to be EVERYTHING to me. The techniques I've employed have helped many others. First, try sleeping at a 45 degree angle. This usually requires piling up pillows. The elevation of the head facilitates drainage from the sinuses. When the situation gets really bad, I've slept sitting up on

a couch or arm chair propped up by numerous pillows and cushions. This technique can take some getting used to, but, it works like a charm and is kinder to your system than drug therapy.

Second, try Ephedra tea. This is an herb found in Chinese herb shops. Ask the herbalist how to prepare it.

I highly recommend the book Natural Health, Natural Medicine by Andrew Weil, M.D. of U of A Med School in Tucson. See pages 253-256 for more information on asthma.

Fourth, stay hydrated. This means not only drinking PLENTY of fluids, but humidifying the house (that is if you are not also allergic to molds).

Basic behavioral techniques are important....diet, exercise, etc. etc, ...but this is the holistic network...I'm preaching to the choir...

Finally, take heart! Being allergic to cats is not well received by cat lovers...often we're cat lovers ourselves. Depending on the breed of cat, there is a good chance you will eventually habituate to those you are around over the long term. Good luck, the advice about sleeping with your head significantly elevated is the best I have ever given out to fellow sinus problem sufferers. It really works!!

Helen.

HomeoNet, a service of the Institute of Global Communications (IGC), is for those interested in homeopathic medicine. [The Homeopathic Internet Resource List](#) is a catalogue of net resources on Homeopathy.

Also, you may want to check these sites:

<http://www.people.virginia.edu/~pjb3s/ComplementaryHomePage.html>

<http://www.cc.emory.edu/WHSC/medweb.html>

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

http://dir.yahoo.com/health/alternative_medicine/

[Islamic Medical Manuscripts](#) is an illustrated, online catalog of essays on featured texts accompanied by thumbnail images, physical descriptions, provenance, and additional resources.

Weight loss

[The Diet-bflo mailing list](#) is for the discussion of Weight Loss issues -- Sure, there is **NO** one way that is perfect for everyone, and the members share ups and downs and in-betweens.

List of health information resources

Browse [Internet Clinical Medicine resources](#), and check [Medterms.com](#) when you encounter an unknown medical term (classic or contemporary).

The [Michigan Electronic Library](#) maintains some interesting links to resources such as Dictionary of English Medical Terms, Multilingual Glossary of technical and popular medical terms in nine European Languages, and A Dictionary of Alternative-Medicine Methods.

[Medscape](#) offers free searching of the National Library of Medicine's MEDLINE abstracts database, and lots of information and news in full text for practitioners and health care consumers.

[OMNI](#) is a gateway to Internet resources in medicine, biosciences, health care and health management. You can browse and search the comprehensive list of United Kingdom resources or the best resources from around the World.

At <http://www.people.virginia.edu/~pjb3s/Acupuncture.html>, you'll find a comprehensive list of acupuncture links.

Here are some resources that may be of interest to people not working in the health

profession:

- [ALLERGY](#) About all types of human allergies - how allergies influence our health and lifestyles, treatments for allergies from the consumer perspective and experience, self-help prevention of allergy symptoms, allergy self-care, allergy support systems, and basic facts. Related topics also include hives, sinusitis, asthma, itches, eczema, rashes, sinus, nasal and respiratory difficulties, mastocytosis, etc.
- [AMALGAM](#) Mercury Poisoning from Dental Amalgam
- [BEHAVIOR](#) Behavioral and Emotional Disorders in Children.
- [HERB](#) Medicinal and Aromatic Plants discussion. Make sure you also visit <http://sunsite.unc.edu/herbmed> for databases containing a wealth of interesting information.
- [SPORTSPSY](#) Exercise and Sports Psychology.
- [talk.abortion](#) About abortion.
- [MALARIA](#) a forum for anyone wishing to ask, preach, or communicate on the general subject of malaria.

These mailing lists often save all messages in log files, and let you search these files for topics of interest. Thus, they are both living discussion forums and interesting searchable databases!

[Mednews](#) is a weekly electronic newsletter. Its columns bring regular medical news summaries from USA Today, Center for Disease Control MMWR, weekly AIDS Statistics from CDC, and more.

[The World Health Organization](#) provides access to world health statistics, WHO press releases, full text of selected WHO publications and more .

You can easily find where to find information about different health topics provided by the U.S. National Institutes of Health (NIH) by using the irsearch service at <http://search.info.nih.gov/>.

Other health related links

[The MEDLINEplus Medical Encyclopedia](#) contains over 4,000 articles and medical images organized in eight topical sections: Disease, Injury, Nutrition, Poison, Special, Surgery, Symptoms, and Tests.

[The Ear, Nose, and Throat Manual](#) offers general information regarding some of the more common diseases in ear, nose, throat such as: ear infections, ear tubes, tinnitus, nasal obstruction, rhinitis, nosebleeds, sinusitis, sinus surgery, endoscopic sinus surgery, septoplasty, tonsillitis, adenoid hypertrophy, tonsillectomy, snoring, adenoidectomy, obstructive sleep apnea, uvulopalatopharyngoplasty, hoarseness, head and neck cancer .

[AllAllergy.net](#) is a metasite of resources on allergies, asthma and food intolerance.

The [ChiMed](#) webpage functions as a clearinghouse for scholars who study the **history of medicine in China**.

[CYSTIC-L](#) is a free email service dedicated to the exchange of information and support specific to cystic fibrosis. An extensive Cystic-L Handbook is available on-line (contains much CF information, and references to other CF resources).

Information about the **Hepatitis B** Information and Support List can be found at <http://hbv.web-page.net>.

[Multiple sclerosis](#) - MS is the site of the International MS Support Foundation. Hundreds of articles and links. For those with MS, their family, and friends. Also, check this [portal to MS information](#).

Diarrhoea: <http://www.bdf.org.uk/leaflets/diarrhoe.html>. Medline Plus has a comprehensive [psoriasis](#) resource.

[The US National Center on Sleep Disorders Research](#) (NCSDR) offers information on sleep disorders and related resources for both the general public and the scientific community. [Talkaboutsleee.com](#) is an Internet sleep information community providing

information about sleep and sleep disorders with chat support, and message boards, and articles.

Many additional health and medicine links: <http://www.HealthAtoZ.com/>
[The Disability and Medical Resource Directory](#) covers disability *products*, medical *products* and resources for the disabled, elderly, caregivers and healthcare providers.

Smoking

The [No Smoke Cafe](#) supports people recovering from addiction to cigarettes. It is for anybody with an interest in quitting smoking or in helping others quit. The [NOSMOKE](#) mailing list is for "*support to people who want to quit smoking cigarettes, cigars or stop using smokeless tobacco products. It is for people who want to quit, are already quit, or anyone supporting a significant other who would like to quit.*"

(Avoid Usenet's [alt.smokers](#) - about "Puffing on tobacco," [Cigarsoft.com](#), and the [Cigar Intelligence Agency](#).)

The U.S. National Heart, Lung, and Blood Institute (NHLBI) has their Web home page at <http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm> For comprehensive information about cardiology, coronary care, angioplasty, heart attack, stroke, vascular disease, tachycardia, angina, cholesterol, blood pressure, heartburn, atherosclerosis, hypertension, see <http://www.hearhome.com/>.

Red Cross and Red Crescent

The International Federation of Red Cross and Red Crescent Societies has a presence at <http://www.ifrc.org/>. The International Committee of the Red Cross (ICRC) is at <http://www.icrc.ch>.

Computers and health

Oh, yes! Almost forgot **Repetitive Stress Injury** (RSI). You may know it as typing injury. Start by browsing [The Typing Injury FAQ](#) document, then follow the leads.

The **RSI Newsletter** is for people who suffer from keyboard related injuries. It is regularly posted to the [SOREHAND](#) mailing list, for Discussion of Carpal Tunnel Syndrome, Tendinitis, etc.

There is a [Chronic fatigue syndrome / Myalgic encephalomyelitis](#) Web page, an interesting [Carpal Tunnel Syndrome](#) page, and a [Co-Cure](#) mailing list - "the Chronic Fatigue Syndrome and Fibromyalgia Information Exchange."

If you have even the slightest pain in your arm or shoulder that could be related to your use of a computer, check out these leads. Personally, I lingered too long, and it took me over nine months to be reasonably well again.

Act now!

The Visible Man

For 3-dimensional digitized images of the human body, point your browser at http://www.nlm.nih.gov/research/visible/visible_human.html. Beware! While these pictures are very interesting, they are also big. You may also want to try [Human Anatomy On-line](#).

If you need more, visit [Galaxy Net's Medicine](#) page. It contains several subject areas as well as powerful search engines tied to specialty and subspecialty areas. Galaxy searches Internet documents and offers listings tied to specialty areas and topical interests.

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Search:

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The Online World resources handbook

Chapter 7: Electronic mail, telex, and fax

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Electronic mail is **the most popular** application of online services, and its usage is growing at a phenomenal rate.

Way back in 1994, BIS Strategic Decisions (USA) forecasted over 25 billion email messages for the coming year, more than twice the number for 1992. By one estimate, over a trillion email messages were sent during 1996.

Oh, well. [Messaging Online](#) reported 891.1 million email accounts globally at year-end 2000, up 67 percent on the previous year. Over 451 million of the total for 2000 were outside the US. In the early 1990s, there were 15 million email accounts in the world. At the end of 2000, [IDC Research](#) estimated that 10 billion emails were being sent every day.

If a given email service charges you US\$30 per hour, it will cost you a meager US\$0.075 to send one typewritten letter (size A-4, or around 2,200 characters). On the Internet, the cost is almost negligible for most users. See [Chapter 15](#) for a breakdown of

this cost.

If you live in Norway, and send the letter by ordinary mail to a recipient in Norway, postage alone is US\$0.63 (2001). The cost is seven times higher than when using email through a commercial email host. Using the Internet, the postal charges are ridiculously high.

To send the same letter from Norway to the United States by ordinary mail will cost 11 times more than commercial email. The letter takes several days to reach the destination, while email messages arrive almost instantly.

You can send email to several recipients in one operation without paying extra for the pleasure. Compare with the costs of sending to several recipients by fax!

You do not have to buy envelopes and stamps, fold the sheet, put it into the envelope, and bring it to a mailbox. Just let the computer send the letter.

The recipient does not have to sit by the computer waiting for your mail. It will be automatically stored in his electronic mailbox. He can read it when he has time.

The recipient can print it locally. It will be a perfect document, no different to one typed locally. He can correct, make comments, and email it onwards to a third party. In this way several people can work jointly on a report. There is no need for you to re-type the text from scratch.

When you receive several messages, you can quickly create replies to them one at the time at your keyboard, and send them in one go. No need to feed five different pieces of paper into a fax machine or envelopes for five different people.

Where you can find a telephone, you can also read mail. In most countries, communicating by email is easy and economical.

The simple but miraculous thing about email is that you can easily and exactly quote the point to which you are replying. It is truly a revolution in communication.

Some online services have a limit on the size of your mailbox. If you receive a lot of mail, you must regularly read and make room for new. If your mailbox is full, new mail may be rejected without warning. You may never know that a person tried to reach you. Select a service that has room for all your mail!

A special warning to those with their email programs set to "Leave mail on server," and "Skip messages over xx K in size." Unless you regularly delete mail from server, your mailbox will become full without you even knowing the reason!

Email for free

Many services on the Internet will let you do email for free - or almost free - in exchange for the right to put an advertisement on every page you read. Here's some popular US providers: [Hotmail](#), [USA.NET](#), [RocketMail](#), [MailCity](#), [Juno](#), [MailExcite](#), [iName](#).

They let you read mail using a standard web browser. All you need is access to the web, at a library, at school, at work, on an airport, an Internet cafe. Anywhere. You get email without having to pay for an account with an Internet Service provider!

[HushMail](#) uses a Java applet to encrypt (with 1,024-bit encryption) and decrypt messages sent between users with HushMail accounts.

Hint: Most these services require that you must be connected to the net while reading and replying. Those using a dial-up modem, may find this expensive. - Outlook Express as of version 5.0 lets you read and reply to mail offline ("web mail"). You dial up to send and receive, then hang up your phone. Read and reply at your own pace, and reconnect to send and check new mail when ready.

If you insist on using a service where you must be connected to the net while reading and replying, select an international service if your main application is use while travelling abroad. Else, you will find it **cheaper and easier** to use a local service. To find a service, try the [Free Email Providers Guide](#).

Beware: Many email-for-free services will give you more disk space for your mailbox, but it will cost you. "No need," you might think. However, you should think again. If you get a lot of spam mail, then a few days absence from your mailbox might

fill it up. When full, mail to you will be rejected. You wouldn't want that, right? One solution is to pay for more space...

How to send email?

Many users just "talk" with an email program to send and receive mail. Internet users of programs like Eudora (my favorite) and Pegasus Mail may compose mail **before** calling the access service. They click on a "write new mail" icon, enter an email address, a subject, write the text, and click at Send.

When all outgoing messages have been composed, they logon to the Internet. Their mail is sent in one batch, and incoming messages are simultaneously retrieved. Interaction with the online service is transparent to the user. Simple. Safe. Quick. Cheap. (see [Chapter 16](#) about automatic email programs).

CompuServe users of programs like OzWin or TAPCIS do it in a similar way, but they can also do it manually. Other systems require different commands to send email.

On some Unix system, mail may be sent using the following type of commands:

1. Type "mail presno@eunet.no".
2. When the computer asks for "Subject:," enter "Hello, my friend!"
3. Type your message, or send a pre-prepared text.
4. When done, enter a period (.) in the beginning of a line, and the message is on its way.

Though commands for sending email differ by system, the principle is the same. All systems will ask for an address, and the text of your message. On some, the address is a code, on others a name (like ODD DE PRESNO). The same applies to the email programs.

Most systems and programs will ask for a Subject title, and let you send copies of your mail to other recipients (Cc:).

Some let you send binary files as email. Binary files contain codes based on the binary numeration system. Such codes are used in computer programs, graphics pictures, compressed spreadsheets, word processed text files, and sound files.

Some email programs let you send mail in web format (formatted in html). This lets you make your mails very beautiful, and you may include photos and clickable links to web pages in a practical way.

Make sure the person you are writing to can receive such emails, or risk confusion at the other end. Also, when including links to web pages, be careful about punctuation - especially periods - right after a web address. Include a space before the punctuation, or risk that the program at the other end thinks that that last period after the URL is part of the URL. Also, you should also include the **http://** part of the web address.

Example: You want to write: "You are advised to look up www.kidlink.org." Write: "You are advised to look up <http://www.kidlink.org>."

To make sure everything comes across fine, always put URLs on a separate line. Some URLs are so long that they will get split into two lines in your message. To increase the chance that a long URL will be interpreted by the other person's program, it may help if you put the link in brackets (<>), as in <<http://www.kidlink.org>>.

Mail through the Internet

Internet's core network has gateways for electronic mail to systems on many other networks. When we include these systems and their connections, we call it the Matrix, or WorldNet (more at [Appendix 1](#)).

If you read this handbook, you probably already have access to the net. If you want to check your options, take a look at the links in the appendix "[Services offering access to Internet](#)".

If you are on the Matrix, you can send email to users on networks like UUCP, CompuServe, MCI Mail, EcoNet, PeaceNet, ConflicNet, GreenNet, Pegasus, AppleLink, Alternex, UUNET, PSI, Usenet, FidoNet and many others.

When people talk about this phenomenon, they often refer to it as "Internet mail," even if they are just using the Internet as kind of a telephone exchange.

Let us take a closer look at the art of addressing mail through the Internet and the Matrix.

Finding a friend's email address

The best method of finding a friend's email address is usually to call your friend and ask. Many people have several mailboxes. Only by asking will you find out which mailbox is being used!

So, you don't know the telephone number? Try <http://www.contractjobs.com/tel/>. This site offers links to online telephone, fax, and business directories around the world.

Sometimes, the information provided by a recipient is not enough. Maybe the address needs an extension for mail to be routed through gateways to the destination?

Typically, the syntax of the address is wrong. Perhaps you made a mistake, when you wrote it down (KIDCAFE-TOPICS became KIDSCAFE- TOPICS).

The return address in the received messages' mailer headers may be wrong. Yes, this happens surprisingly often. It may use a syntax that is illegal on your email system, or suggest a routing that is unknown to your system. When trying to send a reply to this address, the Mailer-Daemon complains: "This is a non-existent address."

Again, the first person to contact for help is your local postmaster. On many Internet hosts, this is simple. If you have a mailbox on the ULRİK computer at the University of Oslo, send your request to postmaster@ulrik.uio.no. If you are on COLNET in Buenos Aires, send to postmaster@colnetr.edu.ar.

POSTMASTER is also the address to turn to on BITNET. Users of FidoNet or RelayNet, write to SYSOP.

There are hundreds of "whois-servers" around the world. The systems whois.nic.ad.jp and whois.ripe.net cover Japan and Europe. Others provide information about local users. (For a list, see <ftp://sipb.mit.edu/pub/whois/whois-servers.list>.)

Note: You need to know the exact address of your recipient, and whether he is using this mailbox regularly. **Many users have mailboxes that they use rarely or never.** Also, think of the easiest way for a recipient to respond before sending a message to him or her.

Directories of subscribers and services

While many hosts let you search lists of local users, no complete global directory of available electronic addresses exists!

Several services on the Internet offer help. My favorite is [the Usenet address database](#). It is also accessible by email to mail-server@rtfm.mit.edu. To query, put the following in the body of your text:

```
send usenet-addresses/[name searching for]
```

The "name" should be one or more space-separated words for which you want to search. Since the search is "fuzzy" (that is, all the words you specify do not have to match), you should list all words you think might appear in the address, including first and last name, possible username, and possible parts of the host name. The case and order of the words you list are ignored. (Send the command "send usenet-addresses/help" to this address for more information.) Example:

```
send usenet-addresses/odd de presno
```

X.400 systems use an address directory according to ITU-TSS standard X.500 that connect several directories. The developers hoped that routing of X.400 messages may eventually be done automatically without the user needing to know the identity of the recipient's mailbox computer. However, it never became a big success.

The Lightweight Directory Access Protocol (LDAP) was introduced as an alternative to X.500 to become "the comprehensive Internet wide e-mail address directories of the future". It is a subset of the Directory Access Protocol (DAP) used to

build X500-based directories.

Information contained in LDAP databases include vital data such as name and e-mail address, and may include supplemental data including address, phone, fax, and even the person's public key which can be used to encrypt messages the user is sending them. For more information, see [the LDAP home page](#).

Supplement by checking the "[How to find people's E-mail addresses FAQ](#)".

Domain name addressing

On the Internet, the general form of a person's email address is:

```
user-name@somewhere.domain
```

My main, international Internet mailbox address is:

```
presno@eunet.no
```

Read the address from left to right. First, the local name of the mailbox (my name abbreviated). Next, there is sometimes the name of the mailbox system or another identification code (previously, I had "login" in this position of my mail address), followed by the name of the institution or company (here "EUnet, a Norwegian Internet provider), and finally the country ("NO" for Norway).

People have sent mail to my mailbox from New Zealand, Zimbabwe, Guatemala, Peru, India, China, Greece, Iceland, and Armenia using this address.

Some of them had to send their mail through a gateway to the Internet, and the address sometimes had to be changed accordingly:

Users of AppleLink used `presno@eunet.no@INTERNET#`. Those on JANET used `presno%login.eunet.no@eanrelay.ac.uk`. On SprintMail, they used ("RFC-822": `<presno(a)login.eunet.no>, SITE:INTERNET`) . CompuServe subscribers used `INTERNET:presno@eunet.no`. (These procedures may have changed now!)

The core of these address formats is "presno@eunet.no," in one way or the other.

We call the core addressing format a Domain Naming System. "EUNET.NO" is a domain. The domain may also contain reference to the name of a company or organization, as in `compuserve.com`, `twics.co.jp`, or `IGC.ORG`. The `.CO`, `.COM`, and `.ORG` codes identify IGC, [TWICS](#), and CompuServe as companies or organizations.

To send mail from the Internet to my CompuServe mailbox, use (do not expect a reply, as I'm rarely there!):

```
75755.1327@compuserve.com
```

Normally, a domain address can only contain one @- character. When an address has to be extended with gateway routing information, replace all @-characters to the LEFT in the address by %- characters. Here is an example:

```
USER%SYSTEM.BITNET@CUNYVM.CUNY.EDU
```

The rightmost @ in this address is maintained. The one to the LEFT has been replaced with a %. The term ".BITNET" tells the gateway machine where to forward the message.

The following used to happen with this address: First, the message was sent to system CUNYVM at the EDUcation site CUNY. CUNYVM investigated the address, and discovered that it was for BITNET. It cut off all text to the right of "USER," and replaced the % with an @. The message was forwarded to mailbox USER on the BITNET system SYSTEM. Replace USER and SYSTEM with your real addressing data.

How to get a personalized domain name?

*If you're a small business, you may like to have a personalized domain name like the big ones. Microsoft uses **microsoft.com**, IBM uses **ibm.com**, HotBot uses **hotbot.com**, and it sure would be nice to have your own **yourname.com**.*

For cost-efficient ways of getting a personalized domain name, check

out [the email-for-free services](#). [USA.NET](#) is one vendor.

Non-Latin characters

"Foreign" characters, they call it in some places. Internet experts call it Extended Character Sets. Those of us with a regularly need to write or read in other languages than English, might simply call them The Challenge.

In 1982, when email was defined, the decision was made to encode email in such a way that only 128 different characters - letters, numbers, punctuation, and so on - could be transmitted from one computer to another. We are still suffering from this decision! It means that many people have difficulty sending and receiving mails containing characters like ä, ç, and Ø, to mention a few.

The good news is that there is a way of encoding data so that [256 different characters can be represented](#), called "quoted-printable".

The bad news is that the underlying transport is still limited to 128 different characters, so the email gets converted to the more limited set, transmitted, then (hopefully) converted back on the other end. If the receiving software doesn't know how to do quoted-printable, the extended characters will show up as an equals-sign and two letter/digit code as in this Spanish language text:

Ah=ED van mis saludos y mis =E1nimos para ti y para todos los = argentinos. Sigo desde hace tiempo con preocupaci=F3n lo que pasa en = vuestro pa=EDs. Me sabe mal que tengais que pasar por =E9sto y me siento = impotente, sin saber qu=E9 hacer. No perdais la esperanza ni la = confianza en un futuro mejor.

Finally, even if your friends' email programs know how to convert codes back to extended characters, different computers have different symbols for the same codes. For example, the trademark symbol, bullet, and "curly" quotation marks are all legal characters in both Windows95 and MacOS, but are in different places in the character set. For example, Windows thinks that character number 241 is a ñ, while the Mac thinks that character number 241 is a Ö.

Anonymous mail

Some day, you may want to send a message anonymously. Try [Hushmail](#), designed by hackers for total security. The mail message's headers are gone. Nobody knows where or who you are.

Internet's Anonymous re-mailers will also let you do that. Check <http://anon.efga.org/~rlist/rlist.html> for a list of servers and directions.

Then, visit the [alt.privacy.anon-server](#) and [alt.anonymous](#) newsgroups for more on anonymous email.

Things Take Time!

How long does it take a message to get from Hyougo in Japan to Saltrod in Norway? To Dominique Christian in Paris?

Sometimes, mail travels from mailbox to mailbox in seconds. This is usually so with messages from my mailbox in Norway to Dan Wheeler in U.S.A. and Mike Burleigh in London.

Messages that must go through many gateways may take more time. How long it takes, depends on the degree of automation in the mail systems involved, and how these systems have been connected to the global matrix of networks.

Speed is high if the computers are interconnected with fixed, high-capacity lines. This was not so for my mails from Oslo to Dominique in Paris. Although the Paris is relatively close, mail was routed through a system in London, and then forwarded only once a day through a dial-up connection. My mails usually took at least one day to reach the destination.

Returned mail

Once you have learned the basics of Internet mail, it is relatively easy. However, be ready for some glitches and hiccups due to incompatibilities between email systems, gateways, protocols, clients, etc. While this is not an "Internet problem" by itself, it will look like one.

Returned mail is one of the results. When an email address is incorrect in some way, the mail system will **bounce** (route) the message back to the sender. Reasons may be that the system's name is wrong, the domain does not exist, or because there was some configuration problem on the receiver's end. This also happens if the receiver's mailbox is full.

The most common error is addressing mail to a non-existent account name or network address. For example, I have seen many users trying to send mail to `LISTSERV@VM1.NODAK.EDU` using `LISTSERV@VML.NODAK.EDU`. When the address is written in lower case letters, a user may easily interpret the number "1" in the address as the letter "l". Alas, the result is an error message.

Let us construct an error when sending to `LISTSERV@VM1.NODAK.EDU`. Let us send a mail to `"pistserv@VM1.NODAK.EDU"` instead, which is a wrong address.

The good news is that **the returned message will include the reason for the bounce**. Below, you will find the full text of the bounced message. It contains much technical information, and most lines have no interest. Also, the message is much larger than the original message, which contained three lines only.

When browsing the bounced message, note that it has three distinct parts: **[1]** The mailer header of the bounced message itself (here, the 13 first lines), **[2]** The text of the error report (from line 14 until the line "Original message follows:"), and **[3]** the mailer header and text of your original message (as received by computer reporting the error):

```
From MAILER@VM1.NoDak.EDU Fri Dec 18 12:54:03 1992
Return-Path: <MAILER@VM1.NoDak.EDU>
Received: from vml.NoDak.edu by pat.uio.no with SMTP (PP)
id <07610-0@pat.uio.no>; Fri, 18 Dec 1992 12:53:54 +0100
Received: from NDSUVM1.BITNET by VM1.NoDak.EDU (IBM VM SMTP V2R2)
with BSMTP id 9295; Fri, 18 Dec 92 05:53:27 CST
Received: from NDSUVM1.BITNET by NDSUVM1.BITNET (Mailer R2.07)
with BSMTP id 3309; Fri, 18 Dec 92 05:53:26 CST
Date: Fri, 18 Dec 92 05:53:26 CST
From: Network Mailer <MAILER@VM1.NoDak.EDU>
To: presno@eunet.no
Subject: mail delivery error
Status: R
```

Batch SMTP transaction log follows:

```
220 NDSUVM1.BITNET Columbia MAILER R2.07 BSMTP service ready.
050 HELO NDSUVM1
250 NDSUVM1.BITNET Hello NDSUVM1
050 MAIL FROM:<presno@eunet.no>
250 <presno@eunet.no>... sender OK.
050 RCPT TO:<pistserv@NDSUVM1>
250 <pistserv@NDSUVM1>... recipient OK.
050 DATA
354 Start mail input. End with <crLf>.<crLf>
554-Mail not delivered to some or all recipients:
554 No such local user: PISTSERV
050 QUIT
221 NDSUVM1.BITNET Columbia MAILER BSMTP service done.
```

Original message follows:

```
Received: from NDSUVM1 by NDSUVM1.BITNET
(Mailer R2.07) with BSMTP id 3308;
Fri, 18 Dec 92 05:53:25 CST
Received: from pat.uio.no by VM1.NoDak.EDU
(IBM VM SMTP V2R2) with TCP;
Fri, 18 Dec 92 05:53:23 CST
Received: from ulrik.uio.no by pat.uio.no with local-SMTP (PP)
```

id <07590-0@pat.uio.no>; Fri, 18 Dec 1992 12:53:24 +0100
 Received: by ulrik.uio.no ; Fri, 18 Dec 1992 12:53:18 +0100
 Date: Fri, 18 Dec 1992 12:53:18 +0100
 From: presno@eunet.no
 Message-Id: <9212181153.AAulrik20516@ulrik.uio.no>
 To: pistserv@VM1.NODAK.EDU
 Subject: test
 index kidlink

The first part of the bounced message is usually of no interest. Hidden in the second part, you will find the following interesting line:

```
554 No such local user: PISTSERV
```

Ah, a typo!

If your original message was long, you are likely to be pleased by having the complete text returned in the third part of the bounced message. This may allow you to solve the problem with a quick cut and paste, before resending to the corrected address.

The text and codes used in bounced messages vary depending on the type of mailbox system you are using, and the type of system that is bouncing your mail.

Above, MAILER@VM1.NoDak.EDU returned the full text of my bounced mail. Some systems just send the beginning of your original text, while others (in particular some X.400 systems) just send a short note telling the reason for the bounce.

Note: If you don't understand why a message bounces, contact your local postmaster for help. Send him a copy of the full text of the bounced message up to - and including - the line "Subject:" at the bottom. (There is no need to send him the TEXT of your original message! Just the header information.)

Returned due to error in contents

When you write a message to a real person, you may usually write your text any way you want. However, not so when the recipient is a computer program, like a LISTSERV, or a World Wide Web by email server.

Example: Often, users can fine tune the way they use electronic mailing lists by sending an email to some administering host computer. On LISTSERV-based lists, the command "set kidlink index" may help fight information overload. However, the command should be written starting in your mail's line 1, column 1. If the text starts with something else, chances are that you will get an error message rather than the requested change of setup.

Many users access the Internet through gateways from a company's internal mail system, and some of these mailers insist on adding extra information to the text, like in this Swedish example:

```
Microsoft Mail v3.0 IPM.Microsoft Mail.Note
Fr }n: Johan Svensson
Till: TOW
Ang}ende: Message headers
Datum: 1994-07-23 19:39
Prioritet:
Brev-ID: FE0257B9
Konversation-ID: FE0257B9
```

If the mail system's administrator is unable or unwilling to let you send Internet mail without extra headers, then you may have problems. To get around it, check if it is possible to send your message as a file.

How do I know my message is received?

On some networks, it is outright impossible. On others, you can request that an automatic acknowledgement be returned, when your mail has been received.

Internet users can often have their mailer add a **Return-Receipt-To: <sender's email address>** line to the mail headers.

*Replace **Sender's email address** by your real address.*

Some mailers allow users to automate this. The final MTA (message transfer agent) will then send a "received" receipt to the specified address.

Receiving email

Most users receive their email in a storage area at an Internet service provider, or some other kind of remote mailbox provider. To receive mail, they either ask their email programs to retrieve new mail, or have their systems set to receive new emails automatically once they arrive in their remote mailbox.

Some remote systems use special transfer methods, typically called [POP](#) or [IMAP](#). Others require that you connect to a remote web site, like hotmail.com, where you may read your mail using a web browser.

If you are moving from computer to computer, or are not getting so much mail, then using a mail server on the web may be practical. If you receive a lot, using other methods may be more efficient.

Attachments

Many mail programs support "attachments", where you can specify a document to send through email. This allows you to share essentially any file in any format, it be Word documents, GIF-encoded images, JPEG-encoded images, Photoshop files, Excel spreadsheets, voice files, executable files, whatever.

Note that if your correspondent's email program doesn't understand attachments, and you send a non-text file (like a Word document or a photo), it will appear as long mail filled with garbage.

Your correspondence must have software to view the file you send, like a PDF viewer for PDF files. Even executable programs will not always be useful to your correspondent unless you both have the same kind of computer. She must have enough free space on her disk to receive your file, so ask first if it is huge. It is usually better to post large documents on the Web and send the web address instead of the file.

Personally, I am **very cautious** about running any executable program unless I'm able to firmly establish that it is from a reliable source. There are so many programs containing viruses being circulated these days.

Some email programs let you configure your system to receive emails using a variety of encoding schemes (MIME, BinHex, UUencode), and to put text attachments in the body of your text. Personally, I use MIME encoding, and have decided not to put text attachments in the body of the text [for security reasons](#).

You may find the [Email MIME Test Form](#) useful when trying to find a way out of the maze.

Web links in messages

Some email programs will recognize web addresses in incoming messages and make them "live". They let you click at a link in your email program, your default browser will be opened, and show the page on your screen right away. Some programs, like Eudora, may be set to request confirmation before taking you there. This may be a time saver for those communicating by modem.

Some programs will automatically retrieve information and elements (like a photo or an illustration) from the web, include it in the body of your mail, and record the action in a database somewhere. Some email programs let you turn off this feature, something which may be useful for dial-up modem users.

The bad news is that when you allow information to be automatically included in the body of your mail, then you are also permitting a remote person to record your actions. It allows him to know if you opened his mail, and retrieve private data about

you in the process.

Privacy

The level of online privacy differs by network, service, and application. Whatever a service may claim, always expect that someone, somewhere, can watch, even record.

All mailbox services have at least one person authorized to access your personal mailbox in case of an emergency. Most of the time, they do not have a right to read your mail without your permission, but they can.

In some countries, mailbox services may let outsiders (like the police) routinely read your private email to check for 'illegal' contents. Here, email is not safer than ordinary mail.

The good news is that most 'inspectors' and 'sysops' are good, honest people. On the other hand, it is useful to know the situation.

It is **not** safe to send sensitive information (like credit card details) by private electronic mail. True, the chance of an outsider getting hold of and take advantage of such information is very small, but it is not safe.

On the Internet, it is child's play for someone to intercept your mail. The typical email message travels through many computers. At each computer, people may access your personal and business correspondence.

On the other hand, with so much mail traveling the network, it is **highly** unlikely that they will, but they can.

Encrypt your email to protect sensitive information. Encryption will also guarantee the identity of the sender of a message, a most useful attribute when financial transactions are involved.

The **PGP** (Pretty Good Privacy) software has become the Internet standard for encryption of email and files so snoops cannot read them. For more information on encryption, check

<http://world.std.com/~franl>

<http://www.isoc.org/internet/issues/encrypton/>

<http://www.chem.swin.edu.au/~graeme/pgp.html>

Sometimes, we need to be certain that a message was written by the sender quoted in the mail's message header. As it is child's play to send an Internet message carrying other people's return email address, and name, you may want to use PGP to make sure the correspondence is authentic.

For this reason, be very skeptical if you ever get a message purportedly from your Internet access provider telling you to change your password to "k00l/d00d!"

One simple trick to check if correspondence is authentic: If in doubt, investigate the mailer header. It shows step by step how an incoming mail has travelled through the net, with a time stamp at each level. If it seems to come from somewhere else, be sceptical. You will not be able to track all jokers in this way, just the more obvious cases.

Privacy is also a concern when talking in the open. Always assume that someone is recording all that is being said in online conferences, chats, and other interactive social gatherings. In chats, anyone using a personal computer as a terminal can log the conversation, or use screen dump to capture 'interesting parts'.

Many PC users can scroll back the screen. They can wait and decide whether to save the conversation in a file until after the conversation has taken place. With these capabilities widely available, users of chats and talk should always assume that their conversations are being recorded.

Do not say indiscreet things in small, informal discussions. Others may record and repost it under embarrassing circumstances. An unauthorized forward of your private correspondence is extremely easy, and completely outside your control!

Some people routinely use anonymous remailers when sending email to Usenet newsgroups or persons to make sure that the recipient (and snoops) cannot tell their real name or email address. Personally, I never use these services, but note that some do.

You may be at the receiving end. For more on anonymous mail, check out the alt.privacy.anon-server newsgroup.

The files RFC 1113 through 1115 are about '[Privacy enhancements for Internet electronic mail](#)'.

Usenet has [alt.privacy](#) (Privacy issues in cyberspace), [alt.security.pgp](#), [comp.society.privacy](#), [comp.security.pgp.announce](#), [comp.security.pgp.tech](#), [comp.security.pgp.discuss](#), [comp.security.pgp.resources](#), and more.

Junk mail

Junk mail, also called **spam**, is one of the curses of modern society. Spam is email messages that you never asked for, unsolicited commercial mail **distributed to many people simultaneously**. Typically, they contain advertising of some product, service, business, scheme, Web-site, etc. Sometimes, such mail promote political ideas.

Junk mail takes time to retrieve, browse, and delete, one by one. It distracts. For some, it may grow out of proportions, and become a major nuisance. Most users must pay to receive it, to a local phone company or an Internet service provider.

What to do? If you get on someone's mailing list, you can ask the sender to take you off that list. This may help a little, but not much! There are too many spammers out there. Besides, now the unscrupulous sender will know that your address is valid, and you will undoubtedly received more of the same!

Personally, I delete them, and keep quiet. My communications costs are low, and it takes too much effort to get off that list.

Others go a long way to protect themselves by being wary of giving out their email addresses, and of subscribing to newsgroups and mailing lists. However, sadly enough, the only 100 percent effective method is to close your mail account, and open another one. Then you should safe, but only for a while...

If you're at all active on the net, your address will be picked up by spammers. It's so easy! Programs like Email Magnet can scan Web sites, newsgroups, and chat channels to retrieve any string looking like an email address.

When you buy online or ask for information about something, your email address usually ends up in a database. Many online vendors sell their collection of addresses to others with information about what browser you are using, the domain you are calling in from, etc. Others consolidate your data with information from hundreds of other databases, each having some other bits of information about your use of the net, preferences, buying habits, etc.

List brokers offer megabytes of lists or CD-ROMs full of addresses to anyone willing to pay. Organizations and individuals offer to send spam mail to names in their private databases. For a fee, of course.

Filtering is option. Most modern email programs have a filtering function that lets you automatically send spams to Trash. They'll filter out mail from given senders, and if they find certain strings in the subject title or the body of the text.

Example: Some dangerous virus distribution schemes are set to send dangerous code in seemingly empty messages. They exploit a hole in the way .html is being displayed in email messages.

To delete mails that are obviously hostile, I let my email program ([Eudora Pro](#)) search the body of the incoming mail for the string `</iframe></BODY></HTML>`, and send them directly to trash.

Another filter searches headers of incoming mails for **aol.com** (some hostile mails have this in common), and marks mails containing this string **red** in the list of incoming mails. In this way, it is easy for me to delete mails that are evidently unimportant, or if needed, to investigate their contents in a more careful way.

Finally, consider using non-Microsoft email programs like Pegasus Mail or Eudora Lite (both are free. This will make you less exposed to these risks. Don't open unlikely looking mail, like a message from the tax man with the subject "I love you". It almost certainly contains the infamous "I love you" virus. Don't forget that you can get viruses in attached Microsoft Word documents, too.

Spam stoppers are used to prevent hostile software to pick up your email address from Usenet newsgroup. A spam stopper is additional characters that makes your address invalid while making it possible for real users to find out what your real address looks

like.

Example: One of my addresses used to be `presno@grida.no`. By instructing my news reader to show it as `presno@remove-this-bit-for-my-real-address`, the information is made useless for spam software.

Note: You **are** making it difficult for those you talk with when doing this. I wouldn't.

You can also buy mail-related utility programs, like [MailJail](#), a mail filtering add-on for the Eudora email programs. Its first release came with 250 rules to help thwart spam mail.

Some users even join initiatives like [the SPAM Filter](#), a free register of people who do not want to receive junk mail. It aims at using their list to filter their addresses against addresses collected by programs such as Floodgate (which automatically builds mailing lists from newsgroup postings).

Others report the incident to the spammer's Internet service provider (ISP). If you do, make sure to save the original email message with all headers intact. The email header is the part of the message that shows where the message originated. While your email program may not be set to display email headers, most programs let you do it. Generally, ISPs will not take action against one of their accounts without proof of the origination of the spam. They often require the original spam message to be forwarded to them before they will take any action, with the email header included.

Then, there is HTML email. These permit inclusion of illustrations in messages, thus forcing a call to get them from a remote site when the mail is opened. When it does, the remote site will be able to record your email address, know if you have indeed opened (read?) the message, and your current IP address. The sender of the message may also be able to set a cookie in your browser, and thus identify you the next time you visit their site...

The good news is that some email clients, like Eudora Pro, allows you to prevent it from automatically downloading HTML graphics. Recommended, and in particular if you're using modem.

Finally, Whenever you subscribe to an email based mailing list, save the welcome message that the service returns on your disk. These messages usually contain information about how to get off the list if the volume should become too high. You may find it easier to consult these files than try to get off by writing the mailing list administrators.

There's a [FAQ on spam](#), a [SPAM-L](#) mailing list, hints on [reading email headers](#), and [a tutorial](#) for those in search for more.

[Purportal.com](#) lets you search five of the most well-known sites dedicated to setting the record straight: Snopes Urban Legends Archive, About.com Urban Legends, CIAC Hoax Database, CERT Computer Security Database, and Symantec (Real) Virus Encyclopedia. Last, but not least, there are a number of [laws against spam](#).

Managing your mailbox

If you receive a large volumes of email, it becomes important to organize your mailbox to handle the most important mails first. Here are some hints:

- Consider using filters (message rules) to automatically move incoming mails to logical folders of your choice. For example, if you work in sales, you may move messages to folders called New opportunities, Follow-up, Internal, and Private. Then, consider how much time should be allocated to handling the mail in each folder. Spam and mail from new persons will not be moved, and thus easier to handle. In MS Outlook, you may do this by clicking at Organize, or by selecting Tools | Message rules.
- Another trick is to give each mail from a known sender an automatic color code. For example, mark all mails from customers with red, those from members of your family with green, and mails from your boss with blue. Mails from new persons will have no color, and easier to single out for handling.
- If your email program can handle it, consider making copies of all received mail to an archive mailbox of your choice. Personally, I keep all important mail on my

disk dating back to 1990. It does not take much space, and allows you check history whenever needed.

Changing your email address

If you change your email address for any reason, you must take steps to ensure continued delivery of mail to your new address:

1. **Before cancelling your old account**, send a change of address mail to all regular correspondents. There are two reasons for this:
 - Some recipients use the filtering features of their email programs to block mail from unwanted addresses, and this may include all unknown people. Write immediately to make sure your mails are not discarded.
 - Maintaining two email accounts simultaneously, even for a short transitional period, may be a hassle - unless you use an email program that can deal with several accounts automatically (like Eudora Pro).
Note: If you maintain two email accounts simultaneously, it is **very important** to set your client so that all new mail originates from your new address! So that people can send reply messages to the correct address.
2. Consider to **send the change of address message at three different times**:
 1. As soon as your new account is operational.
 2. A reminder to anyone who sends mail to your old address during the transition period..
 3. At the end of the transition period.
3. Attach a change of address message to your customized **signature file** (if you use one) at the end of all email that you send.
4. Before you cancel your old account, change your subscription to any automated **mailing lists** in accordance with the list's particular instructions.
 - Use your **old** account to send the `SIGNOFF` command to unsubscribe from the list. This will save you trouble. If it is too late, you may have to write to the moderator of the list and ask her to sign you off manually.
 - Use your **new** account to resubscribe to the mailing list.
5. Since some of the people who might want to send you email will not receive your change-of-address message, make sure that email address directories contain your new address.
6. Make sure that all **web pages** that contain your email address are being updated. If you are maintaining web pages, and have your email at the bottom of the page, don't forget that these entries must also be updated.
7. If you have ever sent a message to a Usenet newsgroup, send another one (to any newsgroup). This will add your new address to databases being used to find Internet user addresses.

Changing your email address is bothersome, so some users prefer to hunt for a permanent email address. The traditional means is to reserve your own domain name. Once done, your email address can move to whatever Internet server hosts your domain.

A cheaper alternative is provided by mail-forwarding services like [Pobox](#) and [NetBox](#). An even greater bargain may be the services providing [email for free](#)..

Using two or more mailboxes

Many users have one mailbox for work and one or several mailboxes for private use. Often, these resides on different Internet Service Providers' (ISPs) machines.

Modern email software, like Outlook Express and Eudora, let you automatically check mail in all mailboxes in one go. All it takes is to dial into the net through one of your ISPs, and hit "Check new mail." You do not have to dial up each ISP individually.

While this is easy, special attention must be paid to how you send mail. If you set the properties for your second email account as instructed by your ISP, you risk receiving error messages saying "*Relay not permitted*." This happens when an ISP (quite commonly) refuses to send mail from you if you are logged on to a different ISP. Only

messages logged on to the ISP that owns the server will be allowed through. They do this to prevent nonsubscribers from using their servers, e.g. to send [spam mail](#).

To solve this problem, specify in the Properties dialog for the second email account that it is to use the first account's outgoing server (**smtp** server). (In Outlook Express, do this in *Tools|Accounts|Properties*.)

Example: Usually, I use four different mailboxes for outgoing mail. When at home, I might be sending all mail from all mailboxes through the smtp server of the Tele2 ISP. When travelling, I often change to the smtp server of my EUNET Traveller account.

Thus, the mail you receive from presno@eunet.no might have been sent from the Tele2 server. The fact will be recorded in the small details of the mailer header of my mail to you.

Warning: You can do this because most outgoing mail servers (SMTP) do not require that you identify yourself by password when sending mail. Therefore, you can even send mail using a fake address, like Michael.Jackson@heavens.org. Also, it means that others can send mail using your name. So, if in doubt about mail you're receiving, check the mailer header to see where it comes from. If it comes from a different server, you may return a request for confirmation. As receipt of mail is password protected, the fake sender will not be able to reply.

The Traveller's Dream

Email-for-free services may appear to be the traveller's dream. They let you get to your email while travelling without the hassle of finding a local access point for your Internet provider, or buying from a local service.

An even better solution is [MailStart](#). Like the email-for-free services, everything is done by Web browser. Enter your email address (as in "presno@eunet.no"), and your login password (the one you normally use to get your mail when at home). MailStart will get your mail for you, and let you handle it in a safe way.

You do not have to be concerned about using several email addresses for your mail. Replies to your mails will go to your main account, and not to an account that you may forget to check for incoming mail later.

Check [Xmail](#) for an alternative.

Replying

On the Internet, electronic messages have a structure that is common across the network. On most systems, you can reply using a reply command. If this feature is not available, use the sender's address as given in the mail header.

Note: Exercise caution when replying to a message sent by a mailing list (also called a distribution list). If you wish to respond to the author only, make sure that the only address you are replying to is that person's email address. If you are not careful, your mail will go to the entire list!

[A bounced message](#) contains two mail headers: the header of your original message (in part three), and the header of the bounced message (in part one).

The 'good' reply address is laid out in the 'From:' header. Thus, the message showed above contains the following two 'good' addresses:

```
From: Network Mailer <MAILER@VM1.NoDak.EDU>  
From: presno@eunet.no
```

The Network Mailer located the second address line in the original message, and used this address when sending the bounced message.

Note: there is no point in sending a message back to the service that sent you the bounced message, like MAILER@VM1.NoDak.EDU above. This is the address of an automatic mail handling program. Write to Postmaster@VM1.NoDak.EDU if you want to talk to a "real person" at this

computer center.

The exact order of a message's header may vary from system to system, but it will always contain the vital 'From:' line.

Email: When everything fails

Communications is simple - when you master it. Occasionally, however, you WILL lose data. You may even experience the worst of all: losing unread mail on your hard disk.

A while ago, this happened to my sister. She logged on to her mailbox service using the communications program Procomm.

After capturing all mail, she tried to send a message. For some reason, the computer froze. It was impossible to close the capture file. She had to switch the power OFF/ON to continue. All retrieved mail was obviously lost.

One day, I had a similar experience. After having written a long and difficult letter, something went wrong. The outfile was closed without warning. The resulting file size was 0 bytes.

Both problems were solved by the MS-DOS program CHKDSK run with the /F option. If you ever get this problem, and have an MS-DOS computer, try CHKDSK or Scandisk. This may save your day.

Hints

Web by email

Read about how to receive web pages by email in [chapter 12](#). [Chapter 11](#) presents some neat ways of receiving notifications by email about changes in web pages out there (including news).

Some old tricks

Bang addressing

"Bang" is American for "exclamation point" (!). The UUCP network uses it in their variation of the domain addressing scheme.

Example: User Jill Small on Econet in San Francisco used to have the address pyramid!cdp!jsmall. Read this address from right to left. The name of her mailbox is to the right. The name of the organization is in the middle. "Pyramid" is the name of the network.

Note: The ! character has a special function on Unix computers. You may have to type the address as pyramid\!cdp\!jsmall to avoid unwanted error messages. The \ character tells Unix to regard the next character as a character, and not as a system command. You can also precede other problematic characters with \ in case of problems.

Some email systems can use bang addresses directly. If your system is unable to handle them, then you must send these messages through a gateway. The American host UUNET is a frequently used gateway. If routing through UUNET, you may write the address like this:

```
pyramid!cdp!jsmall@uunet.uu.net
```

If your system refuses to accept exclamation points in addresses, try converting the address into a standard Internet address. Write the address elements in the Internet sequence (left to right). Replace the exclamation points with %-s, like this:

jsmall%cdp%pyramid@uunet.uu.net

This method works most of the time. If it works, use this addressing form. Bang paths may fail if an intermediate site in the path happens to be down. (Most UUCP sites are registering Internet domain names now. This helps lessen the problem of path failures.)

Some messages must be routed through many gateways to reach their destination. This is the longest address that I have used:

hpda!hplabs!hpscdc!hp-lsd.cos.hp.com!oldcolo!dave@uunet.uu.net

It used to be the address of a user in Colorado, U.S.A.. Today, he can be reached using a much shorter address.

If you are on UUCP/EUnet, you may use the following address to send email to Odd de Presno:

eunet.no!presno

Addressing international electronic mail sometimes looks like black magic. To learn more, read some of the books listed in [Appendix 5](#).

cc:Mail gateways

Many Local Area Networks have been connected to the global Matrix of networks. CompuServe offers a cc:Mail gateway. Lotus cc:Mail is a PC Lan based email system used in corporate, government and other organizations.

When sending from CompuServe Mail to a cc:Mail user through this gateway, a typical address may look like this:

>mhs:pt-support@performa

To send to this user from the Internet through CompuServe's MHS gateway, write the address like this:

pt-support@performa.mhs.compuserve.com

Other vendors of LAN gateways use different addressing methods.

Email to Fax

Some services let you send messages to fax machines, as telex, and as ordinary paper mail.

On CompuServe, we replaced "Odd de Presno 75755,1327" with "FAX: 4737030193". My fax number is +47 370 30193. Services and user interfaces change regularly, so it may not work like this today...

The "[How can I send a fax from the Internet?](#)" FAQ is posted regularly to [alt.internet.services](#), [alt.online-service](#), [alt.bbs.internet](#), [alt.answers](#) and [news.answers](#) on Usenet.

Email to Telex

To send a telex, you'll need the recipient's telex number, an answerback code, and the code of the recipient's country. If the message is meant for telex number 871161147, answerback ZETO, and country Russia (country code 871), enter "TLX:871161147 ZETO" at CompuServe.

When the recipient is using another mailbox system

When the recipient is using your mailbox service, writing addresses is simple. Not so when your email has to be forwarded to mailboxes on other online services through the

Internet, X.400, or similar.

A typical inter-system email address consists of a user name, a mailbox system code, and sometimes also routing information. The problem is that there is no universal addressing format. Finding out how to write a given address may be surprisingly difficult.

Some services are not set up for exchange of email with other services.

If your favorite system lets you send mail to other services, make a note about the following:

- You may need to know how to rewrite the recipient's address to fit your system. For example, you may have to use a domain address to send through Internet, and a different form when sending through an X.400 network.
- The recipient's mailbox system may not be on a network that has an email exchange agreement with your system's network(s). Sometimes, you may have to use a commercial email relay service to get your mail across (see [Chapter 9](#)).
- You may need to know how to route a message through other systems to arrive at its destination. For example, mail from the Ulrik computer in Oslo for Dominique Christian on the Difer system in Paris (France) used to be routed through a center in London.
- Example: If you have problems sending email to me at the address `presno@eunet.no`, you may succeed by rewriting it as `presno@login.eunet.no@listserv.nodak.edu`. The message will go to `listserv.nodak.edu`, which will turn it into `presno@eunet.no` and forward it there. (More under [Domain Name addressing](#).)
- While it may be easy to enclose binary files when sending to someone on your system, this may be impossible when sending across mailbox system boundaries.
- While it may be possible to send text containing embedded control codes and special language characters to users of your system, they may disappear when sent to people elsewhere. Your safest bet is to send your text as standard 7-bit ASCII text (see [Appendix 4](#)). It is the lowest common denominator between computers, software, networks, and users.
- Example: A user in Norway tried to send the Norwegian language line: "Jeg bor på Karlsøy i Troms, Norge." The text was stored using Windows Latin1. The receiver got: "Jeg bor pe Kalsxy i Troms, Norge." Another user received the word "på" as "p=E5."
- If you are using WordPerfect or Word for Windows on an MS-DOS computer, consider storing your text as DOS text before sending.

X.400 addressing

X.400 is a standard for electronic mail developed by ITU-TSS. It is used on some large private and public networks throughout the world.

EDI (Electronic Data Interchange) uses X.400 as a transport mechanism for coordination of electronic part ordering, stock control and payment. X.400 is used to connect EDI systems between companies and suppliers.

The X.400 addressing syntax is very different from domain addressing. To send a message from an X.400 mailbox to my address (`presno@eunet.no`), you may have to write it like this:

```
(C:NO,ADMD:uninett,PRMD:uninett,O:eunet,OU:login,S:presno)
```

Alas, it's not so standard as the domain addressing schemes. On other X.400 networks, the address must be written in one of the following formats - or in yet other ways:

(C:US,A:Telemail,P:Internet,"RFC-822":<presno(a)login.eunet.no>)
("RFC-822":<presno(a)login.eunet.no>, SITE:INTERNET)
'(C:USA,A:TELEMAIL,P:INTERNET,"RFC-822":<presno<a>login.eunet.no>) DEL'
(site: INTERNET,ID:<presno<a>login.eunet.no>)
"RFC-822=presno(a)login.eunet.no @ GATEWAY]INTERNET/TELEMAIL/US"
S=presno/OU=login/ORG=eunet/P=uninett/C=no

To send from the Internet to a mailbox I once had on a Norwegian X.400 host (Telemax), I had to use this address:

```
/I=D/G=ODD/S=PRESNO/O=KUD.DATASEKR/@PCMAX.telemax.no
```

To send from the Internet to Telemail in the US, I have used this (on one long line):

```
/PN=TELEMAIL.T.SUPPORT/O=TELENET.MAIL/ADMD  
=TELEMAIL/C=US/@sprint.com
```

If you must route your message through gateways, complexity increases. One Norwegian UUCP user had to use the following address to get through to me (on one long line):

```
nuug!extern.uio.no!"pcmax.telemax.no!  
/I=D/G=ODD/S=PRESNO/O=KUD.DATASEKR/"
```

To send from an X.400 system to my CompuServe mailbox, I have used the following address elements:

```
Country = US  
ADMD = CompuServe  
PRMD = CSMail  
DDA = 75755.1327
```

The addressing methods used on X.400 systems vary. Example: Some use the code C:USA rather than the ISO country code C:US. MCI Mail uses C:NORWAY, C:USA, and C:SWEDEN.

Some important X.400 codes:

C	the ISO country code (on most services)
ADMD	domain code for public system (abbreviation A)
PRMD	domain code for connected private system (abbreviation P)
O	organization name
OU	organization unit
S	surname (last name)
G	given name (first name)
I	initials (in the name)
DDA	domain-defined attributes, keywords defined and used by the individual systems to specify mailboxes (user name, list, station, user code, etc.), direct delivery devices (attention name, telex addresses, facsimile, etc.)
PN	personal name
(a)	the character @ cannot be used when routing messages from X.400 to Internet. Try (a) instead.
(p)	the character % cannot be used when routing messages from X.400 to Internet. Try (p) instead.
(b)	the character ! (used in "bang" addresses).
(q)	the character " used in email addresses.
RFC-822	this code tells X.400 that an Internet domain address follows. Does not work on all X.400 systems. (See http://info.internet.isi.edu/in-notes/rfc/files/rfc822.txt)

The space character (ascii 032) is a special challenge. Some services let you replace it with an '_' character. If the X.400 gateway supports MIME, you may use the hexadecimal code (=20) as specified in RFC1341 (see "quoted-printable"). If you do, remember to replace the '=' character with =3D, as in '/S=3DPRESNO' (instead of '/S=PRESNO').

Addressing mail from the Internet to/from X.400 is difficult, unless the mailer header of a received message gives the senders address in the proper addressing format.

To set up an email link between an Internet and an X.400 mailbox, start by trying

to send an email from either mailbox to the other. If one of them succeeds, then the mailer header of the received message may explain how to send a reply.

Example: This is a typical Internet mailer header on a message received from an X.400 service:

```
From MSGSUPPORT@smc-tm22.sprint.com Thu Oct 27 02:44:55 1994
Return-Path: <MSGSUPPORT@smc-tm22.sprint.com>
Received: from sprintf.merit.edu (sprint.com) by grida.no with SMTP
id <AA02280>; Thu, 27 Oct 1994 02:44:52 +0100
Received: from sprint.com by sprintf.merit.edu (8.6.5/merit-1.0)
id VAA01624; Wed, 26 Oct 1994 21:45:12 -0400
X400-Received: by mta merit in /PRMD=internet/ADMD=telemail/C=US/;
Relayed; Wed, 26 Oct 1994 21:44:54 -0400
X400-Received: by /ADMD=TELEMAIL/C=US/; Relayed; Wed, 26 Oct 1994
21:41:29 -0400
Date: Wed, 26 Oct 1994 21:41:29 -0400
X400-Originator: MSGSUPPORT@smc-tm22.sprint.com
X400-Recipients: non-disclosure;;
X400-Mts-Identifier: [/ADMD=TELEMAIL/C=US/;UGJE-6721-7167/27]
X400-Content-Type: P2-1984 (2)
Content-Identifier: VL72373 27
From: MSGSUPPORT@smc-tm22.sprint.com
Message-Id: <UGJE-6721- 7167/27*/S=MSGSUPPORT/O=
SMC.MSG.TM22/ADMD=TELEMAIL/C=US/@MHS>
To: PRESNO@GRIDA.NO
Subject: RE: HELP
```

Here, it is simple. Both the Return-Path line and the From: line have the correct Internet address.

If the mailer header does not contain such information, converting the X.400 addresses into a RFC-822 addresses may well be regarded as a black art. Also, note that you cannot send email from the Internet to all X.400 users on the globe. Some gateways are only accessible from commercial services.

For example, continued attempts to send from an Internet mailbox in Norway to an X.400 address in a Nigerian company failed, while mail to/from [CompuServe](#) worked well.

FidoNet

Users of this network can send and receive mail to/from the Internet. For example, a FidoNet user may use the following method to send to my Internet address:

Send the message to user UUCP at 1:105/42. The first line of the TEXT of the message should contain:

To: presno@eunet.no

Add a blank line after the address before entering the text of your message.

FidoNet addresses are composed by three or four numbers;

zone:net/node
or
zone:net/node.point

The FidoNet address 1:105/42 has three elements. "1:" tells that the recipient lives in Zone number 1 (North America). 105/42 refers to Node number 42, which receives mail through Net number 105. This node has an automatic gateway to the Internet.

Another example: Jan Stozek is sysop of "Home of PCQ" in Warsaw, Poland. The Node number of his BBS is 10. He receives mail through Net number 480. Poland is a country in Europe, Zone number 2. The address to his system is: 2:480/10. His user name is Jan Stozek.

You can send an Internet message to anyone in FidoNet by using the following template (on one long line):

```
<firstname>.<lastname>@  
p<point>.f<node>.n<net>.z<zone>.fidonet.org
```

Where <firstname> is the person's first name

<lastname> is the person's last name

To send a message from the Internet to Jan, use this address:

Jan.Stozek@f10.n480.z2.fidonet.org

One final example: Ola Garstad in Oslo has the FidoNet address 2:502/15. Use the address Ola.Garstad@f15.n502.z2.fidonet.org , when sending mail to him through the Internet.

An updated list of global FidoNet nodes can be retrieved from most connected BBS systems. (More in [Appendix 1.](#))

For more information

Start with the [E-Mail Resources, Reviews and Books](#) page, then check the [Beginner's Guide to Effective Email](#).

The Inter-Network Mail Guide describes how to send mail between mail systems like AppleLink, BITNET, CompuServe, Connect-USA, EasyNet, Envoy, FidoNet, GeoNet, Internet, MCI, MFENET, NasaMail, PeaceNet, Sinet, Span, SprintMail, and others.

It is posted monthly to the Usenet newsgroups [comp.mail.misc](#) and [news.newusers.questions](#).

Search it at <http://alabanza.com/kabacoff/Inter-Links/cgi/inmgq.cgi> . It is also available by anonymous ftp from <ftp://ftp.csd.uwm.edu/pub/internetwork-mail-guide>.

The "Frequently Asked Questions: How to find people's E-mail addresses" document is regularly posted to [news.answers](#). (Retrieval information is given under FAQ in [Appendix 6.](#))

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Search:

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The Online World resources handbook

Chapter 8: Free expert assistance

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It may sound too good to be true, but many computer experts are prepared to help YOU without expecting a cent in return. The same applies to experts in many other areas.

You have an impossible decision to make. A lawyer has a dotted line that requires your signature, or a surgeon has a dotted line in mind for your upper abdomen. You're not comfortable with the fine print or the diagnosis and wonder if a second opinion is in order. Just ask to get help.

If you have problems with a communications program, post a message in a suitable Usenet newsgroup, or on a bulletin board. This is also the thing to do if you want to sell equipment. Learn from other people's experiences with the computers and software you plan to buy.

Chances are that you will get a reply - if your subject or query attract attention. In the process, you'll meet new friends, and be able to follow the development in a dynamic marketplace.

The following message from the [alt.winsock](#) newsgroup is typical:

Wed, 14 Feb 96 14:57:18 EST

From: Robert Donahue

RE: FREQUENT DISCONNECTION OF PPP. NEED HELP!!!

In article <4ft882\$18v@mloeff01.ived.nec.gmeds.com>, bz418c@ttp.natp.gmeds.com says...

*>problem. But recently I have got a very strange problem:
>I was disconnected every time after I got PPP connection
>for a while. The disconnection happens most likely when
>I was downloading a big file using Netscape or CuteFTP
>(I can only get about 200KB before the line drops), but*

>it also happens sometimes when I click on regular web pages.

>This problem didn't exist before with the same software

Sounds a little like a problem I had a while back. My modem would hang up the phone at random (usually during a big transfer). It turned out to be the bios in my modem. The early US Robotics 28.8K Sportster had a bug that would cause them to hang up instead of down-shifting the baud rate when the phone line got cranky. I forgot the revision number of the bad bios. I had to get a new bios chip from US Robotics to fix the problem. I would never have known what the problem was if my service provider hadn't posted a warning.

Bob D.

Many users prefer open conference messages to private email for their technical discussions. This gives "the group" a chance to read, comment, provide additional facts, and return with new questions.

One simple question may give an overwhelming number of responses, but most contributions are likely to be useful and educational. Since the discussion is public, consider it a feature of your personal online university. Offer opinions when you have something to contribute, or keep silent.

Stop by a technical forum where beta testers and programmers hang out, and you'll probably get a concise, three-sentence answer. Stop by a forum dedicated to helping users fire up a new product, and you may find long, chatty, but informative diatribes. Different forums. Different responses.

In most conferences, some members are critical to "lurkers." A "lurker" is someone who reads without ever contributing. Don't let them get to you. It is legitimate to remain silent. Most others are also there to watch and learn only.

If you consider buying a newly released computer program, tune in to the section of your favorite online service that deals with products from this manufacturer. Count complaints and error reports before buying.

When your new program has been installed on your system, return for other users' experiences and practical advice. Pay back your dues by reporting your own experiences in the process.

Focus on conferences and newsgroup where many competent users hang out. There, you will usually get faster and better replies to your questions. Asking other users may be faster and better than searching. Complement by searching [Google Groups](#) (Chapter 10).

If you have never visited a BBS, call one in your neighborhood to get a feel for how they work. Most of them can be accessed free. Usually, their only requirement is for a self-presentation before being granted full access to their system.

Most bulletin boards have conferencing and archives filled with shareware and public domain software. Many have files or bulletins listing telephone numbers of other boards in your country or area.

The trick is to find know-how. The larger the online service or conference, the more skilled people are likely to "meet" there regularly. If the local bulletin boards fail to satisfy your needs, try the Internet or some large commercial services.

One exception: When you need contact with ONE particular person, who knows YOUR problem in detail, go where this person usually hangs out.

For expert advice about how to use the Eudora email program, check out the comp.mail.eudora.ms-windows (MS Windows), or comp.mail.eudora.mac (Macintosh) newsgroups. There are several [online support forums for users of Eudora](#).

The site at <http://www.internetvalley.com/top100mag.html> provides links to the top 100 computer- and software-related Web magazines.

Resources on the Internet

Usenet's Winsock-based TCP/IP Application Software group contains:

comp.os.ms-windows.apps.winsock.mail	Winsock-based electronic mail applications and utilities
comp.os.ms-windows.apps.winsock.news	Winsock-based Usenet news readers and servers
comp.os.ms-windows.apps.winsock.misc	Winsock-based applications other than news and email

Usenet also has:

comp.os.ms-dos.mail-news	Administering mail and news software on Windows and MS-DOS.
comp.protocols.tcp-ip.ibm-pc	Discussions about the use of TCP/IP on PC systems

NETSCAPEWEBMASTER is a discussion list for Netscape Webmasters to trade tips, techniques, and other information.

There's a range of [mailing lists](#) and [newsgroups](#) focusing on the Linux operating system. Check [Linuxnewbie.org](http://www.linuxnewbie.org) for experiences, tips, and tricks, and assistance, and more.

For users of MS Windows and MS-DOS computers

Usenet has many newsgroups in the comp.os.ms-windows and comp.os.ms-dos hierarchies. Those focusing on Microsoft Windows are usually divided into these groups: Setup and Installation, General (Windows 3.x, Windows 95, and Windows NT), Application Software, Winsock-based TCP/IP Application Software, Software (Compatibility Issues), Networking, Programming and Software Development (Techniques, Development Tools, and Device Drivers), Visual Basic and Delphi Groups, Windows Archives (FTP and Web sites), and Other Related Groups.

The Setup and Installation newsgroups are:

comp.os.ms-windows.setup.win3x	Questions and problems with setting up and configuring Windows 3.x
comp.os.ms-windows.setup.win95	Questions and problems with setting up and configuring Windows 95

The Windows Archives newsgroups are:

comp.archives.ms-windows.announce	Announcements for new and/or updated Windows ftp/web sites, uploads to sites and other information.
comp.archives.ms-windows.discuss	Discussions about Windows ftp/web sites.

Here are some other newsgroups to wet your appetite:

comp.os.ms-windows.pre-release	Discussion about unreleased and future versions of Windows
comp.os.ms-windows.apps.comm	Communications and fax applications

There are many mailing lists, including:

- The [Windows 98 Give-And-Take](#) List
- [The Windows NT Discussion List](#)
- [WINDOWS NT mailing list](#) (for users and administrators)
- The [Windows 95 Give-And-Take](#) List
- **The MS Excel Question and Answer List:** ([EXCEL-G](#))
- [QBASIC](#) for discussions of tips, tricks, and instructions related to the QBasic and QuickBasic programming languages.
- [WPWIN-L](#) - WordPerfect for Windows
- [ACCESS-L](#) - the Microsoft Access Database Discussion List
- [Visual Basic Beginner's List](#) and [Visual Basic List](#)

[ZDNet Updates.com](#) is an excellent starting place to keep the software and drivers on your computer up to date. [Windows 95 QAID](#) offers interesting information, both on Windows 95 and Visual Basic. More interesting links:

- [Windows information](#) - Technical resources and support to tweak, manage and secure the Windows operating system.
- [Annoyances.org](#) - hints for Windows 95 and 98 users
- [Windows Registry Guide](#) (Windows 95, 98 and NT registry hints)

[FrontPage Technical Support Area](#) offers 100+ pages covering Microsoft FrontPage Frequently Asked Questions, Active Server Pages, Databases, How To's and Tips, Problem Solving, and much more.

The [Microsoft Technical Support Knowledge Base](#) offers access to tens of thousands of product-support documents. Articles tell about new developments in software programs, and how to most effectively use a particular package. You can search by product name, and by keywords.

[SearchWin2000](#) is a portal for Windows NT/2000-Specific information offering news, technical tips, resources, a search engine, and more.

[Help.com](#) offers tips and answers to a wide variety of computing questions. The core of the site is a collection of hundreds of thousands of questions and answers culled from Usenet newsgroups and submitted by users around the world. These are organized under these top headings:

- Hardware (Desktops, Notebooks, Motherboards)
- Software (Operating Systems, Business and Productivity, Graphics)
- Internet (Browsers, Email, Chat)
- Web Building (Web Development, HTML, Web Design)
- Consumer Electronics (Cell Phones, Digital Cameras, Audio)
- Games (Game Systems, Mac Games, Action)

Many [CompuServe](#) forums are operated or sponsored by software and hardware vendors, like: Adobe Systems Inc., Aldus Corp., Ashton-Tate Corp., Autodesk Inc., Borland International, Broderbund Software Inc., Buttonware Inc., Cadkey Inc., Crosstalk Communications, Customs Technologies, Enable Software, Datastorm Technologies Inc., [Microsoft](#) Systems, Nantucket Corp., Lotus Development Corp., Novell Inc., Peter Norton Computing, Quarterdeck Office Systems, Quicksoft, Sun Microsystems (TOPS Division), Symantec Corp., Toshiba, Turbopower Software, and WordPerfect Corp.

They also have hundreds of independent support forums with associated libraries of files and programs.

For owners of Amiga computers

Usenet's [comp.sys.amiga](#) hierarchy has entries like advocacy, announce applications, audio, datacomm, emulations, games, graphics, hardware, introduction, marketplace, multimedia, misc, programmer, reviews and more.

[Exec-PC](#) has the Amiga Hardware and Amiga Software conferences, and a large library with shareware and public domain files. ILINK has the AMIGA conference.

Most online services have "Find this File" commands. The most powerful ones are often found on free bulletin boards.

On [CompuServe](#), type GO AMIGA to get to CBMNET. A while ago, we visited CBMNET to find a communications program. From the menu above, selection five took us to The Amiga File Finder service, and this menu:

```
File Finder AMIGA

1 About File Finder
2 Instructions For Searching
3 How to Locate Keywords

4 Access File Finder

5 Your Comments About File Finder
```

Choice four lets us search for files using keywords, file creation dates, forum names, file types, file name extension, file name or author. Our choice was searching by keywords. The result was a long list of alternatives:

```
Enter Search Term: comm

Amiga File Finder

1 AMIGATECH/C Programming COMSRC.ARC
2 AMIGATECH/C Programming PMDSRC.LZH
3 AMIGATECH/C Programming PNTSRC.LZH
4 AMIGAUSER/Communications BBSIND.LZH
5 AMIGAUSER/Communications INTOUC.ARC
etc.
```

By entering numbers, we asked for short descriptions of file number 4 through 13. Here is one of them:

```
Filename : INTOUC.ARC Forum: AMIGAUSER
Lib: Communications Lib #: 5
Submitter: [76702,337] 24-Mar-89
Size: 51200 Accesses: 157
```

```
This is a modified Comm1.34. It supports both
VT100 and ANSI. The VT100 emulation is based
on Dave Wecker's VT100 program. There is automatic
dialer, split screen that is configurable, phone
book, and other nice features.
```

This is what we were looking for. First, enter GO AMIGAUSER to get to the forum. Enter "DL 5" to get to Downloading Library number 5. INTOUCH.ARC was retrieved using the CompuServe Quick B transfer protocol. This protocol is usually the most efficient choice on this service.

CompuServe has several File Finder services. These include PCFF (MS-DOS computers), MACFF (Macintosh), GRAPHFF (for Graphics), ATARIFF (Atari computers), AMIGAFF. Use the GO command to access, as in GO PCFF .

Apple users

Macintosh users check <http://www.nexor.com/public/mac/archive/welcome.html>. For shareware, try [The Virtual Software Library](#). [VersionTracker](#) is an excellent starting place to keep the software and drivers on your Macintosh up to date.

[Apple's Web server](#) maintains interesting links to the company's libraries, and to sites where freeware and shareware for Apple products may be retrieved.

The Apple Technical Information Library is Apple's official technical- support database. In late 1995, it contained over 12,000 articles on all aspects of Apple products, old and new. The Apple Assistance Center uses the same database to answer customer's questions.

Articles offer advice on trouble shooting, compatibility, workarounds, and more

(see <http://support.info.apple.com/support/support.html>).

Usenet has several newsgroups, including:

alt.sources.mac	Source file newsgroup for the Apple Macintosh computers
comp.sys.apple2	Discussion about Apple II micros.
comp.sys.apple2.comm	Apple II data communications.
comp.sys.mac.digest	Apple Macintosh: info&uses, but no programs.

Similar services are found on many other online services. You will also find conferences devoted to support of popular commercial software for Apple computers.

Other computers

There are so many types of computers and operating systems. First, Unix, of course. (See the [Unix Wizards Mailing list](#)). Then : Atari computers, the TRS-80 series and others from Tandy, DEC computers, mainframes from IBM, Hewlett-Packard computers, CP/M machines, users of LDOS/TRSDOS or OS9, Apricot, Z88, Timex/Sinclair, Archimedes, Psion, and Armstrad.

Even so, there is a high chance that you can find online support for most of them, even if the vendor went out of business years ago. For such computers, [CompuServe](#) is a good place to start.

For journalists and authors

[ProfNet](#) is a cooperative of more than thousand international public information officers giving journalists and authors quick and convenient access to expert sources. Mostly, members represent colleges, universities, and a wide range of government, corporate, and non-profit entities oriented to scholarship and research.

There is no fee for conducting ProfNet searches, nor is there any limit to the number or frequency of your queries.

Virtual Knowledge Communities

Internet lets us share knowledge with others across geographical boundaries, and often also across language and culture borders. We can easily work with someone in Montevideo, Tokyo, Kautokeino, Moscow, and Accra, just as if they were living in your local neighborhood.

The effects of being visible in the net's knowledge sharing communities include learning from others, having an inter-personal network you can share, finding great people to work with on issues affecting you.

For an example, check how the [Kidlink](#) organization reach out to network teachers around the world.

Where to find a suitable knowledge sharing community? Check our pointers in Chapter 10 ([Mailing lists and web forums](#), [Usenet](#)).

Marketing

For a list of mailing lists of interest for advertising, public relations, and marketing, try <http://www.webcom.com/impulse/list.html>.

Utilities

Sure, you can use the Internet as a calculator! Check the [Calculators On-Line Center](#) for links to converters and calculators. It has thousands of links to calculators for Unit Conversion (temperature, weight, area, etc.), Agriculture & Horticulture, Automobile,

Code Translators, Distance (How Far is it?), Finance - Loans, Mathematics, Statistics, Medical & Health Science, Navigation/GPS, Nutrition, Radiation & EHS Safety, Science & Engineering, Aeronautics, Sunset & Tide, Weather, etc.

[Online Conversion](#) lets you perform thousands of different types of conversion calculations. Conversions are organized by type (temperature, length, cooking, etc.), and each conversion page includes numerous options.

For more information about currencies, try the [Currencies of the World page](#). Besides valuable background information, it provides daily exchange rates for 49 currencies.

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Search:

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The Online World resources handbook

Chapter 9: Your electronic daily news

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- Also see Chapter 14: [Desinformation, myths, hoaxes, fraud, deception and errors](#).**

Read, see or listen to national and global news before they are announced by the traditional media. Get those interesting background facts. Get special interest news stories that seldom appear in traditional print. Sure, you read newspapers, watch TV, and listen to radio, but did you know how limited their stories are? Are you content with the same old fires and murders, terrible things that happen day in and day out?

Traditional news media just give you a **small** part of the news. Their editors are not concerned about **YOUR** particular interests. They serve a large group of readers, viewers or listeners with different interests in mind.

Go online and discover the difference. Online news has an enormous width and depth. Besides "popular" news, you will find stories that few editors bother to print. This may give you better insight in current developments, and in as much details as you can take.

Balance your news intake between traditional and digital offerings, letting one complement the other. Get your news in whatever format and time frame that suit your needs. Decide what stories are important based on your own interest, and enjoy the feeling of freedom, diversity, and power.

Most commercial online services offer news, and free news is exploding on the Internet. Most stories come from large news agencies and newspapers. Often, you can read and search articles from magazines, newsletters and other special publications.

Although not as convenient to carry as a real newspaper or as easy to watch as the 6 o'clock news, online news is a valuable resource for those whose jobs depend on up-to-date information. The ability to search today and yesterday's news makes it

particularly useful.

You can even take it one step further: Access raw news feeds from major world wire services, automatic article-clipping folders, Internet mailing lists, and paperless electronic newsletters. Interact with the digital media as broadcast and print outlets bring their stories, staffers, and the occasional name-in-the-news into the realm of the modem.

The cost of reading a given news item varies by online service. An article that sets you back three cents on one service, may cost two dollars to read on another, or be free on the Internet.

Note: Expect it to be many times more expensive (or cheap) to read the same article from the same news provider on another online service. So, compare prices.

Local news

In Norway, we can read local language news from print media like Dagens Naeringsliv, Aftenposten, Kapital, and news wires from NTB and other local sources. Local language news is available online in most countries.

Reading local news on national online services used to be more expensive than on major global online services. As competition among global news providers escalates, this is changing. In addition, many newspapers now offers articles for free on the World Wide Web. Here are some examples:

[The Daily Record and Sunday Mail](#), a Scottish tabloid newspaper based in Glasgow, offers News, Sport, Features, a Magazine section, Tourism information, Historical Information, Telephone Dating, Competitions, Cartoons, Crossword, Agony Aunt, Picture Gallery and much more.

Aftonbladet (Sweden) is at <http://www.aftonbladet.se>, and **Dagbladet** (Norway) at <http://www.dagbladet.no/>. For a country by **country listing of online newspapers throughout the World**, check <http://www.webwombat.com.au/intercom/newsprs/>.

International news

My favorite provider of free daily international news top stories is **[Integrated Newswire's World News](#)** section. This is a selection of headlines dated December 17, 1996:

<i>Boeing merger creates airline superpower</i>	<i>Johannesburg Star</i>
<i>Zimbabwe earmarks farms for seizure</i>	<i>Johannesburg Star</i>
<i>Annan to press U.S. on U.N. debt</i>	<i>MSNBC World</i>
<i>Mother Teresa suffers erratic heartbeat</i>	<i>MSNBC World</i>
<i>Unions, Courts Deliver Blows to Milosevic</i>	<i>Reuters World</i>
<i>Several Said Hurt in Attack on Saddam's Son</i>	<i>Reuters World</i>
<i>Rwandan refugee tide swells</i>	<i>CNN World News</i>
<i>Amid tensions, Arafat telephones Netanyahu</i>	<i>CNN World News</i>

Their offerings also include Information Technology News, Science & Technology News, and Business News.

At **[Infoseek's News Center](#)**, you can search for specific names, phrases or words in the past 30 days of news stories from Reuters, Business Wire and **[PR Newswire](#)**. In addition, you can search current headline news as published by Chicago Tribune, CNN, Los Angeles Time, MSNBC, and The New York Times. Click to access the full texts.

You can "Personalize" your news, and have Infoseek deliver only the news that interests you every time you return to the site. Also, you can have news headlines sent you by email.

Once per week, my communications system sends off a message to the WWW by email service at agora@kamakura.mss.co.jp (ref. [Chapter 12](#)). The message contains the command

send <http://www.mediainfo.com/ephone/news/newshrm/webnews/globarc.htm>

After a while, a list of files in the Global Interactive News Briefs Archive arrives in my mailbox. Each brief contains a digest of articles about the Internet printed in media around the world. I return the URL of the most recent news brief to the Agora server to receive the full report.

Some time ago, a well-known Norwegian industrialist visited my office. I showed off online searching in Brainwave for [NewsNet](#) newsletters, and stumbled over a story about his company.

"Incredible!" he said. "We have not even announced this to our Norwegian employees yet."

Sometimes, American online services give news from other countries earlier than you can get it on online services from within these countries. Besides, you may prefer stories in English.

Most Norwegians prefer to read news in Norwegian. The Japanese want it in their language, and the French in French. If they can get the news earlier than their competitors, however, most are willing to read English.

Few master many languages. Unless you live in a country where they talk Arabic, Chinese or French, chances are that you cannot read news in these languages. English, however, is a popular second choice in many countries, and it has become the unofficial Esperanto language of the online world.

Reading news translated from another language has its risks. Translators often make mistakes. One common reason is time pressure, another inadequate knowledge of the source language. Their cultural background may prevent them from writing an unbiased shorter version of the source text.

The risk of inaccuracies increases when a story, for example initially translated from Spanish into English, are being translated into a third language.

Avoid news that has been translated more than once, or risk the following type of experience:

On September 19, 1991, Norwegian TV brought news from Moscow. They told that Russian president Boris Yeltsin had a heart attack.

The online report from Associated Press, which arrived 7.5 hours earlier, talked about "*a minor heart attack*" with the following additional explanation: "In Russian, the phrase 'heart attack' has a broader meaning than in English. It is commonly used to refer to a range of ailments from chest pains to actual heart failure."

Still, expect your "personal online daily newspaper" capable of giving you the news faster and more correctly than traditional print media. Some news is only available in electronic form.

Seven minutes way back in 1991

On September 19, I called [CompuServe](#) to read news and gather information about online news sources.

According to my log, I connected through Infonet in Oslo (see [Chapter 13](#)). The total cost for seven minutes was US\$6.00, which included the cost of a long distance call to Oslo. (Today, using CompuServe's Standard Pricing Plan, the cost is much less!)

I read some stories, while they scrolled over the screen. All was captured to a file on my hard disk for later study. The size of this file grew to 32.000 characters, or almost 15 single-spaced typewritten pages (A-4 size). If I had spent less time reviewing the lists of available stories, seven minutes would have given a larger file.

Right after having logged on, a menu of stories appeared on my screen. The headline read "News from CompuServe."

The two first items caught my attention, and I requested the text. One had 20 lines about an easier method of finding files in the forum libraries, the other ten lines about writing addresses for international fax messages.

The command GO APV gave me Associated Press News Wires. You will find many

similar short-cut tricks in the online services' user manuals. This command produced the following menu:

```
AP Online                                APV-1

1 Latest News-Updated Hourly
2 Weather
3 Sports
4 National
5 Washington
6 World
7 Political
8 Entertainment
9 Business News
10 Wall Street
11 Dow Jones Average
12 Feature News
13 Today in History
```

I entered "9" for business news, and got this list of stories:

```
AP Online

1 Women, Minority Businesses Lag
2 Child World Accuses Toys R Us
3 UPI May Cancel Worker Benefits
4 Drilling Plan Worries Florida
5 UK Stocks Dip, Tokyo's Higher
6 Dollar Higher, Gold Up
7 Farm Exports Seen Declining
8 Supermarket Coupons Big Bucks
9 Cattlemen Tout Supply, Prices
0 Tokyo Stocks, Dollar Higher

MORE !
```

The screen stopped scrolling by "MORE !" Pressing ENTER gave a new list. None of them were of any interest.

Pressing M (for previous menu) returned me to the "APV-1" menu. On CompuServe, such videotext page numbers are given in the upper right corner of each menu display. I selected "World" for global news, which gave:

```
AP Online

6 Two Killed In Nagorno Karabakh
7 Yugoslavia Fighting Rages On
8 Storm Kills Five In Japan
9 Afghan Rebels Going To Moscow?
0 19 Killed in Guatemala Quakes

MORE !8
```

Oh, a storm in Japan! Interesting. I was due to leave for Japan soon, and entered 8 at the MORE ! prompt to read. My screen was filled with text in a few seconds.

"This is for later study," I thought, pressed M to return to the menu, and then ENTER to get the next listing:

```
AP Online

1 Bomblets Kill American Troops?
2 No Movement On Hostage Release
3 Baker Plans Return To Syria
4 Baker, King Hussein To Confer
5 Madame Chiang Leaving Taiwan?
6 Baker Leaves Syria for Jordan
7 Klaus Barbie Hospitalized
8 Iraq Denounces U.S. Threat
9 Yelstin Said Resting At Home
0 SS Auschwitz Guard Found Dead

MORE !
```

Here, I used another trick gleaned from the user manual. Entering "5,6,9" gave me three articles in one batch with no pauses between them. Five screens filled with text. If I had read the menu more carefully, I might also have selected story 0. It looked like an interesting item.

"This is enough the Associated Press," I thought, and typed G NEWS for an overview of all available news sources ("G NEWS" is an abbreviation for "GO NEWS," or "GO to the main NEWS menu"):

```

News/Weather/Sports      NEWS
1 Executive News Service ($)
2 NewsGrid
3 Associated Press Online
4 Weather
5 Sports
6 The Business Wire
7 Newspaper Library
8 UK News/Sports
9 Entertainment News/Info
10 Online Today Daily Edition
11 Soviet Crisis

```

First, a quick glance at 6, which presented itself in these words: "Throughout the day The Business Wire makes available press releases, news stories, and other information from the world of business. Information on hundreds of different companies is sent daily to The Business Wire's subscribers."

Then choice 7: "This database contains selected full-text stories from 48 newspapers from across the United States. Classified ads are NOT included in the full-text of each paper."

Their list of newspapers included Boston Globe, Chicago Tribune and San Francisco Chronicle. The latter is known for its many inside stories from Silicon Valley.

Choice 8 gave news from England. There, I selected UK News Clips, and received the following menu of news reports:

```

U.K. News Clips

93 stories selected

1 RTw 09/19 0818 YUGOSLAV AIR FORCE HITS CROATIAN COMMUNICATIONS
2 RTw 09/19 0755 CROATIA BATTLES CONTINUE AS EC PONDERES PEACE FORCE
3 RTw 09/19 0753 ARAB PAPERS SAY MOSCOW WANTS MIDEAST PARLEY DELAYED
4 RTw 09/19 0749 DOLLAR STANDS STILL, SHARES DRIFT LOWER IN ...
5 RTw 09/19 0729 EARNINGS GLOOM REVERSES LONDON STOCKS' EARLY GAINS
6 RTw 09/19 0716 SOVIETS NEED 14.7 BILLION DOLLARS FOOD AID, EC SAYS
7 RTw 09/19 0707 IRA SAYS IT KILLED TIMBER YARD WORKER IN BELFAST DOCKS
8 RTw 09/19 0706 BRITISH CONSERVATIVE CHIEF PLAYS DOWN TALK OF ...
9 RTw 09/19 0630 FINANCE RATES
10 RTw 09/19 0603 REUTER WORLD NEWS SCHEDULE AT 1000 GMT THURSDAY ...

```

The numbers in column four signify the release times of the stories. The articles are fed continuously from the news wires.

Next stop was the UK Newspaper Library. Here, you can search in full-text stories from The Daily and Sunday Telegraph, [Financial Times](#), The Guardian, UK News. The latter offers selected articles from The Daily & Sunday Telegraph, Financial Times, The Guardian, Today, The Independent, Lloyd's List, The Observer, and [The Times/Sunday Times](#).

In 1991, the rate for searching the UK Newspaper Library was US\$6.00 for up to ten hits. For another US\$6.00, I could get a menu with an additional ten stories. The rate was US\$6.00 to read the full text of selected stories. These rates were added to CompuServe's normal access rates.

For more about "clipping" of news, check out [Chapter 11](#). This Chapter is also contains pointers to business related news.

The news service "Soviet Crisis" was my final destination. It was just a few weeks after the attempted coup in Moscow, and I was eager for reports.

OTC NewsAlert had the following interesting story:

OTC 09/19 0750 FIRST ENGLISH LANGUAGE SOVDATA DAILINE IS LAUNCHED

The selection gave three screens with information about a new online service. Briefly, this is what it said:

"The SovData DiaLine service includes an on-line library of more than 250 Soviet newspapers, business and economic periodicals, profiles of more than 2,500 Soviet firms and key executives that do business with the West, legislative reports and other information."

It also said that part of the database was available through [LEXIS-NEXIS](#), and soon through [Data-Star](#), FT Profile (<http://www.ft.com>), [Reuters](#), Westlaw, and GBI. Undoubtedly, the name has changed by now.

Finally, a fresh story about the fate of the KGB. I read another fifty lines, entered OFF (for "goodbye CompuServe"), and received the following verdict:

Thank you for using CompuServe!

Off at 09:03 EDT 19-Sep-91
Connect time = 0:07

Seven minutes. Fifteen typed pages of text. US\$6.00. Not bad!

An overwhelming choice

I assume that your "daily online newspaper" will contain other stories. But where do you start?

On the Internet, consider [Clarinet](#), an electronic publishing network service providing commercial news and information. It provides general, international, sports, technology, entertainment and professional financial news, special features and columns.

[Worldnews.com](#), a multilingual news portal, offers several hundred online news sources in 20 languages and presents them in over 500 subject and geographical categories. Most of its contents are fully searchable.

[Individual.com](#) provides commercial news. With more than 25,000 pages refreshed daily, over 1,500 topic areas broken down into 240 categories within more than 20 industries, it covers a lot of ground. They claim receipt of up to 20,000 news stories each day from over 700 English language sources - newspapers, magazines, trade weeklies, newsletters, news, and press release wires. (October 1996)

You can read preselected news by topic area, or have your own "individualized" issue - based on your own keywords - sent you by e-mail every business morning.

Individual.com's sources include the following international titles: Newsbytes, Advertising Age International, Euromarketing, Inter Press Service, ITAR/TASS, Lloyd's List, Korea Economic Daily, Kyodo News International, Network World, Nikkei English News, OPEC News Agency, Reuter Business Report, Reuter E.C. Report, Reuter European Business Report, Reuters Asia Pacific Business Report, Traffic World, Xinhua News Agency, Agence France Presse, Asian Aviation News, BioWorld Today, BioWorld Weekly, Business China, Business Eastern Europe, Business Europe, Business Latin America, European Media Business & Finance, International Banking Regulator, International Petroleum Finance, Japan Chemical Week, PHARMA Japan, Reuter Corporate World News, Reuter Energy Report, Reuter Money News Service, Reuter Transcript Report, Reuter World News Service, World Airline News, World Airport Week, World Gas Intelligence.

Reading article abstracts is free. By paying a symbolic subscription fee, you get access to the full texts.

For general news, start with major newswires, like Associated Press, Agence

[France-Presse](#), Xinhua, [Reuters](#), and the like.

Check links to broadcasting sources of news in many languages at <http://www.markovits.com/broadcasting/>. Choices include BBS, Channel 4 (United Kingdom), Deutsche Welle (Germany), Teletext from NOS (Holland), Scandinavian broadcasters, Community Broadcasting Association of Australia, CBS, Radio Japan, the Internet Multicasting Service, US-based radio stations, CPB and NPR (USA), Radio Canada, Radio France, Radio and TV schedules from Finland, and more.

Inter Press Service (IPS) has a [World News Index](#) with news in English, Dutch/Flemish, Finnish, German, Kiswahili, Norwegian, Spanish, and Swedish.

Voice and video, please!

[Current Awareness Resources via Streaming Audio & Video](#) is a compilation of links to audio/video services that can be of use to the information professional who monitor current events. It focuses on news/public affairs services that are available in English. In most cases these links will take you directly to the service (it will start playing immediately) or to within ONE click.

Sites offering voice and video news through the net include:

- [canalweb.net](#) (France). Example: "*Tin Tuc TV*": Franco-Vietnamese bilingual Internet TV channel dedicated to cross-cultural issues (philosophical, ethnic and social): reflexion, tolerance, satire. Every fortnight on canalweb.net.
- [BBC](#) (England) online radio broadcasts. Example: Broadcasts in Central Asian languages, like [Uzbek](#), [Kazakh](#), [Azeri](#), and Russian.

Here are some other interesting choices: The [Online radio stations worldwide](#); [Publicradiofan.com](#) has a database of program listings for hundreds of public radio stations around the world; [Current Awareness Resources via Streaming Audio & Video](#).

News by mail

Some newspapers and news sources invite you to receive their news by email, but not all. Whenever this is the case, check out Web2Mail [in Chapter 11](#).

Searching the news

The [News Index](#) news only search engine indexes current articles from hundreds of sources from around the world. It is not an archive, but a resource for finding more information on current topics you are interested in. The news is broken up into various topics such as business, politics, sci-tech, and opinion. Use it to read different versions of a story, and hopefully derive some semblance of what actually occurred. Use it to find multiple sources if your first choice want to charge you for reading it.

By following a large number of papers, you can follow ongoing stories as they happen. Use it to monitor what goes on within a topic of interest. Search for a topic by submitting keywords. Hits containing all keywords are listed first. Click on the link to get an article's text.

[Daypop](#) searches and indexes over 6600 news web sites and weblogs for current events - just for today. You can limit your to news, weblogs, headlines, or all pages. Search results include the title of a site, brief excerpt, and a cache link with the cache date. (Cache refers to a copy of the page being kept on the daypop server.)

We typed the search word "Arendal," which is the name of a small 40,000 inhabitants town in Norway, and received a long list of hits, also from local newspapers...

Interestingly for some, the Advanced Search option lets you limit a search to one or several languages (like English, French, German, Dutch, Swedish, Finnish, Norwegian, Spanish, Portuguese, Italian. You can also limit your search to one or several geographic areas, ranging from United States to the United Arab Emirates.

Google's [News Search](#) is refreshed with new content every hour and contains material from over 100 English-language sources (March 2002). Each entry includes a time stamp of when the content was first crawled and links to related articles (if available). The following limit syntax terms work: intitle: terms in the headline; intext: terms in the text of the article; site:cnn.com limits from a particular source (if available).

These search engines also focus on today's news (English language sources only):

- [NewsBot](#)
- [NewsBlip](#)
- [NewsTracker](#)
- [Lycos](#)
- [TotalNews](#)

For more, check [NewsCenter](#)'s list. [Panda Newsfinder](#) also includes historical archives. [AllTheWeb's News Search](#) includes some foreign language material.

In [Financial Times' Global Archive](#), you can search and read over 6 million articles from 3,000 periodicals worldwide (March 2000), most of them for free. Keyword searches may be modified in a number of ways, and you can select to search one, several, or all of the indexed publication groups. Registered users may save searches for later reference. A powerful tool for anyone searching for current business-related news and writing.

[NewsTrawler](#) is a meta search engine that lets you search hundreds of news archives on the web in parallel. The collection includes news, magazine and journal sources from a broad range of countries.

Note: While the search for information itself is free, a number of news resources provide free summaries but charge for the full retrieval of information.

[OCLC FirstSearch](#) lets you search the Fact on File **World News Digest**, a full-text coverage of world politics, international affairs, the environment, science, medicine and health, economics and business, crime, education and social issues. Articles are drawn from over 100 global news sources. The 70,000-record database contains the complete full text of Facts On File since 1980 (1998).

Computer, Communication, Internet News

For free daily news about the Web, [NewsLinx](#) - Daily Web News - is a favorite. The page for May 3, 1996, simply started like this:

- Full Speed Ahead For The Internet (c|net)
- Can't Sell Famous Web Names" (Boston Globe)
- Gates Says Don't Worry About Web Jams (News Tribune)
- Pointcast Network Hot (Chicago Tribune)
- Create Web Pages With "Liquid Motion" (Web Review)
- Web Connects Siblings (Boston Globe)
- Job Searching On The Web Becoming Standard (Detroit News)
- Germany Plans Minor Net Regs (Reuters)
- Computer Checkup Via Web (Interactive Age)
- Strange Unibomber Site (Web Review)

Click on a title to get the full text.

NewsLinx features links to stories culled from the mainstream press, with an update posted each business day. Although there are many business or technology listings on the Web, this service provides links to the best stories, a simple one page interface, and focus exclusively on the Web.

C|Net's [NEWS.COM](#) is another fine source for this kind of news, as is [The New York Times' Computer News Daily](#) section. NEWS.COM is divided into several sections, and focuses on products and services being developed for the Internet, stories on hardware and systems, Intranets, and technology business news. A free electronic

newsletter is also available.

[Individual.com](#) offers commercial news within these categories

Computer Hardware & Peripherals Computer Hardware & Peripherals
 Computer Software Computer Software
 Computer Professional Services Computer Professional Services
 Data Communications Data Communications
 Interactive Media & Multimedia Interactive Media & Multimedia
 Semiconductors Semiconductors
 Telecommunications

If you are into computers, you owe it to yourself to check out [Newsbytes](#). This service offers global headline news from bureaus around the world. The stories are sorted in sections with names like IBM, UNIX, Government, Telecom, Trends, Business, Apple, Personal Computers, DOS, Windows, Pen, Networks, General, Education, Health, Online, Broadcast, Legal, Personal Digital Assistant, Chips, Super Computers. A favorite!

[The IM Europe Newsdesk](#) provides links to news originating within the EU on information markets, multimedia, the information society, and information and communication technologies. The site can be accessed in English, French, and German.

News is more than news

After some time, your definition of the notion "news" may change. Since so many conferences are also interesting sources, they should also be a part of your news gathering strategy. Check in regularly to read what members say about what they have seen, done, heard, or discovered.

Professional news reporters have also discovered this. Online conferences are popular hunting grounds for writers of the traditional press.

Many [CompuServe](#) forums have news sections. If you are into Hot News and Rumors about Amiga Computers, read messages in section 3 of the Amiga Tech Forum.

Consumer Electronics Forum has the section "New Products/News." The Journalist Forum has "Fast Breaking News!" The Motor Sports Forum has "Racing News/Notes." The Online Today Forum has "In the News."

Below, we have therefore combined the traditional news providers with conferences to provide some interesting sources sorted by part of the world:

Links to news spanning the globe

[Abyz News Links](#) provides very easy-to-use links to over 15,600 newspapers and other news sources from around the world (March 2001). Fast to use..

[Kidon Media-Link](#) (The Netherlands) is another worldwide index of online news sites.

[Lastminutenews.com](#) allows users to select a country and city via pull-down menus and then the newspaper's homepage in a new window.

[HomeTown Free-Press](#) offers over 1,500 links to free local news and information sites in Africa, Antarctica, Asia, Australia and New Zealand, Eastern and Western Europe, Middle East, North, South and Central America, West Indies (December 1999). Sites include newspapers, radio and television stations, schools, civic and civil organizations. [NewsCenter](#) is another fine resource.

[WRAL-TV5](#) delivers free international news via continuous feeds from Reuters, Associated Press and The Sports Network.

United Nations Daily Highlights: <http://www.un.org/News/dh/latest.htm>.

[BBC Worldwide Monitoring](#)'s news reports draw upon radio, television and news agency reports from over 3000 sources in over 140 countries, to provide fast, reliable coverage of political and economic news. When each report comes in, it is translated into English, but without editorial comment or analysis. Includes a transcript service, and an alerting service, providing summaries of monitored reports as stories unfold.

Finally, check CRAYON for the free "[CReAting Your Own Newspaper](#)" service.

Mark off your selected batch of information sources, and have a customized newspaper delivered to you. There's a worldwide daily news index at

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

Ah! And [click here](#) if you just want the weather.

Africa

[Africa News Online](#) offers news from over 50 different sources, including 34 top African news organizations. The site is managed by Africa News Service, a non-profit agency. Dispatches from the Panafrican News Agency are also available. You'll find a wide range of country and topic-specific news, including stories relating to arts and entertainment, science and health, business and finance, and sports. An archive of past stories is searchable.

[PeaceNet's World News Service](#) offers several digests on Africa, covering different regions of the continent, with coverage from the Inter Press Service (IPS):

- Africa - General Overview of the Entire Continent
- Southern Africa - Kalahari, Cape and Islands
- West Africa - Niger Basin
- West Central Africa - Congo-Logone
- North Africa - Maghreb and Niles
- Eastern Africa News - Rift Valley and Red Sea

IPS' writers are all local people covering the areas in which they live, and their articles appear three days after copyright. Other sources include the Pacific News Service, the United Nation Information Centre, Third World Network Features, PeaceNet and EcoNet.

Financial Times' [News by E-Mail](#) delivers selected stories each weekday. After free registration, subscribers can select the topics that interest them, from industry-specific news (autos, chemicals, transport, etc.) to various summaries (US news, world news and comment, etc.). Available in HTML or text form, the email news stories are linked to research, online discussions, and other resources. Users can add or drop topics at any time.

[The Weekly Mail & Guardian](#) (Johannesburg, South Africa) also offers news by email. Their searchable news archive goes back to July 1994.

[ZAMNET](#) provides links to the Africa Information Afrique News Archive. The archive contains articles from Angola, Botswana, Lesotho, Mozambique, Malawi, Namibia, SADC, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe published over several years.

Visit <http://www.sul.stanford.edu/depts/ssrg/africa/somalia.html> for links to specialized news sources on Somalia.

China

[China Daily On the Web](#) delivers English language news from China under the headings Top News; Home News; China Business; World Business; Money; Opinion; Sport; Feature; World News.

[China News Digest](#) (CND) is a voluntary non-profit organization aiming at providing news and other information services about China-related affairs. All CND services are free of charge.

CND's English language publications include CND-Global (three issues per week), CND-US (one issue per week), CND-Canada (one issue per week), CND-Europe/Pacific (one issue per week), CND-China (two issues per month).

[China News Service & Agency](#) offers daily business news from China, Hong Kong, Macau, and Taiwan to subscribers. The [Ta Kung Pao Chinese Daily](#) has daily coverage of news about China and Hong Kong in Chinese . Requires Big5 or GuoBiao software to read.

Usenet's talk.politics.china is for Discussion of political issues related to China.

Japan

[Japan Press Network](#) provides the latest news covering Japan's high-tech industries as well as finance, economics and the Japanese press. **Nikkei** (on FP Profile) has an English language service with news articles from Nikkei and other Japanese newspapers.

[The Japanese Journals Information Web](#) offers Current Awareness using access to tables of contents of current Japanese journals and magazines. In addition, it has The Union List of Japanese Serials and Newspapers (ULJSN) currently includes information on 4,844 titles held by twenty libraries or accessible over the web (1999).

To read many of the tables of contents, where these are not presented as graphics files, you must have a computer that can display Japanese text. The union list includes romanized information.

Middle East

The [al-Jazeera](#) 24-hour news satellite channel in Qatar is the CNN of the Arabic speaking world. It publishes in Arabic, explores taboo subjects, and welcomes criticism of governments.

[Arabic News](#) delivers daily Arabic country by country news: Politics, culture, recipes, book reviews, weather, sports, arts. Covers Egypt, Egyptian life, pyramids, Lebanon, Iraq, the Gulf, its oil, Arabian horses and camel races.

The Middle East News Network publishes daily news, analysis and comments from 19 countries in the Middle East produced by Arabic, Hebrew, Turkish and Persian press. You can read these news through [Reuters](#), Down Jones News/Retrieval, and Information Access.

[Arabnet](#) brings up to the minute Arabic news in Arabic characters. For uncensored (by the Israeli) Palestinian news, check the [Birzeit University](#) site.

Other countries in Asia and the Pacific

For interesting links to sources of political, social and economic news about mainland China, Hong Kong, Taiwan and Tibet, check <http://freenet.buffalo.edu/~cb863/china.html>.

[Asia Times Online](#) is a daily publication covering the Asia-Pacific region with an emphasis on politics, economics and business. Covers China, Southeast Asia, Japan, Korea, India/Pakistan, Central Asia/Russia, Oceania. [AsiaNow](#) has stories from Asiaweek, Time Asian Edition, those broadcasted by CNN International to Asia, and its own columnists on Asian politics, Asian Business and Technology. It also has live news feed from global news agencies like AP and Reuters, video and audio.

[EurasiaNet](#) provides daily news and analysis on Central Asia and the Caucasus, and developments in Russia, the Middle East, and Southwest Asia that bear on this region. Users can sign up to receive a weekly bulletin by email.

[PeaceNet's World News Service](#) has a Southeast Asia digest. It includes coverage from the Inter Press Service (IPS) on Vietnam, Thailand, Hong Kong, Japan, Cambodia, Korea, Philippines, Taiwan, The People's Republic of China, Malaysia and the region as a whole.

The Star, Malaysia's leading English-language daily newspaper, brings its news at <http://www.jaring.my/~star/>. Singapore's **Straits Times** is at <http://straitstimes.asia1.com/>. [Thailand News Web Directory](#) has links to newspaper, TV, radio, magazine and Thai government's reports.

Mailing lists:

- [Pakistan News Service](#), and **Pakistan News Service Discussion** ([PNS-L](#))
- The [Kashmir Journal](#)

The **Pakistan News Service** is at <http://www.paknews.org/>, and [IndoNews](#) delivers "Indonesian Daily News Online - Berita dari Indonesia." [IraqNet](#) - a multilingual virtual

community for Iraqis everywhere - offers headline news on Iraq.
Usenet has

- [soc.culture.bangladesh](#) Issues & discussion about Bangladesh.
- [misc.news.southasia](#) News from Bangladesh, India, Nepal, etc.
- [alt.culture.indonesia](#) Indonesian culture, news, etc.

The Hindu, a national Indian newspaper, is experimenting with an online edition.
IndoLink is an interesting source of Indian news, information, articles. **Economic and Political Weekly** (EPW), India, is a social science journal featuring research articles in economics, sociology, political science and other disciplines.
Bangla2000 lets you subscribe to receive daily news by email about Bangladesh. In English and Bangla.
The Tibet Information Network is an independent news and research service providing information and analysis of current events in Tibet. **UzWeb** offers news from Uzbekistan by email.

Central and South America

PeaceNet's World News Service has a Latin America and the Caribbean digest with coverage from IPS. The America Latina digest is the Spanish language equivalent. The digests feature regular news from sources like La Agencia Latinoamericana de Informacio'n (ALAI), Third World Network's Revista del Sur, and Tercer Mundo Económico.

News from Cuba, Latin America, the Caribbean and Africa is available daily from **Radio Havana**, Cuba. El Tiempo (Colombia) is at <http://www.eltiempo.com/>. There's another source of news as seen from a Cuban perspective at <http://www.cubanet.org/>. In Spanish, German, French, and English.

The **Latino News Network** provides multimedia news to those interested in learning about Latinos both as a market and as a community.

Europe

Start by visiting **Editor & Publisher** for European daily news and weather. Here are links to Radio Amsterdam, Deutsche Welle, Der Spiegel, L'Unione Sarda (Italy), RTI (Ireland), Baltic News Service, The Vagon News Service (target is British ex-patriots) and The Electronic Telegraph in United Kingdom, Bulgarian news, Croatian Radio News, Danske nyheder (Denmark), Gazeta Wyborcza on-line (Poland), and much more. You can search **the Guardian** OnLine Archives in England, and the **Economist** is at <http://www.economist.com/>.

For a peek at El Periódico de Catalunya (Spain), point your browser at <http://www.elperiodico.es>.

The Austrian "**Wiener Zeitung**" claims to be the oldest existing daily newspaper in the world (nearly 300 years old). Its Web page covers domestic and world news in German, general information about Austria's government, the house of parliament, the president, articles from the weekly computer page, and the Friday supplement, reviews of books, records and cultural events, a chess page, and more. The **DE-NEWS** mailing list is about "what's going on in Germany - a summary of daily news from Germany (in English)." (Try **GERMNEWS** for the German language equivalent).

For more English language daily news covering the Baltic countries, check **Editor & Publisher**.

The Dutch language Internet newspaper **InterNetKrant** brings news from the Netherlands. You may also want to try **the News, Magazines & Information Servers page**.

Der Spiegel (Germany) is at: <http://www.spiegel.de>.

The **HELLENIC NEWS database** is at <http://www.greeknews.ariadne-t.gr/>. For a page with Greek newspapers, try http://www.spark.net.gr/perip_e.html.

Mailing lists:

- The [ALBANIAN](#) list - for discussion of various issues related to Albania, Kosova, and the Albanian population in the Balkans (FYR of Macedonia, Montenegro, Serbia, Greece), as well as Albanian communities world-wide.
- [MAKNWS-L](#) - Macedonian News

[Dow Jones](#) Interactive offers full text from Wall Street Journal Europe, Agence [France-Presse](#), the Paris-based International Herald Tribune, the Guardian, and others from the United Kingdom.

The Vatican Radio is at <http://www.wrn.org/vatican-radio/>, and **Radio Vaticana Kurznachrichten** (in German) at <http://www.kath.de/rv/>. More links to international broadcasters: <http://www.wrn.org/stations.html>.

If you know French, check the [Francopholistes l'annuaire des listes de diffusion francophones](#) page.

North America

There's an abundance of online news sources covering North America. We are therefore just including a few pointers here, like

The Wall Street Journal	http://interactive.wsj.com/	(English)
	http://interactivo.wsj.com/	(Spanish)
The Washington Post	http://www.washingtonpost.com	
USA Today	http://www.usatoday.com	
Los Angeles Times	http://www.latimes.com	

[Newslink](#) offers links to many U.S. newspapers, broadcast networks and affiliates, magazines and publishers, and sites of special journalistic interest on the World Wide Web.

Check out [Editor & Publisher](#) for more.

Russia and neighbors

[Press Rover](#) offers free full text search of an archive of Russian newspapers and periodicals. Your search may be limited to the following areas: Government & Society, Business & Economy, Culture & Arts, and Family & Entertainment. Payment is required for document retrieval only.

There's a [Russian News Links](#) page with links to Federal News Service, Izvestia, ITAR- TASS, InterFax/Maximov, Nezavisimaya gazeta, Pravda-5, and an extensive list of other Russian newspapers and magazines on the Internet, including audio radio resources. It also have good coverage of other NIS countries, including Ukraine, Belarus, Armenia, Georgia, Kirghizistan, Azerbaijan, The Baltics.

[The Jamestown Foundation](#) publishes **The Monitor**, a daily digest of news reports from Russia and other former Soviet republics.

A daily news summary of events in Southeastern and Eastern Europe, the Caucasus and the Trans-Caucasus is available from [Radio Free Europe/Radio Liberty](#). In addition to news briefs, RFE/RL offers features, analysis, special reports, and press reviews. Countries covered include Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Iran, Iraq, Kazakhstan, Kirgistan, Latvia, Lithuania, North Caucasus and Transcaucasia, Romania, Russia, Slovakia, South Slavic, Tajikistan, Tatar-Bashkir, Turkmenistan, Ukraine, and Uzbekistan.

Other English-language sources with news from Russian include [Moscow Times](#), and [The St Petersburg Times](#). For a fee, [East View Publications](#) offers searchable databases of articles from the daily Russian newspapers Nezavisimaya Gazeta and Sevodnya.

Usenet has:

- [alt.current-events.bosnia](#) The strife of Bosnia-Herzegovina.
[soc.culture.bosna-herzgyna](#)
[alt.news.macedonia](#) News of Macedonia in the Balkan Region.
[alt.current-events.ukraine](#) Current and fast paced Ukrainian events.

English-language news from Croatia is at http://www.carnet.hr/news/media_eng.html.

BosNet distributes information relevant to the events in/about Republic of Bosnia-Herzegovina. Daily posting typically consists of newsbriefs compiled from reports by UPI, RFE/RL, NYT, Reuter, as well as other sources, such as: LA, SF, Chicago dailies; WP, WSJ, The [Economist](#), White House, New Republic, Boston Globe, various Ministry Reports, FPB, etc.

Special interest news

Freedom Press is the world's oldest anarchist publishing group (founded in 1886). Their **FPI** mailing list sends extracts from their publications with an emphasis on news.

MagPortal lets stay abreast of recent free magazine articles available online. Updated each business day, the site organizes the articles in categories like Business, Internet, Family and Home, Sports, Health, and Science and Technology, and others. A keyword search engine is provided. If interested in environment protection, check The **Environmental News Network**.

The **Newseum** is definitely special interest. It is an interactive museum of News. Online exhibits include News Stories of the Century, the Berlin Wall and the Media and the Space Race. You may also enjoy a visit to **Historical Newspapers Online**, which includes Palmer's Full Text Online, 1785-1870.

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Search:

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The Online World resources handbook

Chapter 10: Finding a needle in a bottle of hay

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Also see [Chapter 14: Desinformation, myths, hoaxes, fraud, deception and errors.](#)

There is little doubt that the databases of the online world contain nearly everything needed to complete a major research project, fuel an information-needy business, or just help get the school homework done.

Online research is faster, provides more depth and is cross-referenced to help researchers locate obscure resources. It makes you an "instant expert" on a subject matter. The main problem is learning how to get a confident grip on the searching process.

Prepare by clipping

Experienced users regularly "clip" news from online services, and store selected parts of what they get on their personal computers' hard disks. They use powerful tools to search their data, and know how to use the information in other applications. (More about clipping in [Chapter 11.](#))

Regular clipping of news is highly recommended. It is often quicker and easier to search your own databases, than to search online. Your data is a subset of previous searches. Therefore, the stories on your disk are likely to have a high degree of relevancy.

There are many good programs for personal computers that let you search your personal data for information. See [Chapter 14](#) for ideas.

While secondary research can never replace primary information gathering, it often satisfies most information needs related to any task or project. Besides, it points in the direction of primary sources from where more in- depth information may be elicited.

When your personal database fails to deliver

Regular "clipping" can help you build a powerful personal database, but it will never satisfy all information needs. Occasionally, you must go online for additional facts.

When this happens, you may feel like Don Quixote, as he was looking "for a needle in a bottle of hay." The large number of offerings is bewildering. To succeed, you'll need a sound search strategy.

Your first task is to locate **useful sources** of information. The next, to decide how best to find that specific piece of information online. You must **plan** your search.

Although one source of information, like an online database, is supposed to cover your area of interest, it may still be unable to give you what you want. Let me explain with an example:

You're tracking a company called IBM (International Business Machines). Your first inclination is to visit forums and clubs concerned with products delivered by this company. There, you plan to search message bases and file libraries. The search term IBM will probably give so many hits that you almost drown. To find anything of interest in these forums, your search terms must be very specific. General news providers, like Associated Press, may be a better alternative. Usually, they just publish one or two stories on IBM per week. Don't expect to learn about details that are not of interest to the public. AP's stories may be too general for you. Maybe you'll be more content with industry insiders' expert views, as provided by the Brainwave for [NewsNet](#) newsletters OUTLOOK ON IBM, or THE REPORT ON IBM.

The level of details in a given story depends in part on the news providers' readers, and the nature of the source. The amount of "noise" (the level of irrelevancy) also varies. In most public forums, expect to wade through many uninteresting messages before finding things of interest.

Try the following strategy:

- Step 1:** Locate sources that provide relevant information,
 Selecting sources is half the battle in making a good search!
 You probably won't find what you need if you're not looking in the right place.
- Step 2:** Check if the information from these sources is at a satisfactory level of details, and that the volume is acceptable (not too much, nor too little).
- Step 3:** Study the service's search commands and procedures, PLAN, and then SEARCH.

Locating interesting sources

Step 1 is not an easy one. There is such an abundance of directory services and pointers.

My **current favorite** is [Google](#). By December 2001, it claimed to index over 3 billion documents, i.e. Over 2 billion web pages (html, pdf, other formats), 700 million Usenet posts and 300 million images. Its Usenet postings date back to May, 1981.

Compare notes with [Searchenginewatch.com](#), and [Searchengineshowdown.com](#). They regularly gauges the comparative sizes of each major search engine's index.

Google rates sites based on who links to whom. Ranking depends on the number of links to a site and its rating position, thus giving a type of peer review of the Web itself. It puts search terms in context by displaying an excerpt of the text that matches a

particular query with the search terms included in bold. Several languages.

If you worry about search engines selling data collected from your searches to third parties, try the Google-powered [Topclick](#) search engine. They use no cookies, no banner ads, and strives to protect your privacy.

Google lets you use a plus sign (+) to include words or a minus sign (-) to exclude words in the search, as in *+online +world -computer*. This search will only return hits containing the words "online" and "world" but not "computer".

You can limit your search to .pdf files by using the syntax *filetype:pdf*. A Boolean "OR" is available with Google. For it to function, capitalize the OR. Note that Google only makes searchable the first 110 k of a page. Long documents may have substantial content invisible to Google.

One nice feature in this age of dead links is that Google saves a copy of the indexed page. So, if you are unable to get to a desired page, select the cache copy.

It's only worth using Google if you bear in mind the sort of material which might be posted in your subject area. Since anyone can publish almost anything on the Web, pages vary - from personal pages set up by any student who has Internet access, to those set up academic or research institutions, those set up by not-for-profit organizations, and those from commercial organizations.

Warning: The largest search engines index less than 1/10th of the web!
"Two scientists from the NEC Research Institute in Princeton carried out a study on the Net's loudest search engines and found that not only do they not index the best part of the Net but they are most likely to index commercial over educational, US over European and popular over relatively unknown," reported [Nua Internet Surveys](#) in July, 1999.

Search engines are not indexing their databases daily. In early 2002, Google refreshed their database once per month! A web page made available on the web on Thursday might not appear in any search engine for weeks.

Simply because many pages from a site are available does not mean that the engine makes every page of an entire site searchable. This is a good reason for not relying on one search engine only.

[Fast Search](#) and [Alta Vista](#) are second choices. Sometimes, I play Google against Alta Vista or Fast Search for maximum result. If I want a query to contain **a string from a Web address**, Alta Vista would be my first choice. In other cases, network access speed will decide. If getting to one of them takes too long, I go to the other. [Arnoldit.com](#)

For international search engines, check [Arnoldit.com](#).

Disabled Internet surfers may want to search these offerings through [SETI-search.com](#). This search service is particularly interesting for those who are blind, or have very low vision as it works smoothly with their assistive technology devices.

Special

[FindSame](#) allows users to search for documents using large pieces of text rather than keywords. It treats your search query as an entire document and returns a list of "documents that contain any fragment of that document that is longer than a certain length. That length is about one line of text." Alternatively, users can enter the URL of a document and FindSame will return pages that contain at least a few sentences that appear on that page.

Meta-searching

Meta-search agents let you search several search engines in one operation. For example,

[Super Searches](#) searches major search engines like Alta Vista, Excite, Galaxy, HotBot, Lycos, Web Crawler, Yahoo, WWW Yellow pages, Meta crawler, [Google Groups](#), Aliweb, Hotbot, Lycos, and more. Also, try [Dogpile](#), [Highway61](#)

One word of warning: The meta-search agents treat the product of search engines as data: changing it, organizing it, and making it simpler to use for the consumer, without understanding that this information is more like a publication than raw data.

Usually, these services do not support Boolean, temporal, or proximity operators, and therefore give very poor precision. Set building is not possible. Most well-known meta-engines send a query to many entirely "pay for placement" engines.

Searching a topic area

Narrowing a search down to a specific topic area can be a challenge with the general search engines. Sometimes, you may be better off using a more targeted search service.

There are many services linking you to topic area search engines. Example:

[SEARCH.COM](#) links you to search services within areas like Arts, Automotive, Business, Computers, Directories, Education, Employment, Entertainment, Finance, Government, Games, Health, Housing, Legal, Lifestyle, News, People, Politics, Reference, Science, Shopping, Sports, Travel, Usenet, and Web.

[Langenberg Search](#) is a gateway to some of the most popular search engines for a variety of subjects grouped under : Acronym, Area Codes, Books&Pubs, BusinessFinder, Cooking, Dictionary, Encyclopedia, Entertainment, Government, Jobs, Maps, Medicine, Metasearch, Misc, Money&Stocks, News&Sports, PersonFinder, Religion, SearchEngines, Shipping, Translation, Travel, Usenet, Weather, Zip Codes.

[SearchEngineGuide.COM](#) offered links to 2341 search engines sorted by area in December, 1999. [The BIG Search Engine Index](#) may also be worth your visit.

Some other interesting offerings:

- [Today's news](#)
- [Acronym Finder](#) (over 225,000 acronyms, abbreviations and definitions - Jan. 2002)
- [Agricultural Search Engine](#) (English, French)
- [Archives of yesterday's news](#)
- [Airport Search Engine](#)
- [Animals](#)
- Asia (Search [Asian Studies WWW VL Web Space](#))
- [Browser applications](#), all the small application programs that run in web browsers.
- [Computer companies, hardware, software, peripherals.](#)
- [Computers, etc.](#)
- [Country music](#)
- [Clip art, icons, background images, animations, sound clips](#)
- [Currency exchange](#)
- [Education](#)
- The Internet guide to [engineering, mathematics and computing](#) (EEVL)
- [English](#) (to find the meaning of this very special English word)
- Films ([Online Short Films](#))
- [Financial-only content](#)
- [Food recipes](#)
- [Frequently Asked Questions](#) (FAQs)
- [Games on the Net.](#)
- [Games II](#)
- ['Geo' Industry Search Engine](#) (GIS, GPS)
- Geography - [blank map outlines](#)
- [Glossaries](#) - Arts & Culture, Business , Careers & Employment , Computers & Internet , Economy & Finance , Education , Entertainment , Family & Relationships , Government, Politics & Military , Health, Medicine & Fitness , Humanities & Social Sciences , Law and Justice , Lifestyle , Media , News & Weather , Reference , Science , Sports & Recreation , Technology , Transport , World, Regions, Countries & Travel
- [Health](#)
- [Health](#)

- Historical web pages. - "The Internet Archive's" [WayBack Machine](#) lets you surf the net as it was. Also, includes Usenet postings, archival movies, Arpanet historical documentation, and more.
- [Html, dhtml, Perl, Java: for Web developers and programmers.](#)
 - [Sourcebank](#) - Programming resources on the internet, source code for Java, C, C++, research papers and online magazine articles.
- [Image Search \(Google\)](#)
- Locating mailing lists with interesting discussions
 - [Topica](#)
 - [Liszt](#)
 - [L-Soft](#) (the LISTSERV vendor)
 - [Mailbase](#)
 - [Onelist](#)
 - [Neosoft](#)
 - [New Lists](#)
 - [Catalog.com](#)
 - [Findmail](#)
- [Mail-order catalogs](#)
- [Maps](#)
- [Marketing](#): For Online Advertisers, Marketers, and E-Commerce
- Multimedia files such as movie scenes, pictures, music clips, concerts, sporting events: [Lycos](#), [Scour.net](#), [arribavista.com](#), [Altavista](#).
- [Music \(MP3 format\)](#)
- [Mythology and folklore](#)
- [Non-Profit Organizations](#)
- [.pdf documents](#) documents (Adobe)
- [Old newsreels](#): more than 3,500 hours (1896-1970).
- [Postal codes](#) around the world
- [Sample sounds and sound effects](#).
- [Scientific information](#). | [Scirus](#)
- Software - shareware and public domain: [Lycos](#), [Tucows](#)
- [Time related links](#) . An extensive collection.
- [Weblog searches](#)
- [Web searches](#). In addition, searches in million of articles from 5,400 premium sources, such as books, magazines, databases, and newswires not available elsewhere.
- [WebData.com](#). Access to specialized online databases.

Finally, check [AltaVista's Search Guides](#) for guidance about how to search for some types of information. [W3engine](#) is a search engine's search engine. It helps you find search engine sites; meta search sites; index directories; specialty engines; yellow pages; and more. You can also locate search engines by country. [InfiniSource](#) has a portal with links to specialized search engines, as has [Universitet Leiden](#) in Holland.

Searching for non-US information

No search engine indexes the whole Web, and most US based services tend to be best at US contents. US services focusing on other geographical areas tend to miss local organizations having registered .com, .org, or other global addresses.

For contents in other geographical areas, you may be better served by engines specialized on these areas. To locate such engines, try [Search Engines Worldwide](#) (with [frames](#)). 850 search engines and directories from 130 nations (April 2000), listed alphabetically by country.

Some examples:

[Africa](#)

Europe: [Euroferret](#)

India-Related Search Engines: [Utexas.edu](#), [KHOJ](#)

[Israel](#)
[Middle East](#)
[Russia](#)
[Scandinavia](#)
[South Africa](#)
[United Kingdom](#)

For links to search services in other countries, try [Search Engines Worldwide](#), [Search Engine Colossus](#), and [Country Specific Search Engines](#).

[The Financial Times Global Archive](#) is another interesting offering. It has over 10 million articles from 2000 publications. Their news database is updated on a 24 hours / 7 days basis from selected international publishers and agencies. Search the five year archive of the Financial Times Newspaper as well as archives of European, Asian and American business sources.

In the [comp.infosystems.search](#) newsgroup, discussion is focused on web searching: *"Discussion about the different aspects, ramifications and use of search engines and associated technology."*

Non-English language searches

There are major structural differences between languages. An indexing system built for English text may therefore not be suitable for a text written in the language you're searching, and in particular if the other language uses special fonts. Using special purpose search engines may be the way to go in such cases. Some options:

- [Arabic](#)
- [Chinese](#)
- French (<http://lokace.iplus.fr/> and <http://www.ecila.fr>)
- German (<http://www.aladin.de/> and <http://www.dino-online.de/suche.html>)
- [Italian](#)
- [Japanese](#)
- [Spanish](#) ([Spanish language search engines](#)).

Another problem using the English language search systems is that you don't just have to understand English to get the most out of them, you'll have to understand English well.

Searching Usenet

After searching the Web, my next step is usually [Google Groups](#), a large indexed database of archived Usenet news dating back to 1981. We're talking about over 700 million messages here (2001)! It is by far the most complete collection of Usenet articles ever assembled and a fascinating first-hand historical account.

You can use the service for research, or to locate interesting newsgroups worth your subscription.

Google Groups' powerful filter lets you limit what records will be searched by a query. A search may be limited by date, author, newsgroup name (using wildcards, or range operators), wildcards (compan* matches companies, company, and much more).

The order of the records in the hit list may be set to reflect how often the words you're searching for appear, as well as the importance you have given the posting date. This scoring will give you the records that best match your search at the top of the list.

Once you have found an interesting message in a hitlist, you can retrieve the thread as it appears on the screen.

[InfoSeek](#) lets you search many Internet newsgroups, news and business information from real-time newswires, publications, broadcast programs, financial and government databases, World Wide Web pages, mailing list archives, and technical support information (including over a year of Computer Select database of the full-text and abstracts of about 100 computer magazines).

Queries can be entered as plain English, or by just entering key words and phrases. There is a Japanese language version at <http://japan.infoseek.com>.

Searching Mailing lists and Web forums

[BoardReader](#) claims to let you "search 732,456 forums and message boards from the Web, information that most search engines do not retrieve." The forums and boards are sorted in these top-level topic groups: Art & Antiques, Automobile, Boating, Computers, Console Games, Hobbies, Home & Garden, Motorcycles & ATV's, Health, Entertainment & Music, Outdoor Recreation, Sports, Social, Travel.

[Reference.COM](#) ([Chapter 11](#)) indexes messages posted to several mailing lists and Web forum. This includes [Kidlink](#)'s announcement lists.

Several mailing lists let you search their archives of postings through the Web. For example, all postings to [the TOW mailing list](#) since 1993 are searchable. Hits can be filtered by strings found on the subject line, strings in the author's email address, or by giving a date range.

Microsoft lets you search several of [their mailing lists](#), like those on ATL, ActiveX, Active Server Pages Scripting, Authenticode, CIFS, Client Scripting, Cryptographic API, Distributed COM-Based Code, Internet Explorer Html.

Some other mailing list archive sites:

- [American.edu](#)
- [Anet](#) (via rutgers.edu)
- [Buffalo.edu](#)
- [Asu.edu](#)
- [Emory.edu](#)
- [Gmd.de](#)
- [Hea.ie](#) - many lists focusing on Irish, Celtic and Gaelic culture and languages.
- [Indiana.edu](#)
- [Lsoft](#)
- [Nih.gov](#) - mainly medicine and health related lists
- [Nodak.edu](#) - carries all public [Kidlink](#) lists
- [Polito.it](#)
- [Psu.edu](#)
- [Spc.edu](#)
- [Stjohns.edu](#)
- [Temple.edu](#)
- [Uta.edu](#)
- [Yorku.edu](#)

[Catalist](#) is the official catalog of LISTSERV mailing lists. This site lets you search for mailing lists of interest. It guides you to their web archive interface, if available. The LISTSERV web archive interface allows you to search the list's archive, and browse postings chronologically.

Searching specialized databases

If you are looking for more specialized databases, try [The Internet Sleuth](#). It links to over 3,000 searchable databases on the Internet on a wide variety of subjects.

Sleuth's categories include: Agriculture, Economics, Internet, Regional, Education, Legal, Sciences, Astronomy, Employment, Literature, Shopping, Aviation, Engineering, Mathematics, Social Sciences, Biology, Physics, Entertainment, Medicine, Software, BioSciences, Environment, Arts, Music, Sports, Business, Finance, News, Technology, Business Directories, Food & Drink, People, Trade & Industry, Chemistry, Genealogy, Travel, Commercial Databases, Government, Politics, Usenet News, Companies, Health, Computer Related, Recreation, Veterinary, Humanities, Reference, Web Search Engines.

[Database Central](#) links to over 4,000 database resources. The resources vary widely, from software, shareware, and middleware to tips, tutorials, and white papers to

books, magazines, and discussion forums. You may browse by category or use a keyword(s) search engine.

The "Deep" Web

Then, there's the "deep" web, also called the Invisible Web. These are the terabytes of information available in digital form through hidden databases that cannot be seen or searched directly by most Web search engines. They include databases, archived material, and interactive tools such as calculators and dictionaries. About 95 percent of this information is available to the public and is not subject to subscription fees.

In early 2002, experts estimated that the "surface Web" contained 1 billion to 2 billion documents, while the "deep Web" could contain as many as 550 billion. Put another way, the surface Web contained about 19 terabytes of information, while the deep Web contained about 7,500 terabytes.

A terabyte is a measure of data storage. One terabyte is the equivalent of about 1,600 CDs or 1,000 gigabytes.

Reasons for the invisibility of the deep Web include that search engines cannot find them (they identify "static" pages rather than "dynamic" pages used by large databases), have made a conscious decision not to index them, or that the information is stored in a format that search engines are unable to index. For example, search engines can record a database's address, but can tell you nothing about the books, magazines or other documents it contains.

Links to some Invisible Web resources:

- [The Direct Search page](#)
- [InvisibleWeb.Com](#)
- [CompletePlanet](#)
- [The Big Hub](#)

Your "last" resort

If your success is still meagre, consider asking other onliners for advice. Actually, as this may often be a fast way to interesting sources, you may even want to put it higher on your list.

When looking for information about agriculture and fisheries, visit forums and conferences about related topics. Ask members what they are using.

If you want information about computers or electronics, ask in such conferences.

*When you do not know where to start your search, ask others!
Their know-how is usually the quickest way to the sources.*

Google Groups will help you locate relevant newsgroups for your questions. To find interesting mailing lists, check [Topica](#), or its subsidiary, [the Liszt Index of Electronic Mailing Lists](#). Liszt can also be searched by email.

The Liszt Index lets you enter any word or phrase to search their directory of over 90,095 listserv, listproc, majordomo and independently managed mailing lists (as of March, 1999). It will not allow you to search the message bases, but it sure will help you locate potentially interesting discussions.

[The Listserv home page](#) lets you sort LISTSERV discussion groups by 1st letter of list name, by country, by server name, and more. The description pages of the individual discussion groups, however, is not to much help. Try [Publicly Accessible Mailing Lists](#) for an alternative.

Also, there are over 250,000 Web based discussion forums (June 26, 1998). By November 25, 1996, the number was just 37,000. Search for discussions of interest at <http://www.forumone.com/>.

Note: There is much free information on the Internet, but be prepared to pay for current and relevant information. Your payment is for **filtering**, **sorting**, and **emphasizing** of what matters to you.

Read the user manuals

Some online services let you retrieve their user information manuals by modem for free. Others send them to all users, while some charge extra for them. If they do, buy! They're worth their weight in gold.

User manuals from commercial services like [CompuServe](#) make good reading. The latter two also publish monthly magazines filled with search tips, information about new sources, user experiences, and more.

Whenever it is possible to retrieve these help texts in electronic form, consider doing that. It is often faster to search a help file on your disk, than to browse through a book.

Monitor the offerings

Professional information searchers watch the activity in the online world. They subscribe to announcements about new offerings, regularly search databases for new sources of information, and read about new services.

On most online services, you can search databases of available offerings, and a section with advertisements about their own 'superiorities'. Keep an eye on what is being posted there.

There's an announcement-only service called [NET-HAPPENINGS](#). It is a favorite for monitoring Internet's offerings.

The service distributes announcements about tools, conferences, calls for papers, news items, new mailing lists, electronic newsletters like EDUPAGE, and more.

Net-happenings is also at [comp.internet.net-happenings](#). Their archives can be searched at <http://scout.cs.wisc.edu/index.html>.

[NEW-LIST](#) regularly distribute notices about new discussion lists (conferences). You can search the postings. Also in the [bit.listserv.new-list](#) newsgroup.

"[Seidman's Online Insider](#)" is an informative newsletter. You can subscribe to have it delivered weekly to your mailbox. Subscription information at <http://www.clark.net/pub/robert/listserv.html>.

Heriot-Watt University Library (Scotland) publishes the free [INTERNET RESOURCES Newsletter](#). Emphasis is on Engineering, Science, and Social Science related sources in the United Kingdom. You can subscribe to have an alerting message, plus the table of contents sent via email, each time a new issue appears.

The Usenet newsgroup [alt.internet.services](#) focuses on information about services available on the Internet. Services for discussion include:

- things you can telnet to (weather, library catalogs, databases, and more),
- things you can FTP (like pictures, sounds, programs, data)
- clients/servers (like MUDs, IRC, Archie)

Every second week, a list of Internet services called the "Special Internet Connections list" is posted to this newsgroup. It includes everything from where to retrieve pictures from space by FTP, how to find agricultural information, public UNIX, online directories and books, you name it.

On The [Well](#), read the "News from Around Well Conferences" topic to learn about developments.

The LINK-UP magazine is an interesting paper source. In North America, contact Learned Information Inc., 143 Old Mariton Pike, Medford, NJ 08055- 8707, U.S.A. In Europe: Learned Information (Europe) Ltd., Woodside, Hinskey Hill, Oxford OX1 5AU, England.

Two monthly magazines, Information World Review and FULLTEXT SOURCES ONLINE from BiblioData Inc. (U.S.A.), are also available through Learned Information. (BiblioData, P.O. Box 61, Needham Heights, MA 02194, U.S.A.) Learned Information's "Learned InfoNet" is at <http://info.learned.co.uk/>

More sources about sources

Scott Yanoff updates an interesting, [selected list of Internet resources](#) twice per month.

John December's "[Information Sources: the Internet and Computer-Mediated Communication](#)" has pointers to information describing the Internet, computer networks, and issues related to computer-mediated communication. It lists Internet texts for new users, comprehensive Internet guides, and specialized and technical information.

[The Gale Directory of Databases](#) contains detailed descriptions of over 11,500 publicly available databases accessible through an online vendor or batch processor or for purchase on CD-ROM, diskette, or magnetic tape, or as a handheld product (Feb, 1999). It is a comprehensive guide to the electronic database industry worldwide. They also offer listings of database producers and vendors.

For lists of electronic journals about the Internet ("E-zines" or "Ejournals"), click at <http://www.edoc.com/ejournal/>

Several electronic journals and newsletters are available through the Internet, covering fields from literature to molecular biology. For a large list, try <http://www.meer.net/~johnl/e-zine-list/>.

The [NEWSLTR](#) list distributes various network newsletters. Offerings include: Edupage, Hitek, HPC, Infosys, IAT Inforbit, and many more.

[The Argus Clearinghouse](#) offers over 1,000 topical guides to the Internet's information resources. The guides are created by librarians and other information professionals, and cover a diverse range of topics, from Theatre, Law, and Chemistry to Midwifery.

Interested in CD-ROM? The database at <http://www.microinfo.co.uk/> offers details about thousands of information products and services - mainly CD- ROMs. Products are classified in 27 topics ranging from agriculture and food to theology.

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Search:

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The Online World resources handbook

Chapter 10: Finding a needle ... (Part II)

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Practical hints about online searching

We cannot give a simple, universal recipe valid for all online services. The best approach on one service, may be useless on others.

Besides, recommendations will vary considerably depending on whether you want "focused searches" designed to find and retrieve a specific set of documents providing a specific set of information, or "satisfied searches" designed to find just some hits that are "good enough" regardless of the source.

On some services, searching starts by selecting databases or type of source. This may help you get rid of some irrelevancies. On other services, this selection is assumed.

The next step is to enter your search words (or text strings), and a valid time frame (as in "between 1/1/90 and 1/1/91"), where such an option is available.

Here are some sample search terms used on the net:

SONY AND VIDEO

The term SONY **and** the term VIDEO. Both words must be present in the document to give a match.

VIDEO*

search for all words starting with VIDEO. "*" is a wild-card character referring to any ending of the word. VIDEO* matches words like VIDEOTEXT and VIDEOCONFERENCE.

SONY WITHIN/10 VIDEO Both words must be present in the text,
but they must not be farther apart than
ten words. (Proximity operators)

IBM OR APPLE Either one word OR the other.

Some services have adjacency operators, and some automatic truncation. Truncation allows searching on different word endings or plurals with the use of a truncation wild card symbol. For example, if the truncation symbol is *, then the search term econ* will return items that contain economics, economy, economic, and econometric. Car* will return items that contain cars and cartoon, so it is advisable to use truncation symbols carefully.

Many services let you reuse your search terms in new search commands. This may save you time (and money), when you get too many hits. For example: if IBM OR APPLE gives 1,000 hits, limit the search by adding "FROM JANUARY 1st.," or by adding the search word "NOTEBOOK*".

Most services offer full online documentation of their search commands. You can read the help text on screen while connected, or retrieve it for later study. Expect the quality of these texts to be variable, but browse them all the same.

Make a note about the following general tricks:

The use of ANDs and ORs

is called Boolean searching. It allows search terms to be put into logical groups by the use of connective terms.

Using **AND**, **OR**, and **NOT** search operators may seem confusing at first, unless you already understand the logic. Here are some hints that you may find helpful:

Use the Boolean operator **AND** to retrieve smaller amounts of information. Use **AND** when multiple words must be present in your search results (MERCEDES AND VOLVO AND CITROEN AND PRICES).

Use **OR** to express related concepts or synonyms for your search term (FRUIT OR APPLES OR PEARS OR BANANAS OR PEACHES).

The purpose of **NOT** is avoid listings of irrelevant records. Be careful when using this operator. **NOT** gets rid of any record in a database that contains the word that you've "notted" out. For example, searching for "IBM NOT APPLE" drops records containing the sentence, "IBM and Apple are computer giants." The record will be dropped, even if this is the only mention of Apple in an article, and though it is solely about IBM.

Use **NOT** to drop sets of hits that you have already seen. Use **NOT** to exclude records with multiple meanings, like "CHIPS Not POTATO" (if you are looking for chips rather than snack foods).

Often, it pays to start with a "quick-and-dirty" search by throwing in words you think will do the trick. Then, look at the first five or 10 records, but look only at the headline and the indexing. This will show you what terms are used by indexers to describe your idea and the potential for confusion with other ideas.

Use proximity operators to search multiword terms. If searching for "market share," you want the two words within so many words of another. The order of the words, however, doesn't matter. You can accept both "market share" and "share of the market."

Relevance ranking, and more

Some claim that boolean searches only find between 20 - 25 percent of the relevant information. The problem is that you must know the terms to search on before you begin. Many people don't know these terms and cannot guess them.

Several online services are busy trying to supply better "search engines" using techniques like natural language searching, relevance ranking, concept searching, automatic subject grouping, and more.

Relevance ranking tries to measure how closely the retrieval matches the query, usually in quantitative terms between 0 and 100 or 0 and 1,000. It usually provides a ranked listing of search results, with a score for the relevance of the result, based on the

occurrences of the terms used and also their position in the document. It provides somewhat the same results as AND searching. Also, it offers the benefits of OR searching as all the terms in a query need not be present in the result.

[Alta Vista](#) offers both boolean and enhanced relevance ranking searches. For example, you can require that selected terms be found in the results. The query "+apples +bananas oranges" will not find a document missing the words apples and bananas. Those files that contain oranges will be listed before those that do not contain this word, but files without this word will also be listed.

Some services let you search specific types of information. For example, Alta Vista allows searches for characters or words in an URL (a Web address), or a hyperlink.

Application: My Web pages are at <http://home.eunet.no/~presno/>. The query "+link:eunet.no/~presno/ -url:eunet.no/~presno/" will most likely find all links to my pages on other Web servers except my own. The "-" character in front of a word works as a NOT operator. The "link:" phrase is for searching in hyperlinks across the Internet. The "url:" code lets you search in the URL addresses of the found pages.

Key Word In Context (KWIC) searching will return the key word and N words near the key word to give the user the context in which the key word was found.

Phrase Searching allows searching of phrases when available. Note that some systems can be confusing if you think "Online World" is searching the two words together as a phrase, when in fact the engine is searching Online OR World.

Fuzzy searching is another interesting concept. This option allows you to search when you don't know the exact spelling of the word. Some systems use the Soundex algorithm invented over 70 years ago to search name files. Names that sound alike should have the same Soundex number. It uses these basic rules:

- Vowels are ignored.
- Consonants that sound alike in a pronounced name have the same "number".
- Successive consonants with the same number are counted as one (Willitt is equal to Wilith).

Note: Information in English may be just a small part of that available in a country's national language. When English language sources fail to meet the need at hand, consider the services of a skilled bilingual searcher.

Spelling errors are very common reasons for search failures. Make sure you have that terminology term or person's name right. Also, names are not spelled the same way in all countries, and those who produce texts also make spelling errors. For example, the name of the composer Tchaikowsky is supposedly spelled in 36 different ways on the nets. 'Ciaikovsky' is one of them.

Important: *Some users get so fascinated by advanced methodology used by a search engine that they forget the purpose of the task: to find good and relevant information. If a search engine does not hold this information in its database, then it having the best search features on the net does not justify using it!*

[Bare Bones 101](#) is a collection of lessons designed to help users get their web searches on the right track quickly and easy. The tutorial has 20 independent lessons, addressing topics such as meta-searchers, subject directories, evaluating sites, Boolean logic, and field searching. It offers overviews of the most popular search engines.

Searching file libraries

The commands used to find files are similar to those used in traditional databases. Often, you can limit the search by library, date, file name, or file extension. You can search for text strings in the description of the contents of a file, or use key words.

On the Internet, [the Virtual Shareware Library](#) is a favorite. It links to a front end which catalogues about 120,000 software files available from the 22 largest shareware and freeware archives on the Internet (1996). Its search engine lets you

search descriptions, locate, retrieve, or order files.

Narrow your search by stating the desired hardware or software platform, as in Commodore Amiga, Atari, MS-DOS, Microsoft Windows, Apple Macintosh, Novell Netware, IBM OS/2, Unix/Linux, etc.

Use Boolean operators (AND and NOT), specify case requirements, use wildcards (like *, | and ?), delimit by file creation dates, demand matches in paths and file names, and limit the size of the search report.

Using a program like Netscape, just click on the desired files to have them transferred to your local disk. Easy.

To search a huge database of files on the Internet, try [FTP Search](#). In September 1996, their index contained over 62 million files.

FTP Search features advanced search options to help you narrow down to the file you want, including case insensitive/sensitive substring searches, limiting to a given domain and path, as well as many formatting options.

On bulletin board systems, there are many different search methods.

Example: You're visiting a bulletin board based on the BBS program RBBS-PC. You want a program that can show GIF graphics picture files. Such files are typically described like this:

```
VUIMG31.EXE 103105 07-15-91 GIF*/TIFF/PCX Picture Viewer
```

From left to right: file name, size in bytes, date available, and a 40 character description.

You can search the file descriptions for the string "gif". You do this by entering the term "s gif all". This will probably give you a list of files. Some will have the letters GIF in the file name. Others will have them in the description field.

[CompuServe](#) has several "Find this File" services.

Searching conferences and forums

On Usenet, it is easy. Simply connect to The Deja News Research Service above. Many mailing lists maintain log files, and offer ways of searching them. Often, you must be a subscriber to search, so it is more cumbersome. Many services have commands for selective reading of messages. For example, on [CompuServe](#) you can limit your search to given sections. You can also select messages to be read based on text strings in the subject titles. The command

```
rs;s;CIS Access from Japan;62928
```

displays all messages with the text "CIS Access from Japan" in their subject titles starting with message number 62928. Most users have their programs do this automatically for them. For examples, OzWin and TAPCIS handles this well. Such message filtering is also common in Usenet newsreaders. For example, the [Free Agent program](#) from Forte Advanced Management Software, Inc. lets you go online to retrieve message headers, mark off those you want to read, and then call back to retrieve the selected message bodies.

Searching by email

When searching a database stored on another continent, then the speed of response may be a problem. In such cases, note that several databases on the Internet can be searched by email. [Reference.COM](#) ([Chapter 11](#)) allows for searching of Usenet postings, while the Agora-servers let you search many databases using World Wide Web by email services ([Chapter 12](#)). MCI Mail and MCI Fax have a program called Information Advantage, under which online services and newsletters can deliver search results and other information over the online services.

Using discussion lists through the Internet

For instructions about how to get a directory of LISTSERV based mailing lists, send the following email message:

```
To: listserv@listserv.nodak.edu
Subject: (keep this blank)
Text:
LIST GLOBAL
```

You will receive a LONG list of available sources of information. The list dated March 8, 1996, had over twenty-three thousand lines. Each mailing list is described with two lines. Here are some examples from the list:

Network-wide ID	Host address and list description
AARWA-L	listserv@postoffice.cso.uiuc.edu African & Africa Related Women's Assoc. (AARWA)
AAT-L	AAT-L-request@LISTSERV.UIC.EDU Art & Architecture Thesaurus Discussion List
ACADEMIA	listserv@technion.technion.ac.il Academia - Forum on Higher Education in Israel
BBS-TR	listserv@vm.ege.edu.tr BBS Listesi (Turkish)
CAPEL-L	listproc@listas.ansp.br Grupo de discussao da CAPEL
EUROTRI_CV	majordomo@uv.es Foro de las OTRIs de la Comunidad Valenciana
HIRIS-L	listserv@icineca.cineca.it HIGH Resolution Infrared Spectroscopy - List

The column "Network-wide ID" contains the names of the mailing lists. "Full address and list description" contains the email addresses that members use when submitting discussion items, and a short textual description of each conference. Keep the list on your hard disk. This makes it easier to find sources of information, when you need them.

Subscribing to mailing lists

These mailing list, also often called 'discussion list', work like online conferences or message sections on bulletin boards, but technically they are different. (Read about [Kidlink](#) in [Chapter 2](#) for background information.) All these lists are controlled by a program called LISTSERV on the host given under "Full address" above. Thus, to subscribe or signoff to the AAT-L mailing list above, write to listserv@listserv.uic.edu. Mailing lists offer "conferencing" with the following important functions:

- All "discussion items" (that is, electronic messages sent to the lists' email address) are distributed to all subscribers.
- Messages are usually automatically stored in notebook archives. You can search these log files, and you can have them sent to you as electronic mail.
- Files can often be stored in the lists' associated file libraries for distribution to subscribers on demand.

The term "Network-wide ID" signifies that you do not need to subscribe by email to the host running a mailing list's LISTSERV. If there is a LISTSERV on a host in a country closer to where you live, then you can subscribe to this rather than to the remote. This helps keep the total costs of the international network down.

Example:

You live in Norway. There is a LISTSERV in nearby Finland at listserv@fiport.funet.fi. You can send your AAT-L subscription request (SUBSCRIBE AAT-L FirstName LastName) to this address, rather than to listserv@uicvm.uic.edu.

Use the addresses in column two when sending messages to the other members of the discussion lists, but DO NOT send your subscription requests to this address!! Your mail will be forwarded to all members. Chances are that nothing will happen, while everybody will see how sloppy you are. So, you subscribe by sending a command to a LISTSERV. The method is similar to what we did when subscribing to Infonets in [Chapter 7](#). If your name is Jens Jensen, and you want to subscribe to CAPES-L, send this message to a LISTSERV:

```
To: (enter a preferred LISTSERV address here)
Subject: (You can write anything here. Will be ignored.)
Text: SUB CAPES-L Jens Jensen
```

When your subscription has been registered, a confirmation text will be returned to you. Note that some mailing lists will ask you to return a subscription confirmation before accepting. From now on, all messages sent to the list will be forwarded to your mailbox. (Send "SIGNOFF CAPES-L" to this address to unsubscribe from the mailing list.) Some lists will forward each message to you upon receipt. Others will send a periodic digest (weekly, monthly, etc.). To send a message to HIRIS-L, send to the address in column two above. Send to

```
HIRIS-L@ICINECA.CINECA.IT
```

Review the following example. Most mailing lists will accept these commands.

Example: Subscription to the China list

CHINA-NN is listed as follows in the List of Lists:

```
CHINA-NN  listserv@asvm.inre.asu.edu (Peered)
          China News Digest (Global News)
```

You can send your subscription request to listserv@asvm.inre.asu.edu. Scandinavians may subscribe by mail to listserv@fiport.funet.fi. North American users can also send their mail to listserv@listserv.nodak.edu. If your name is Winston Hansen, write the following command in the TEXT of the message

```
SUB CHINA-NN Winston Hansen
```

When you want to leave CHINA-NN, send a cancellation message like this to the LISTSERV where you subscribed:

```
To: listserv@asvm.inre.asu.edu
Subject: (nothing here)
SIGNOFF CHINA-NN
```

If you subscribed through listserv@fiport.funet.fi, sending the SIGNOFF command to listserv@asvm.inre.asu.edu will get you nowhere. Send to listserv@fiport.funet.fi. Never send the SIGNOFF command to the discussion list itself! Always send to the LISTSERV.

Note: If the mailing list has a web page with a public message archive, then it may be easiest to subscribe from this page. At [the CHINA-NN list archive page](#), just hit "Join or leave the list (or change settings)."

Searching mailing list log files

Many mailing lists maintain logs of messages sent through the list. Search commands differ both by mailing list system, and version number. Check with the administrator or other members of your lists about how to search these resources. To search mailing list log files controlled by listserv@listserv.nodak.edu, send an email with the following command in the text of your mail:

```
search <keyword> in <list name>
```


Replace <keyword> with your desired search term, and <list name> by the name of the list. Example: To find all messages in the log files of the **Kidlink** mailing list containing the word "janeiro" (as in Rio de Janeiro), send the following command to the Listserv's email address:

```
search janeiro in Kidlink
```

The Listserv returns the following type of report (Abbreviated. Only the first hit is shown below):

```
From: "L-Soft list server at North Dakota HECN (1.8c)"

> search janeiro in kidlink
-> 15 matches.

Item #   Date   Time   Recs   Subject
-----   ---   ---   ---   -
000373  93/10/06  00:06    54   The first response from France

To order a copy of these postings, send the following command:

GETPOST KIDLINK 373

>> Item #373 (6 Oct 1993) - The first response from France
I will also give speeches in Maceio (the site of the
Portuguese language KIDLINK forums), Rio de Janeiro,
                        ^^^^^^^
and Goiania/Goias. A lot of fun!
```

You could also restrict searches like this:

```
SEARCH search_string IN KIDLINK SINCE 96/01/01
SEARCH search_string IN KIDLINK WHERE SENDER CONTAINS NATHAN
```

The Usenet resource

Some interesting Usenet information articles are being posted regularly. We call these articles **Frequently Asked Questions** texts, or just FAQs. They tend to be useful both for novice and experienced users, and usually fall into one of these groups:

1. How-to articles explaining the basics and fine points of network usage, standards, etc. Examples: "How to Read Chinese Text on Usenet," and "How to find more information about blues and jazz."
2. Introductory notes about one or more newsgroups, covering policies for submissions to that group, usage, etc. Common questions and answers pertinent to a newsgroup(s).
3. Indexes of archives, or pointers to archives for various groups. Periodic newsletters, calendars, pointers to publications. Examples: "PostScript interpreters and utilities index," "Index to the rec.radio.amateur.* Supplemental Archives," and "FidoNet Newsletter."
4. Statistical information and reports about Usenet; tables of Usenet hosts, links, etc.
5. Miscellany, including small useful sources, "fun" lists, and more.

The resource at <http://www.cis.ohio-state.edu/hypertext/faq/usenet/> provides an alphabetic list of all Usenet FAQs found in the [news.answers](#) newsgroup. Many of these FAQs are presented in the same format as they appear in the newsgroup, while others have been further processed and split into additional documents. Click on individual FAQs to read. The list of newsgroups and mailing lists is available on hosts that run Usenet News or NetNews servers and/or clients in the **news.lists** news group. The members of [news.newusers.questions](#) and [alt.internet.access.wanted](#) will readily accept your help requests.

Other sources available through the Internet

The [Galaxy](#) service offers: Search Galaxy Pages, Find Galaxy Entries, Search the World Wide Web, Search Gopher Space, Search Hytelnet Services (includes traditional "top-down" interface), and has pointers to searchable indexes and databases at many other sites.

Free vs. commercial sources: On commercial online services, the profit motive provides continuous pressure to keep data plentiful and approachable. On the Internet, the information you'll find is there often because of someone's good will. So, unless the resource is sponsored or commercial in another way, beware of outdated information.

The [Northern Light Search Engine's "Special Collection"](#) is a database of million books, magazines, journals, newswires and databases that aren't generally available via the Web. Searching the database is free, but there is a modest fee for documents actually retrieved.

[The Electric Library](#) has more than 1,000 publications in its archive (1996). Users can enter a plain English question to search over 900 full-text magazines, over 150 full-text newspapers, over 2,000 complete works of literature (Shakespeare, Monarch Notes), 20,000 photographs, news wires, television and radio transcripts, book, movie and software reviews, and Compton's Encyclopedia. They also have a dictionary, thesaurus, almanac, fact books, and more.

Talking about Shakespeare. There is also a site offering [the Complete Works of William Shakespeare's plays and poetry](#).

Getting more out of your magazine subscriptions

To garner new subscribers and keep current readers, magazine publishers turn to online services to create an ancillary electronic version of their print product. Their readers are being transformed from passive recipients of information into active participants in publishing.

You can "talk" with PC Magazine's writers through [ZiffNet](#) on CompuServe. Their forums function as expert sources. Here, you will often learn about products and trends sometimes before the magazines hit the newsstand. Time magazine has a forum on [America Online](#). There, readers can discuss with magazine reporters and editors, and even read the text of entire issues of Time electronically before it is available on newsstands.

Stanford University's [HighWire Press](#) lets you search in the full text of hundreds of thousands of science articles.

Time Warner's [Pathfinder](#) provides the full text of Time magazine, including a feature called Time Daily, updated with the latest stories each evening around 8 p.m. ET.

PC Magazine (U.S.A.) is one of those magazines that arrives here by mail. We butcher them, whenever we find something of interest. The "corpses" are dumped in a high pile on the floor. To retrieve a story in this pile is difficult and time consuming, unless the title is printed on the cover. Luckily, there are shortcuts. Connect to [ZD Net Search](#). Here, you can search for stories. Once you have a list with title references, turning the pages gets much easier. However, as the articles are in full text, you may not want to hit for the floor at all.

[FindArticles.com](#) offers free access to the full-text of articles published in over 300 magazines and journals dating from 1998. Users can search the database by keyword and subject categories (Arts & Entertainment, Computers & Technology, Reference & Education, Sports, and more).

On [CompuServe](#), [ZiffNet](#) offers Computer Database Plus. It lets you search through more than 250,000 articles from over 200 popular newspapers and magazines. The oldest articles are from early 1987. Their database is also available on CD-ROM, but the discs cover only one year at a time.

CDP contains full-text from around 50 magazines, like Personal Computing, Electronic News, MacWeek and Electronic Business. Stories from the other magazines are available in abstracted form only. To search, you pay extra per hour. In addition, you

pay a fee per abstract and per full-text article. These fees are added to your normal CompuServe access rates.

[ZiffNet](#) also offers Magazine Database Plus, a database with stories from over 130 magazines (1994) covering science, business, sport, people, personal finance, family, art and handicraft, cooking, education, environment, travel, politics, consumer opinions, and reviews of books and films.

The magazines include: Administrative Management, Aging, Changing Times, The Atlantic, Canadian Business, Datamation, Cosmopolitan, Dun's Business Month, The [Economist](#), The Futurist, High Technology Business, Journal of Small Business Management, Management Today, The Nation, The New Republic, Online, Playboy, Inc., Popular Science, Research & Development, Sales & Marketing Management, Scientific American, Technology Review, UN Chronicle, UNESCO Courier, U.S. News & World Report, and World Press Review. (In [Chapter 11](#), we present another [ZiffNet](#) magazine database: the Business Database Plus.)

Magazine Index (MI), from Information Access Company (U.S.A.) covers over 500 consumer and general-interest periodicals as diverse as Special Libraries and Sky & Telescope, Motor Trend and Modern Maturity, Reader's Digest and Rolling Stone. Many titles go as far back as 1959.

Although most of the database consists of brief citations, MI also contains the complete text of selected stories from a long list of periodicals. It is available through several commercial vendors.

The [Ei Compendex](#) database (Ei CPXWeb) from Engineering Information offers information on various disciplines of engineering, from marine to chemical to electrical to nuclear. Over 3 million summaries of journal articles and conference proceedings, and 220,000 new additions every year.

What to do if you have so many references to a given magazine that you want to check it out? Try [the Electronic Newsstand](#). It has links to over 2,000 magazine sites (1996). If you like, you can subscribe (with discounts) to over 300 of them.

Finding that book

Many libraries are accessible through the Internet. For a list of links to library web servers, look up [Libweb](#), or [webCATS](#). Both Libweb and webCATS have geographical indexes with links to libraries in Africa, Americas, Asia/Pacific Rim, and Europe/Middle East. Also, check the [Searchable Bibliographies & Major Library Catalogs](#) page.

Some libraries can be searched by Internet mail. This is the case with [BIBSYS](#), a database operated by the Norwegian universities' libraries.

I am into transcendental meditation, and therefore constantly look for books on narrow topics like "mantra." To search BIBSYS for titles of interest, I sent a mail to genserv@pollux.bibsys.no. The search word was in the subject title of the message. By return email, I got the following report:

```
Date: Fri, 21 Jul 93 13:54:18 NOR
From: GENSERV@POLLUX.BIBSYS.NO
Subject: Searching BIBSYS

Search request : MANTRA
Database-id : BIBSYS
Search result : 5 hits.
```

The following is one of the references that I forwarded to my local library for processing:

```
Forfatter : Gonda, J.
Tittel : Mantra interpretation in the Satapatha-Brahmana
        / by J. Gonda.
Trykt : Leiden : E.J. Brill, 1988.
Sidetall : X, 285 s.
I serie : (Orientalia Rheno-traiectina ; 32)
ISBN : 90-04-08776-1
1 - UHF 90ka03324 - UHF/INDO Rh III b Gon
```

[The Russian State Library](#) has a books by e-mail system that lets readers around the

globe read any of its 42 million books, manuscripts and documents at the click of a mouse. All it takes is by paying a few cents per page. They send maximum 40 percent of a book.

[The Modern Chinese Literature and Culture Resource Center](#) is a bibliographic site devoted to the culture of twentieth-century China. It contains: (1) lists of translations of modern Chinese literature; (2) bibliographies of literary studies, media studies, visual arts, education, and music; (3) lists of important journals in the field (with links to their websites); (4) announcements, lists of relevant associations and institutions; (5) an image archive; (6) links to Chinese e-text; (7) relevant internet resources; (8) links to websites of university course; and (9) information on how to join the associated MCLC mailing list.

The British Library is at <http://www.bl.uk/>. "[Book Lovers: Fine Books and Literature](#)" has links to writers and poets, libraries, publishers and booksellers, both of new and second hand/antiquarian books.

[The Complete Guide to Online Bookstores](#) is a handy guide to the net's offerings. Their list is broken down into categories like: Academic bookstores, Alternative, Archive, Australian, Automotive, Business & Career, Children's, City, Computer & Technical, Cooking, Co-Ops & Book Trading, Gay & Lesbian, General, German, Health & Nutrition, How-To, Israeli, Irish, Martial Arts, Medical & Chiropractic, Multilingual, Museum, Mystery & Fantasy, Future Fantasy, Nature, Organizational, Photographic, Progressive, Rare Books, Religious, Special Interest, Spiritual, Swedish, Travel, University & College, and more.

[Roswell Computer Books Ltd.](#)'s online book store in Canada has a large database of titles. [The Internet Book Shop](#) in the United Kingdom offers over 750,000 (1995), while [Book Stacks Unlimited](#) offers over 410,000 titles. Search online, read book reviews, enter order and credit card information to have the books shipped. They also offer several free virtual volumes. [Amazon.com](#) claims over 1.5 million titles. For yet more books, check <http://www.barnesandnoble.com>.

For more on science fiction, browse **William Gibson's self-destructing electronic book "Agrippa"**.

OCLC's [WorldCat](#) is a reference database covering books and materials in libraries worldwide. Their Online Union Catalog (OLUC) is the world's largest and most comprehensive bibliographic database.

[The Peking University Library](#) (Beijing, China) contains about 4,500,000 items. It includes 2,700,000 items in Chinese and 900,000 items in different foreign languages. There are also 650,000 volumes of periodicals and other documents and 160,000 rare books. **The National Library of China** (NLC) is at <http://www.nlc.gov.cn/etext.htm>.

Bookworms may appreciate [the DOROTHYL list](#), and especially if they like Agatha Christie, Josephine Tey and Dorothy L. Sayers. **The Mark Twain forum (TWAİN-L)** is at listserv@yorku.ca.

For **Stephen King**, check out <http://www.wco.com/~pace/king.html>. Usenet has [alt.fan.holmes](#), and there is a "[Sherlockian Connection](#)" Web page with many links.

[The Internet Poetry Archive](#) brings selected poems from several contemporary poets in different languages, including text, photo of poet, voice of poet reading the poem, select bibliography, and brief biographical note.

If you are into Very Rare Books, visit [the Vatican Library](#), one of the world's oldest and most tightly restricted libraries. Founded in the mid-1400s, the library houses over 150,000 manuscripts and a million printed books, including 80,000 books published during the first fifty years of the printing press.

Digital images of several full printed volumes, manuscripts, and artworks are gradually being made available through the Internet. 200 of its most precious manuscripts, books, and maps -- many of which played a key role in the humanist recovery of **the classical heritage of Greece and Rome**, is available.

If quite impossible to locate a given book, try EXLIBRIS, [the Rare Books and Special Collections Forum](#).

[The Bibliophile Mailing List](#) is for collectors and sellers of old, rare, scarce, and/or out-of-print books. It is a forum for buying, selling, and trading books.

On Usenet, they have [alt.books.reviews](#), [k12.library](#), [alt.books.technical](#), [rec.arts.books](#), and more.

Online books

You needed strong muscles to read the earliest books. In ancient Babylonia and Assyria, books consisted of numbered collections of rectangular clay tablets. They were inscribed with cuneiform and packaged in a labeled container. Taking a book from the shelf and carrying it to a reading table required the help of several assistants.

Today, you'll find full electronic versions of books on the World Wide Web and in other types of Internet archives.

The first issue (version 1.0) of this virtual book is one example. You can find it in the archives of Project Gutenberg. You can retrieve it to your disk for later reading, or read it with your Web browser.

[Project Gutenberg](#)'s offerings include The Complete Sherlock Holmes Mysteries, Aesop's Fables, The Unabridged Works of Shakespeare, The Love Teachings of Kama Sutra, Tarzan, The Oedipus Trilogy (Sophocles), Mark Twain's A Connecticut Yankee, Frankenstein, Alice's Adventures in Wonderland, The Holy Bible, Peter Pan, The Holy Koran, Roget's Thesaurus (1911), Webster's Unabridged Dictionary, and The World Factbook (CIA).

[The Electronic Text Center](#) offers a collection of thousands of English, French, German, Japanese, and Latin texts.

[The Alex Catalog of full-text Electronic Texts](#) gives pointers to more offerings. The catalogue is divided into Search the catalog, Browse the catalog (by author, date, host, language, subject, or title), and Information about cataloging Internet resources.

Books in other languages

On the Internet, there are a rapidly growing number of library online public-access catalogs (OPACs) from all over the world. Some provide users with access to additional resources, such as periodical indexes of specialized databases. More than 270 library catalogs are online (1992).

For Chinese books in Chinese (and in English language), check [the China International Book Trading Corporation](#).

Non-Chinese speaking people will probably classify Chinese poems as 'rare'. Many of them are impossible to read, unless your computer can handle the special characters, and you know their meaning. Interested? Subscribe to [the CHPOEM-L mailing list](#). Be prepared to use your Big5 and GuoBiao utilities.

Dictionaries and encyclopedias

[OneLook Dictionaries](#), [The Faster Finder](#), lets you search words in several dictionaries and glossaries in one operation. By March 1999, it had 2,299,280 words in 461 online dictionaries indexed. A search for "backbone" returned definitions in six specialized dictionaries.

Your search may be limited to specific dictionaries/glossaries sorted in groups like Computer/Internet, Science, Medical, Technological, Business, Sports, Religion, Acronym, and General Dictionaries.

[A Web of On-line Dictionaries](#) has links to online grammar resources for languages ranging from 'Armenian' to 'Urdu'. It also offers Multilingual Dictionaries, Specialty English Dictionaries, Thesauri and Other Vocabulary Aids, Language Identifiers and Guessers, An Index of Dictionary Indices, and A Web of On-line Grammars.

[The Xrefer](#) reference search engine meta-searches and cross-references several encyclopedias, dictionaries, thesauri, books of quotations, and a number of subject-specific titles. After a simple keyword search, initial returns consist of a brief description and the source. Full returns can vary significantly in length, some quite brief, with a useful collection of cross-references and adjacent entries displayed on the right-hand side of the browser window.

[The Research Institute for the Humanities in Hong Kong](#) offers extensive links

to reference works, dictionaries and thesauri in many languages. Their offerings include Chinese, Dutch, English, Esperanto, French, German, Greek, Italian, Japanese, Latin, Norwegian, Qur'anic Arabic, Russian, Slovak, Spanish and Welch dictionaries; Dictionary of Acronyms; Quotations; Abbreviations for International Organizations; History-related reference works; Philosophy-related reference; Computer-related reference; White & Yellow Pages; Maps; Encyclopaedias. [Lexicool](#) links to more than 500 translation dictionaries and glossaries.

[travlang](#) links to online translating dictionaries. Languages covered include: Afrikaans, Czech, Danish, Dutch, English, Esperanto, Finnish, French, Frisian, German, Italian, Latin, Norwegian, Portuguese, Spanish, Swedish.

[A Web of Online Dictionaries](#) is another great resource. For example, it contains :

BURMESE: Burm.-Eng.-Burm. On-line Dictionary. CHINESE: Chin. Character Dictionary Web; A Chin. Syllabary Pronounced According to the Dialect of Canton by S. L. Wong; Chin.-Eng.-Chin. Character Dictionary; Chin.-Eng.; Chin.-Japanese-Korean Dictionary of Buddhist Terms; Chinlex Chin.-German Socio-Economics Dictionary; Eng.-Chin. (gopher); Eng.-Chin. (PC-DOS download); Eng.-Chin.-Eng. Dictionary of Commerce and Trade; Eng.-Chin.-Eng. Dictionary of Medical Terms; Eng.-Chin. Dictionary; Guoyu Cidian Chin. Dictionary; Marjorie Chan's Index of Chin. Online Glossaries and Dictionaries; World Wide Web CJK-Eng. Dictionary/Database; Zhongwen Zipu Chin. Character Genealogy; Kingsoft Chin.-Eng.-Chin. On-line Dictionary; Dictionary of Chin. Characters; Hakka Dictionary romanized (Dylan's Sa Tdiu Gok Hak Ga Su Dien); Hakka Pronouncing Dictionary; I Ching Lexicon; Kanji Base Query form (50,000 chars). TAIWANESE: Daiwan Way Taiwanese On-line Dictionary; Modern Literal Taiwanese Dictionary. TIBETAN: Rangjung Yeshe Tibetan-Eng. Dictionary (85,000 chars); Tibetan-Eng. Dictionary of Buddhist Teaching and Practice; Jim Valby's Tibetan-Eng. DOS dictionary (FTP download); Zhang-Zhung/Tibetan/Eng. Dictionary.

There's another comprehensive resource at <http://www.xlation.com/>, and then there is "[an annotated listing of dictionaries, glossaries and encyclopedias that have some sort of version online or, if you will, a glossary of glossaries](#)".

[The Places for THINKers](#) web has links to sources like Webster's Dictionary, Roget's Thesaurus, Bartlett's Familiar Quotations, and FAQs about Copyright.

The real **Roget's Thesaurus of English Words and Phrases** can be found at <http://www.thesaurus.com/>. You can search [Bartlett's Familiar Quotations](#), [Webster's](#), [Roget's Thesaurus](#), and [Columbia Encyclopedia](#). [AskOxford.com](#) offers resources to help you make the best use of the English language.

I wanted quotes for a speech for my wife's birthday, and entered "wife". Here are two examples of what I found in **Bartlett's**:

Euripides. 484-406 B. C.
... Man's best possession is a sympathetic wife.

Plutarch. 46 (?) - 120 (?) A. D.
... Pittacus said, "Every one of you hath his
particular plague, and my wife is mine;
and he is very happy who hath this only."

At Search.Com, you can also search [the Complete Works of William Shakespeare](#), [the Koran](#), [The Bible](#), and The World Wide Web [Acronym and Abbreviation](#) Server.

Try <http://math-www.uni-paderborn.de/HTML/Dictionaries.html> for more dictionaries. [Dictionaries and Encyclopedias](#) has links to Esoteric Dictionaries and Encyclopedias, Technical English dictionaries, and some resources in other languages.

[Assorted Encyclopedias on the Web](#) has a collection of links to various encyclopedias including Biology, Environment, Medicine, Crafts, Hobbies, Sports, Cultures, Geography, History, Economics, Finance, General Knowledge, Internet, Mathematics, Computing, Mysticism, Mythology, Philosophy, Physics, Cosmology, Religion and Social Sciences.

[Research-It!](#) has free searching of dictionaries, thesauri, language translators,

acronyms, quotations, maps, phone numbers, postal information, package tracking, financial info and more.

[The UNESCO trilingual Thesaurus](#) (English/French/Spanish) contains more than 7,000 terms for education; science; culture; social and human sciences; information and communication; and politics, law and economics. It also includes the names of countries and groupings of countries (political, economic, geographic, ethnic and religious, and linguistic groupings).

At [the Phrase Finder](#) page, type in a word to get a list of phrases related -in some way- to that word. The database includes: Lines from Shakespeare (or phrases related to the word Shakespeare), Quotations (or phrases related to the word quotation), and One-liner jokes.

Searching and reading well-known encyclopedias like **Grolier's Academic American** in full text costs money. Some services, like Dow Jones Interactive, will give you access at discount prices.

[The Concise Columbia Electronic Encyclopedia](#) has made over 17,000 articles from their Third Edition searchable for free. (Related links turn the encyclopedica into a subject-oriented front-end to the fee-based Electronic Library.)

The [Encyclopaedia Britannica](#)'s 32-volume site also gives access to articles from over 75 magazines. Detailed encyclopedia entries and articles (as well as related books and Websites) for specific topics are accessed through the keyword search engine at the top of the page.

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Search:

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[Feedback please.](#)

Illustration by [Anne-Tove Vestfossen](#)



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- [International trade](#)
- [Electronic mail](#)

We must be willing to risk change to keep apace with rapid change. The key is moderation and balance, supported by enough information to allow meaningful feedback. Going online requires adaption by management and staff in developing the necessary skills and vision. This chapter starts with how to use the networks to manage projects. Next, we will show you how to watch competitors, prospects, suppliers, markets, technologies, and trends. It winds down with marketing and sales by modem.

Project coordination

Several services offer private online conference areas to businesses. It is an efficient solution when coordinating a group of people geographically far apart, or when team members are constantly on the move.

Some claim people are more candid and meetings more efficient when they communicate online. They favor online discussions for brainstorming and productivity tasks, even when individuals and facilities are available for face-to-face meetings.

Applications range from tight coordination with suppliers and subcontractors, to development of company strategies, and new organizational structures.

Renting an online conference area has advantages over doing it in-house: The company does not have to buy software, hardware, expensive communications equipment. It does not need to hire people to operate and maintain the conferencing system. The more international the business, the better the external alternative.

Many Internet access providers offer email based distributed conferencing for private groups. [Take it Offline](#) offers it for free. Some also offer interactive, live chats

in private virtual meeting rooms on the net.

For ideas about how to set up and operate a coordination conference, study how volunteer organizations do it. One place to check is KIDPLAN, a coordination conference used by [Kidlink](#). Browse the discussion that took place [between May 8, through May 28, 1991](#).

Agreeing on a time for your meeting across time zones may also be a challenge. Check "[Agreeing on a time for your meeting](#)" in Chapter 4 for solutions.

Making it work

Making online conferences and task force meetings work, can be a challenge. Most of the dialog is based on the written word. The flow of information can be strong. This may cause an information overload for some members.

To overcome this, consider appointing a moderator-organizer for your online conference. This person:

Adds value by setting agendas; summarizing points; getting the discussion(s) back on track; moving on to the next point; mediating debate; maintaining address and member lists; acting as general sparkplug/motivator to keep things flowing by making sure that contributions are acknowledged, relevant points are noted, new members are welcomed, silent "Read-Only Members" are encouraged to participate, and the general atmosphere is kept appropriate to the goals of the conference/task force meeting.

Great online conferences do not just happen. Those set to get the meeting fired up and keep the discussion rolling must work hard on it.

The meeting's organization may depend on the number of participants, where they come from, the exclusivity of the forum, and the goal of the meeting.

In large meetings, with free access for outsiders, the best strategy may be to appoint a Moderator-Editor. This person

filters contributions, gathers new information, summarizes scattered contributions, does background research.

Filtering may be desirable when conferences are open to customers and media. Its main purpose, however, is to help participants cope with the absolute flow of information.

A conference can have an educational purpose. You can bring in someone who can add value by bringing experience and expertise to the group.

You also need someone to do the dirty jobs everyone expects to be done - but never notices until they are not. This person keeps the show running by serving as a benevolent tyrant, sheriff, judge, mediator, general scapegoat, and by playing a role in setting the general policy and atmosphere of the meeting.

To support the work, you may use an online PIM (personal information manager) like the one offered by [AnyDay](#). It offers calendar, task list, and contacts through the web.

Now, back to the 'normal' applications of the online resource.

Watching what others do

Peter Drucker says (Forbes ASAP 8/29/94, p. 104):

Most CEOs still believe that it's the chief information officer's job to identify the information he requires. This is, of course, a fallacy. The information officer is a toolmaker; the CEO is the tool user.

... the information you need -- the really important information -- you cannot truly get from your information system. Your information system gives you inside information. But there are no results inside a business."

At the heart of any profit-making company is sales. No matter how wonderful the technology or how dedicated the manufacturing staff, without sales, the company fails.

To sell products and services, you need sources for identifying potential buyers. With a little ingenuity, you can probably create your own list of targeted sales leads, simply using your modem.

How would cosmetics sell in Japan? What about sneakers in Mexico? In the age of the global business community, questions about expanding product services beyond national borders abound.

It is safe to claim that the best business opportunities are outside your company, in the external world.

Companies need to watch customers and markets, find technologies to help develop and build products, research new business actions, find new subcontractors and suppliers, people to hire, and persons to influence to boost sales.

In this marketing age, where sales calls cost hundreds of dollars and business-to-business marketers use the telephone or the mails to reach prospects, maintaining complete and accurate market lists is important.

There are many other questions: What are our most important customers and their key people doing? What new products are they promoting? Who are their partners? What else may influence their willingness to buy from us?

What prices are our major suppliers offering other buyers? Should we get other sources for supplies? What major contracts have they received recently? Will these influence their ability to serve our needs?

What new technologies are available now, and how are they being used by others?

Threats are the reverse side of opportunities. What are our competitors doing? What products and services have they launched recently? Are they successful? What are our competitors' weaknesses and strengths? What relationships do they maintain with our most important customers? How is their customer support functioning, and what methods are they using in their quality assurance?

Are new trade regulations being introduced in important foreign markets?

Each company has its own priorities when it comes to watching the external environment. The information needs differ depending on what products and services are being offered, the technological level of the company, the markets that it addresses, and more.

Needs and priorities also differ by department and person, for example depending on whether a user is the president, a marketing manager, product manager, sales person, or has a position in finance or production.

Remember your priorities when online. You cannot possibly capture and digest all information that is out there. Your basic problem is to find the right information in the right form at the right time.

Consider appointing an online manager. Select and empower a central manager to oversee the process of exploiting the online resource. A "make-things-happen" person, who can also be a contact point for upper management.

Monitoring your own business

What kind of news about your company is being published? What do others say about your products and services? What kind of exposure do your new product announcements get in the media?

Maybe you will find useful sources to monitor at [NewsCenter](#)?

Monitoring other people's Web pages

Monitor changes in your competitors' "What's New" or "Product Description" pages by subscribing to the [MyMindit](#) service. For a small annual fee, you'll get a notification by email each time an identified Web page changes. Alternatively, have the Web page sent you as html mail or mail attachment, or the notification sent to your pager or cell phone. Changes in Microsoft Word, FrameMaker, and Adobe Acrobat (.pdf) files may also be tracked. There is a more comprehensive service for webmasters.

[Web2mail](#) also delivers web pages as attachment to email whenever they change. You can also request files of the following formats: PDF (Adobe™ Acrobat™ files), GIF, and JPG image files. Subscriptions may be done from the web page or by email.

You can receive a web page instantly - with or without images - by sending an email to www@web2mail.com with the web page you want as the subject of the message. Finally, because users only subscribe to the best pages on the web, they offer a search engine of the pages their users subscribe to. Use it to find fresh pages you haven't seen before. Pages are ranked by the number of web pages mailed out, so you see the most popular pages at the top of the list.

Both services let you monitor search results. For example, to track the Russian company Vimpelcom using the Daypop news service request monitoring of changes at <http://www.daypop.com/search?q=Vimpelcom&t=a> . Your searches may be as simple or complex as you want.

The two services have differing features, and only experience will tell which one that might serve you needs best.

The free [Spyonit](#) service will just send a notification when a web page has changed. [Northern Light Search Alert Service](#) will notify users via email whenever new information meeting their search criteria is found in daily updates to its database of webpages and Special Collection articles. Special Collections articles may only be read after paying a fee.

Build your own, local 'database'

It does not take much effort to check one hundred different topics from multiple online sources on a daily basis. The computer will do it for you.

You do not have to read all stories as carefully as you would with printed material. Most experienced users just read what is important now, and save selected parts of the retrieved texts on local disks for later reference.

We handle printed material differently. Most of us make notes in the margins, underline, use colors, cut out pages and put into folders. These tricks are important, as it is so hard to find information in a pile of papers.

Not so with electronic information. With the right tools, you can locate information on your computer's disk in seconds.

In seven seconds, I searched the equivalent of 2000 pages of printed text for all occurrences of the combined search words 'SONY' and 'CD-ROM'! The search tool was a MS-DOS shareware program called LOOKFOR . It searched 4.2 megabytes on an 80486-based notebook computer.

With Windows 95/98 on a 233 MHz Pentium, and a powerful indexing program, the search will be completed much faster. Using AltaVista Discovery (see [Chapter 14](#)), the same search took about two seconds across over a gigabyte of documents. It found the words in web pages and text documents. The search could easily be extended to include my email archive.

During a typical work day, my personal "databases" usually give me more direct value than what I have on paper, or can get online.

My disks contain megabytes of texts retrieved from various online services, but only what I have decided to keep. My personal databases contain more relevant information per kilobyte than the online databases that I am using. Searching the data on my disk often gives enough good hits to keep me from going online for more.

You will often get better results when searching your own subset of selected online databases, than when you go online to find information. It is usually easier and faster.

On the other hand, your in-house database will never be fully up-to-date. Too many things happen every day.

Also, the search terms used for your daily intake of news will never cover all future needs. Occasionally, you have to go online to get additional information for a project, a report, a plan.

Updating your database means going online regularly to find supplementary information.

Regular monitoring gives the highest returns, and is required to get an edge over your competitors.

For beginners, the best strategy is often to start with the general, and gradually dig deeper into industry specific details. Let us review some good hunting grounds for information, and explain how to use them.

Clipping the news

Too much to read and not enough time to read it? If you feel this way, you are not alone. Keeping up with critical developments that affect you and your business can be a daunting task. "Clipping" cannot do the reading for you, but it sure can help you gather and manage business information more efficiently.

Several online services offer 'clipping services'. They select the news that you want - 24 hours a day - from a continuous stream of stories from newspapers, magazines, news agencies and newsletters.

You select stories by giving the online service a set of search terms. The hits are sent to your electronic mailbox, for you to read at will.

Many make the news available as soon as they have been received by satellite. The delay before used to protect the interests of print media is disappearing. Online services usually deliver news sooner than print media, radio and television.

'Clipping' gives an enormous advantage. Few important details escape your attention, even if you are unable to go online daily. The stories will stay in your mailbox until you have read them.

'Clipping' on the Internet

[Reference.COM](#) is a personalized conference postings delivery service that covers over 150,000 newsgroups (Usenet), mailing lists, and Web forums. You subscribe by submitting keywords that describe your interests. Postings that match your profiles (based on content, no matter which conferences they fall into) will be sent you periodically via email.

The search profiles can include operators like AND, OR, AND NOT, WHERE ORGANIZATION CONTAINS, WHERE SUBJECT CONTAINS, and WHERE date <=>. You can adjust the frequency of delivery, the volume of articles, and the length of subscription.

One interesting application of the netnews service is to find which newsgroups may or may not be covering a subject area. When you have found the names, subscribe to those for direct inquiries, postings of queries, to converse with experts, etc.

[Institute for Scientific Information](#) offers an alerting service built on a Current Contents database of over 7,000 journals, 2,000 books, and proceedings from the world's core research literature. ISI's Coverage includes publications in the fields of life sciences; agriculture, biology and environmental sciences; physical, chemical and earth sciences; clinical medicine; engineering, computing and technology; social and behavioral sciences; and the arts and humanities.

[ZD Net](#) offers a free, personalized news service tailored to include only your favorite topics.

[PointCast](#) provides free personalized news from [Reuters](#). S&P Comstock's stock ticker, SportsTicker, AccuWeather, and Variety. Select to receive news on any of 35 industry topics.

For a modest fee, [Individual.com](#) (see [Chapter 9](#)) will send you a customized daily news report right to your electronic doorstep. The report will contain the day's headlines and news-briefs relevant to your needs. To get the full text of a selected article, connect to the shown Web page and read it.

[Clarinet](#) allows the use of software filters to display only messages that include certain keywords, and can subscribe to subsets of the wire service offerings. Users' newsreaders can do some individualized filtering as well.

[Knight-Ridder's News Alert](#) provides fee-based filtered information from AFX

(European business news), A.M. Best, Business Wire, Comline Business News (Japanese business news), Federal News Service, Futures World News, Global Information Network, Knight Ridder Financial, [PR Newswire](#), Sports Ticker, US Newswire, and other sources. Email and fax delivery available.

[World News Connection](#) (WNC) is a foreign news alert service from the U.S. Government. For a moderate fee, you get access to time sensitive news gathered from thousands of foreign media sources, including political speeches, television programs and radio broadcasts, and articles from newspapers, periodicals, and books.

Contents include unclassified military, political, environmental and sociological, scientific and technical data and reports from around the world. All the material is translated into English. Regional categories covered include: Central Eurasia, East Asia, Near East & South Asia, China, East Europe, West Europe, Latin America, Sub-Saharan Africa. Note: U.S. information is not included.

Some subscription plans include clipping. Define the type of information in which you are interested. On a daily basis, WNC will review all articles being added to the service, identify those meeting your profile, and email them to your mailbox.

[CARL](#) (Colorado Alliance of Research Libraries, U.S.A.) offers a table of contents alert service. Users with an "UnCover profile" may create a list of journal titles in which they are interested. When the next issue of any of those titles is entered into UnCover, the table of contents will automatically be emailed to them. Ordering an article is as easy as replying to the email message.

'Clipping' on CompuServe

[CompuServe](#)'s Executive News Service (ENS) monitors over 8,000 stories daily from sources like Deutsche Press-Agentur (Germany), Kyodo News Service (Japan), ITAR/TASS (Russia), Xinhua News Agency (China), Pacific Rim News Service, The Washington Post, OTC News-Alert, Reuters Financial News Wire, Associated Press, UPI, [Reuters](#) World Report, IDG PR Service, Inter Press Service (IPS), Middle East News Network, European Community Report, and Dow Jones News Service.

One of them, [Reuters](#), has 1,200 journalists in 120 bureaus all over the world. They write company news reports about revenues, profits, dividends, purchases of other companies, changes in management, and other important items for judging a company's results. They write regular opinions about Industry, Governments, Economics, Leading indicators, and Commerce.

[Reuters](#) also offers full-text stories from [Financial Times](#) and other leading European newspapers. Its Textline is a database with general and business news from some 2,000 publications in Western and Eastern Europe, North and South America, Africa, the Middle East, and Asia. It includes [Reuters](#)' own news services, and translated abstracts of stories from some 17 languages. The database reaches back more than 10 years and is updated at around one million articles per year.

The IDG PR Service distributes high-tech related news gathered by the staffs of IDG's magazines. The InterPress Service covers Third World countries. The Middle East News Network integrates the contents of 28 information sources covering this region of Asia.

The Executive News Service lets you define up to three 'clipping folders'. Supply 'key phrases' that define your interests. These key phrases will be used for searching stories as they are sent. Hits will be 'clipped' and held in a folder for you to review at your convenience. When creating a clipping folder, you set an expiration date and specify how many days a clipped story is to be held.

To browse the contents of a folder, select it from the menu. Stories can be listed by headlines or leads. Select those you want to read, forward to others as email, or copy to another folder. Delete those that you do not need.

Defining key phrases is simple. The important thing is not to get too much, nor too little. General phrases will give many unwanted stories while too narrow phrases will cause you to miss pertinent stories. Example:

The phrase APPLE COMPUTERS will only clip stories that have the words APPLE and COMPUTERS next to each other. This may be too narrow. Specifying just APPLE or just COMPUTERS would be too broad. Entering

APPLE + COMPUTERS is a better phrase since the words can appear anywhere in the story, and not necessarily next to each other.

ENS carries an hourly surcharge over base connect rates.

Other clipping services

[Dow Jones' Interactive](#) has a comprehensive clipping service for business users. Sources include [Financial Times'](#) international business reports - grouped within primary industry segments.

Filtering may also be used when retrieving news through QMail gateways on BBSes. For example, I use the 1stReader program for communications with a Norwegian PCBoard BBS that carries hundreds of newsgroups and mailing lists from Usenet, Internet, BITNET, and other networks. By having 1stReader upload a list of keywords through the BBS' QMail door, all new messages containing these words or phrases from given conferences will be selectively retrieved, compressed, and downloaded. A powerful feature!

There are also clipping offerings on a host of other free and commercial services.

When clipping is impossible

Many services do not offer clipping. On these, you can use various methods of regular, selective reading.

Many conferencing systems let you select messages to read by keywords.

[CompuServe](#)'s forums have efficient 'read selective' and 'quick scan' commands.

Another trick is to limit your reading to specific message sections.

The high forum message volume is a special problem on this service. Old messages are regularly deleted to make room for new ones. (Often called "scroll rate.") Some popular forums do not keep messages for more than a couple of days before letting them go. You must visit often to get all new information.

Many bulletin boards can be told to store unread messages about given topics in a compressed transportation file. This file can then be retrieved at high speed. Special communication programs (often called offline readers) and commands are available to automate this completely.

Powerful scripts and offline reader programs (see [Chapter 12](#)) can do automatic selection of news stories based on the occurrence of keywords (for example, a company name) in headlines or the messages' text.

Subscription services

It is useful to dig, dig, and dig for occurrences of the same search words, but digging is not enough. Unless you periodically scan "the horizon," you risk missing new trends, viewpoints and other important information.

It can be difficult to find good sources of information that suits your needs. One trick is to watch the reports from your clipping services. Over time, you may discover that some sources bring more interesting stories than others. Take a closer look at these. Consider browsing their full index of stories regularly.

If your company plans exportation to countries in Asia, check out MARKET: ASIA PACIFIC on Brainwave for [NewsNet](#). The newsletter is published monthly by W-Two Publications, Ltd., 202 The Commons, Suite 401, Ithaca, NY 14850, U.S.A. (phone: +1-607-277-0934). Annual print subscription rate: US\$279.

The index itself may be a barometer of what goes on. Here is an example. Note the number of Words/Lines. Do these numbers tell a story?

July 1, 1993

Head #	Headline	Words/Lines
1)	THE PHILIPPINES IS AT A TURG POINT	616/78
2)	CHINA AND KOREA WILL LEAD REGIONAL ECONOMIC BOOM	315/41

3)	ASIAN COMPENSATION IS STILL LOW, BUT RISING QUICKLY	303/38
4)	CONSUMER GOODS WON'T BE ALL THE CHINESE BUY	221/29
5)	WOMEN BEAR THE BRUNT OF CAMBODIA'S TROUBLES	284/34
6)	TAIWAN MAKES A MOVE TOWARD THE CASHLESS SOCIETY	243/29
7)	TIPS ON MANAGING CULTURAL HARMONY IN ASIA	264/37
8)	TAIWANESE BECOME MORE DISCERNING, HARDER TO REACH	217/27
9)	DIRECT MARKETING HEADED FOR GROWTH IN SINGAPORE	205/27
10)	TOURISM IN MALAYSIA WILL GROW	610/76
11)	CHONGQING: FUTURE POWERHOUSE	2708/342

It is a good idea to visit Brainwave for [NewsNet](#) to gather intelligence. Review indexes of potentially interesting newsletters. Save them on your hard disk for future references. You never know when they may be of use.

The newsletters within computers and electronics bring forecasts of market trends, evaluation of hardware and software, prices, information about IBM and other leading companies. You will find stories about technological developments of modems, robots, lasers, video players, graphics, and communications software.

The Management section contains experts' evaluation of the economic climate with forecasts, information about foreign producers for importers, tips and experiences on personal efficiency, management of smaller companies, and office automation.

Other sections are Advertising and Marketing, Aerospace and Aviation, Automotive, Biotechnology, Building and Construction, Chemical, Corporate Communications, Defense, Entertainment and Leisure, Education, Environment, Energy, Finance and Accounting, Food and Beverage, General Business, Insurance, Investment, Health and Hospitals, Law, Management, Manufacturing, Medicine, Office, Publishing and Broadcasting, Real Estate, Research and Development, Social Sciences, Telecommunications, Travel and Tourism, Transport and Shipping.

Several newsletters focus on specific geographical areas, like:

- THE EXPORTER (Published by Trade Data Reports. Monthly reports on the business of exporting. Functionally divided into operations, markets, training resources, and world trade information.)
- SALES PROSPECTOR (Monthly prospect research reports for sales representatives and business people interested in commercial, and institutional expansion and relocation activity. Grouped by geographic area in the United States and Canada.)

OPEC Daily Bulletin is a daily news report on oil prices, exploration, and consumption.

Other newsletters focus on technology intelligence:

Advanced Manufacturing Technology

Reports on desktop manufacturing, computer graphics, flexible automation, computer-integrated manufacturing, and other technological advances that help increase productivity.

High Tech Materials Alert

Reports on significant developments in high-performance materials, including alloys, metallic whiskers, ceramic and graphite fibers, and more. Concentrates on their fabrication, industrial applications, and potential markets.

Futuretech

Provides briefings on focused, strategic technologies that have been judged capable of making an impact on broad industrial fronts. Includes forecasts of marketable products and services resulting from the uncovered technology and its potential impact on industry segments. Advanced Coating & Surface Technology, Electronic Materials Technology News, Flame Retardancy News, High Tech Ceramics News, Innovator's Digest, Inside R&D, Japan Science Scan, New Technology Week, Optical Materials & Engineering News, Performance Materials, Surface Modification Technology News,

Genetic Technology News, Battery & Ev Technology, and much more.

Databases and forums with an international orientation

Internet users have access to thousands of sources of current government information from around the world -- census data, Supreme Court decisions, world health statistics, company financial reports, weather forecasts, United Nations information, daily government press briefings and much more.

General

Country Indicators for Foreign Policy (The CIPF project) identifies and assembles statistical information conveying key features of the economic, political, social and cultural environments of countries around the world. The CIPF database can be queried in four ways: By Region - View regional snapshots, compare regions on key indicators, obtain time-series for regional data; By Issue Area - View top 10 and bottom 10 lists for key indicators; By Regional and Global Organization - Collect data grouped by dozens of inter-governmental organizations; Through the Quick Query page - Advanced users can choose the data they need using drop-down list boxes. (Password required for access, which is free.)

Census data

Statistiska centralbyrån (Sweden) provides [links to the government statistics agencies of the countries of the world](#), broken down continents and regions of the world and with links to international organizations.

For global demography and population information, check this Australian resource <http://coombs.anu.edu.au/ResFacilities/DemographyPage.html>.

At <http://grid2.cr.usgs.gov/globalpop/1-degree/>, you can retrieve a population database depicting the worldwide distribution of population in a 1X1 latitude/longitude grid system. There are other global population databases at <http://grid2.cr.usgs.gov/globalpop/1-degree/description.html> and <http://www.census.gov/ipc/www/idbnew.html>. The latter is the U.S Census Bureau's **International Data Base (IDB)**, a computerized source of demographic and socio-economic statistics for 227 countries and areas of the world.

Market data

World Competitiveness On-line offers the World Competitiveness Yearbook published by International Institute for Management Development. The Yearbook aims to "capture in a single index the capacity of a country's economic structure to promote growth."

The Economist Group (United Kingdom) offers analysis and forecasts of the political, economic, and business environment in more than 180 countries. Access to the public areas of their web site requires a free registration. Their full-text publications, databases and other information are accessible by subscription only.

The European Union has a **Market Access Sectoral and Trade Barriers Database** covering over 50 countries worldwide, in 26 sectors, and 13 divisions of measurement.

Emerging Markets Companion (<http://www.emgmks.com/>) is another window into the emerging economies of Asia, Latin America, Africa and Eastern Europe.

The IPE mailing list is for the discussion of international political economy. Topics include NAFTA, regional trading blocs, trade regimes, international debt, long cycles, historical world systems, EEC, currency and market crises, democracy and governance in Latin and South America, Africa and Asia, commodity negotiations.

On Usenet, check out the biz and clari.biz hierarchies of newsgroups for leads (biz = business postings). Many **ClariNews** groups cover the business and financial world.

The International Affairs Network offers a comprehensive hypertext [guide to the worldwide network-accessible resources](#) available to scholars in the study of International Affairs. The guide contains pointers within such areas as: International

Political Economy, Foreign Policy, Economic Development, Technology, Science, and Environmental Policy, International Law, Area Studies Resources, and more.

There is another interesting international law resource on the World Wide Web, at <http://www.law.ecel.uwa.edu.au/intlaw/>.

The Transport Web is an information service for the international transportation industry.

Information Access Company provides several reference and full-text databases targeted at businesses. Coverage includes news and information on companies, industries, products, markets, and applied technologies, and on subjects such as computers, marketing, management, health, law, aerospace, popular culture, and scholarly research.

PROMPT (Overview of Markets and Technology) is **IAC**'s largest database. It provides international coverage of companies, markets and technologies in all industries.

Users of **Data-Star**, **LEXIS-NEXIS**, and **Reuters** have access to international political and economic coverage from the British Broadcasting Corporation (BBC). Split into five regional parts across over 140 countries, Summary of World Broadcasts makes up a daily political document, with coverage of legislation, policy, labor issues and foreign relations. The Weekly Economic Report covers topics such as energy, agriculture, and transportation. (BBC is also at <http://www.bbc.co.uk>.)

In the Business Database Plus at **CompuServe**, you can search in full-text stories from hundreds of North American and international publications for industry and commerce.

The articles are about sales and marketing ideas, product news, industry trends and analyses, and provide company profiles in areas such as agriculture, manufacturing, retailing, telecommunications, and trade. This is a partial list of the database's magazines:

Agribusiness Worldwide, Air Cargo World, Beverage World, Beverage World Periscope Edition, Business Perspectives, CCI-Canmaking & Canning International, CD-ROM Librarian, Chain Store Age - General Merchandise Trends, Coal & Synfuels Technology, Communication World, Communications Daily, Communications International, Consultant, Cosmetic World News, Dairy Industries International, Direct Marketing, Financial Market Trends, Financial World, Food Engineering International, Forest Industries, Gas World, Graphic Arts Monthly, The Printing Industry, High Technology Business, International Trade Forum, Investment International, Journal of International Business Studies, Journal of Marketing Research, Medical World News, OECD Economic Outlook, The Oil and Gas Journal, Oilweek, Petroleum Economist, Plastics World, Purchasing World, Restaurant-Hotel Design International, Seafood International, Supermarket Business Magazine, Training: the Magazine of Human Resources Development, World Economic Outlook, World Oil.

Trade Show Central is a large searchable database of international trade shows.

Market research reports from Frost & Sullivan are available through Data-Star. It produces over 250 market reports each year, in 20 industrial sectors. These reports cover results of face-to-face interviews with manufacturers, buyers and trade association executives, supplemented by a search and summary of secondary sources.

Ways of doing business

International Business Practices is full text of a U.S. Department of Commerce reference work that provides overviews of import regulations, free trade zones, foreign investment policy, intellectual property rights, tax laws and more in 117 countries.

Brainwave for **NewsNet** has the **Worldwide Business Practices Report**. It offers monthly detailed information on such country-specific topics as business customs and protocol, negotiating tactics and bargaining tips, marketing strategies travel recommendations, local government regulations, social interaction and etiquette, safety and health issues.

You should also take a look at the continent related pointers listed in

*Chapter 4 and 9!***Stock/financial information**

[The Syndicate](#) is filled with links to stock exchanges and financial information around the world. Besides the usual United States links, you'll find links to countries like Austria, Canada, Costa Rica, Finland, France, Germany, Ghana, Hong Kong, Ireland, Israel, Italy, Japan, Korea, the Netherlands, New Zealand, Norway, Russia, Singapore, South Africa, Sweden, Switzerland, Turkey, United Kingdom, and countries in Latin America.

The [Italian FINANCE AREA](#) page is another good source for global finance information. For links to banks around the world, check http://www.gwdg.de/~ifbg/bank_2.html.

Legal resources

[The Foreign and International Law Resources on the Internet](#) page contains a long list of annotated pointers within international law, and topical resources.

The [Lawtel](#) subscription service offers a fully indexed database of all official EU documents, such as case law, adopted and proposed legislation, commission reports, commission notices dating back to 1987, and more.

International organizations

[United Nations](#) (UN) carries UN DPI Press Releases, General Assembly, Security Council and ECOSOC resolutions, and more.

[United Nation's Food and Agriculture Organization](#) (FAO) offers several searchable databases. Their FAOSTAT Database contains extensive agricultural data from many countries. Data is provided for production, trade, commodity supply and demand balances, population, land use, and fisheries.

For more, try [the Official WEB Locator for the United Nations System of Organizations](#). Categories on their home page include: Alphabetical Index, Official Classification, What's New, Frequently Requested Information, Related Information and Other International Organizations.

[OECD](#) (The Organization for Economic Co-operation and Development) is a forum permitting governments of 29 industrialized countries to study and formulate policies in economic and social spheres. It offers economic data on the members states, analysis of nonmember countries, and links to statistical resources on the net.

Some other international organizations:

- [ILO](#), the International Labor Organization
- [UNESCO](#)
- [The United Nations Children's Fund](#) (UNICEF)
- [The World Health Organization](#) (WHO)
- [Statistical Resources on the Web](#)
- [More](#)

How to monitor your competitors

Sales managers need to know what competitors are doing. Lacking this knowledge, it is risky to maneuver in the market.

Start by making a strategy for online market intelligence. Here are some practical hints:

1. Select online services that offer clipping of stories and information based on your search words or phrases. Use such services for automatic monitoring of stock quotes and business news.
2. Read what investment analysts and advisors write about your competitors. Most markets are well covered by databases and other sources of information.

3. Read what competitors write about themselves. Their press releases are available from online databases in several countries.
4. Compare your competitors with your own company and industry. Items: stock prices, profits, revenue, etc.
5. Regularly monitor companies and their particular products.
6. Watch trend reports about your industry. Search for patterns and possible niches.
7. Save what you find on your hard disk for future references.

Can you get everything through the online media? Of course not!

Do not expect to find production data, production formulas, detailed outlines of a company's pension plan, or the number of personal computers in a company. Such information rarely finds its way to public databases.

Using the net as a marketing tool

Many companies - large and small - use the networks as a marketing instrument.

Some set up web sites to provide technical support to customers all over the world. They offer technical information, help, upgrade software, list of agents, technical bulletins with lists of products, and new products. Examples: [Microsoft](#), Toshiba, Quarterdeck, Digital Research, Tandy, Novell.

The Internet provides an unparalleled way to present the image an organization wishes to project, and to communicate all its messages to a diversity of self-selecting, interested audiences. Businesses can also use their Internet presence for intelligence-gathering, as a feedback loop, and an early warning system for itself - at an amazingly low cost.

[Microsoft's](#) Knowledge base is one example. It is a database collection of case-study examples, tips, updates and related articles about Microsoft products. Here are some other interesting examples to check out:

<http://www.jango.com>
<http://www.pizzahut.com/>
<http://sunsolve1.sun.com>
<http://www.mastercard.com>
<http://www.americanexpress.com>
<http://home.eunet.no/~presno>

Mind you, having a Web page has no value if nobody visits it. Make sure you send information about your site to the net's announcement services!

First, study "[How To Announce Your New Web Site](#)", WebCom's "[Publicizing Your Web Site](#)" - which also includes "Registration to Spanish Indexes," and [the Internet Advertising Resource Guide](#). You may also want to check your site's popularity at [LinkPopularity.com](#), sign up for a monthly report, and read their hints on how to increase the "popularity index."

For discussions about Internet Advertising/Marketing techniques, join [the I-Advertising mailing list](#), and browse [EPage](#) for advertising examples.

Other interesting places include [the Online Advertising Discussion lists](#) (at <http://www.tenagra.com> and <http://www.o-a.com/>), and [The Internet-Sales Moderated Discussion List](#). For a long list of Marketing-related Discussion and Announcement Groups on the net, visit <http://www.wolfbayne.com/lists/>.

Then, find a service that can help you submit your Web address widely to the net's search engines and directories. Here are some ideas:

<http://www.openmarket.com>
<http://www.yahoo.com/>
<http://galaxy.einet.net/>

Browse the "[Internet Marketing](#)" site, and study [ActivMedia's](#) focus look at [online marketing trends](#). Check [Web Promotion UK](#).

Use the **Google Groups** search engine to find newsgroups or bulletin boards related to business.

Go to [the Google Groups website](#). Under the search box, a list of the top newsgroup hierarchy with a short description. Click at any of these group names to receive a list of newsgroups. Use your browser's search feature to locate groups that might be interesting.

An option is to search for a term of interest to your organization. Above your list of hits, there will be a list of "Related groups." These may be interesting, and worthy of further checks. Hit "Advanced Groups Search," and limit your search to any given newsgroup (like biz.ecommerce). If you do this without entering any other terms, you will get a list of recent posts, and an idea about the group's focus.

In some businesses, contacts result in meetings of some sort, and some oral presentation supported by multi-media. The more expensive the products or services being offered, the more will such presentations be tailored to the audiences' needs. If you regularly address audiences face-to-face, consider subscribing to the free [GREAT SPEAKING](#) newsletter. Backissues at <http://www.antion.com/ezinebackissues.htm>.

Strategic considerations

The Americans have a gift for marketing and sales by modem. You meet them in online forums all over the world, in person or through agents, and especially in computer oriented conferences and clubs.

Their main strategy is *reference selling*. Make key customers happy, and make sure they tell others.

In [Chapter 5](#), I told you what happened when a member wrote about his upgrade to a 425 megabytes hard disk in CompuServe's Toshiba forum. It made me place my order with his preferred seller.

One common sales strategy is to be constantly present in relevant conferences, and spend a generous amount of time helping others. This takes time. By proving competence and willingness to help, you build a positive personal profile. This profile is the key to business, information about competitors and other benefits.

Another approach is to ask for information or suggestions. It's a more benign way of publicizing yourself than a blatant sales approach.

To drop quickly into a conference to post an "advertisement," is a waste of time. The message may be read by some, but chances are that you will be criticized (in public) for having "polluted their environment" with a commercial message. On the Internet, it is considered inappropriate to send out unsolicited information.

A North American business person tried this approach. He posted a long sales letter to all conferences and newsgroups that he could find. The text started like this:

Subject: Court Ordered Liquidation - Computer Memory
- CPU's & DSK Drives

Choice Trading Company, Court Appointed Liquidators, have been assigned to liquidate the following Multi-Million Dollar inventory of computer Memory Chips, CPU's and Hard Disk Drives. All items are new and come with applicable manufactures warranty. Prices quoted include all state and local taxes plus shipping and handling.

Order Number	Mfg.	Description	Cost (EACH)
Memory			
1524	Toshiba	30 Pin Simms 1x3	70ns 1 meg \$ 25.00
1525	Toshiba	30 Pin Simms 1x9	70ns 1 meg 25.00
etc.			

Three days later, his mailbox was closed. Furious users had bombarded it with everything from hate mail to megabytes of rubbish. His access provider had to close down the account to avoid serious operational problems.

Another reason for not using the "advertisement" strategy is that the volume of information in the best conferences for your marketing effort probably is too high to make traditional advertisements worthwhile.

When you distribute commercial information, preface it with a concise summary that can be followed-up with more detail if requested. Also, make sure that the information provided is of significant value to readers.

If you're an entrepreneur running a home business, visit the Usenet group at misc.entrepreneurs.

International trade

The International Trade Network is on [the IntlTrade mailing list](#). It is for advertisements of exports, imports, services, and direct investments. Trade advertisements may be posted gratis by anyone, and are relayed worldwide by email to subscribers in a daily digest.

You'll find a glossary of terms used in the business of trading at <http://centrex.com/terms.html>.

Electronic mail

Here is a list of other useful applications of electronic mail:

- to distribute lists of important prospects quickly to your sales force,
- to avoid lengthy telephone conversations,
- to receive order information faster and more efficiently than by traditional mail or fax (and from a larger geographical area),
- to distribute quickly reports and memos to key people all over the world,
- to send new prices and product announcements to customers,
- to exchange spread sheets and analyses between users of personal computers.

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Search:

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The Online World resources handbook

Chapter 11:

Getting an edge over your competitors

Locating country-specific information

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Below, there are many pointers to country-specific information, sorted by continent. To get more, try this trick:

Search the Internet using [Alta Vista](#). See [Chapter 10](#)). Compose a query that contains the international standard top-level code for the country in question (click on link in [Appendix 6](#) for a list of country codes). Insist that the code be present in the URLs of found resources. Qualify further by adding other words or phrases if your query gives too many hits.

Example: `+url:.kr`

`"url:"` insists that the preceding string be found in the URL. `"KR"` is the top-level code for Korea. This code is often found at the end of the location part of URLs pointing to this country, unless the server uses a non-country specific code (like `.net` or `.com`). This search is likely to return links like <http://kpd.sing-kr.org/> (Korea Progressive Directory).

Expect the two character code to exist in URLs pointing to resources in other countries also. However, the result is usually good. For example, `MN` is the code for Mongolia. Using `"url:.mn"` in your query will also find URLs like <http://www.an.cc.mn.us/depts/he/raynauds.html>.

Check [The Economist "Country Briefing"](#) Pages. For each country, there is succinct forecasts, economic and political profiles, core statistics, essential recent articles and in-depth surveys from The Economist.

Africa

Brainwave for [NewsNet](#) has several interesting newsletters

Africa Intelligence Report
 Africa News On-Line
 - political, economic and cultural developments
 Country Risk Guides: Sub-Saharan Africa
 Country Risk Guides: Mid-East & North Africa
 Monthly Regional Bulletin - Southern Africa,

PRS-Forecasts: Mid-East & North Africa
 PRS-Forecasts: Sub-Saharan Africa
 Southern Africa Business Intelligence

The Information Bank on African Development Studies (IBADS) is a mailing service provided by the Africa Technical Department at [the World Bank](#). Its aim is to send out information about development studies on Sub-Saharan Africa. [Investext](#) brings regular reports about activity in the African region.

For leads in South Africa, start with [ExiNet](#). This South African trade information resource has information on South African Exporters, South African Trade Fairs and Exhibitions, Travel and Tourism, South African Publications, South African Property, and South African Demographics: A Regional Summary. ExiNet boasts a database of over 70,000 South African companies.

Other South African sources on the Web include [The Africa Commercial home page](#) in Cape Town, and [Compustat](#).

African Census data is at <http://lexis.pop.upenn.edu/world/africa>. See <http://grid2.cr.usgs.gov/globalpop/africa/> for the **African Population Database**.

The **SUDAN-L** mailing list is where you will find information and sources of information about Sudan.

China

China Ministry of Foreign Trade and Economic Cooperation (MOFTEC), a major component of China's national economy. Has Essentials of China's Foreign Economic Relations and Trade, China Trading Opportunities, and more. In English and Chinese.

[China Statistical Information Network](#) offers the Chinese government's statistical yearbook. [The State Intellectual Property Office](#) of P.R. China offers information of the country's laws and regulations, as does the comprehensive [Chinese National Law and Regulations](#) site (in Chinese).

[Chinamarkets](#), another MOFTEC offering, covers information on thousands of industrial products, from machinery and electronic products to textiles and foodstuffs, as well as company information and a business news section.

[China Dimensions](#) offers China Administrative Regions GIS Data, GB Codes for the Administrative Divisions of the People's Republic of China, Fundamental GIS: Digital Chart of China with layers for roads, railroads, drainage system, contours, populated places and urbanized areas, access to the China Census of Population, Data on Population and Agriculture, Data on Provincial Economic Yearbooks, China Micro-Economic Database, Agricultural Statistics, Data on Hospitals and Epidemiology Stations, and the Priority Program for China's Agenda 21. Many data sets are available at the county level.

[CDN-Global](#) provides news and information about China and Chinese that are of general interests to readers all over the world. Published three times a week.

[China Business News](#) publishes updated economic news to those into doing business with China. [Chinese Business World](#) provides information about business, travel, and culture.

Reports on **World Bank Projects in China** are at <http://www.worldbank.org/html/extdr/offrep/eap/cn2.htm>.

A WWW service for the Chinese community exists at <http://www.edu.tw/>. Most of the local texts support Chinese BIG5 only.

[Kompass](#) has information about **companies in China**.

India

There is a comprehensive Web site about India, its economy and industry, called the [Indian Economy Overview](#). The site has complete coverage of the recent Indian Financial Budget, including full text, live coverage, commentary, analysis and reactions.

The aim of the non-profit [National Centre for Trade Information \(NCTI\)](#) is to promote "trade, investment and technology flow among different countries". For statistical information about economy, population, etc., see <http://www.nic.in/gistnic/>.

Check [IndiaWorld](#). Their offerings include Indian news, business and

entertainment information with links to India Daily, khoj daily, The Indian Express and The Financial Express, Madhya Pradesh Chronicle, India Trade Daily, and more.

[The Economic Times](#) is the largest selling business daily in India. [Kompas](#) has information about Indian companies.

Japan

[The Japan External Trade Organization](#) (JETRO), provides Japanese government procurement information from Kampo, the governments official journal, alongside economic information about Japan. One hyperlink points at "Japan Economic Trends, Industry, Markets, Business Practices." This page contain such things as First Steps in Exporting to Japan, Doing Business in Japan, and The Japanese Consumer.

[The Mizuho Securities RESEARCH & LINKS page](#) provides links to English language resources on Japanese economy, finance and politics.

[The Japan Information Center of Science and Technology](#) (JIST) offers a range of commercial English language databases in the broad spectrum of science, technology and medicine.

[Orbit](#) has an English language database of Japanese technology. It contains abstracts of articles, patents and standards from more than 500 Japanese magazines.

[Reuters](#) offers the Yomiuri Shimbun, Japan's best-selling daily newspaper. [Tradstat](#) offers Japanese import and export statistics.

[Dow Jones Interactive](#) brings full-text stories from the Japan Economic Newswire (Kyodo News International), which covers Japanese company, industry and financial markets; government, defence and science news. It also brings full-text stories from many other international publications including New Era Japan, New Food Products in Japan, New Materials Japan, and PDS's Japan Auto Industry Survey, Power Asia.

[The Investext database](#) has English language profiles of thousands of Japanese companies sourced from Teikou, Japan's largest business credit agency.

[Kompas](#) has information about Japanese companies. [LEXIS-NEXIS](#), [Dialog](#), NiftyServe, PC-VAN, and G-Search have the Teikoku Databank, with directory and income information about over one million Japanese firms.

Middle East

[ArabNet](#) focuses on the Arab world in the Middle East and North Africa, and offers links and information about Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, UAE, Yemen.

[The Israel Industry R&D Information System \(MOP\)](#) have an information server at <http://www.matimop.org.il/>. There's a weekly newsletter called "[The Arab Press on Israel](#)."

[The Israel Information Service](#) is at <http://www.israel.org/> (some documents are in French and Spanish). Choices include Basic Statistics, The Economy, Culture, Communications and Media, and Basic Laws and Legal Issues.

[Kompas](#) has information about companies in the region.

Other countries in Asia and the Pacific

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) offers "[Asia-Pacific in Figures](#)". The online version has HTML and Excel files with socio-economic statistics for: Afghanistan, Armenia, Azerbaijan, Bangladesh, Bhutan, Brunei, Cambodia, China, Georgia, HK, India, Indonesia, Iran, Japan, Kazakhstan, Kyrgyzstan, Laos, Macao, Malaysia, Maldives, Mongolia, Myanmar (Burma), Nepal, Pakistan, Papua New Guinea, Philippines, North Korea, South Korea, Russian Federation, Singapore, Sri Lanka, Tajikistan, Thailand, Turkey, Turkmenistan, Uzbekistan, and Vietnam. Also, it includes statistics for a number Pacific countries.

[Asia Pulse](#), a real-time commercial intelligence wire designed for corporate users, delivers information about Asian infrastructure, private investments, government

procurement, company and industry developments, politics, exports, retail trade, and regulatory issues. Covers 50 industry categories in over 20 countries.

[Asia Intelligence Ltd](#), an online source for economic, political, and strategic intelligence on Asia, brings daily briefings, a conflict monitoring service, and an election watch.

[AsiaSource](#) provides information regarding the cultural, economic, social, historical, and political dimensions of Asia. With a worldwide events calendar, a glossary of terms, annotated links and opinion pieces, news services, country profiles, special features, and more.

[The Asia-Pacific Economic Cooperation \(APEC\)](#) brings information about the 18 current members' economies, calendar of APEC activities, press releases, and more.

The [Asian Development Bank](#) is at <http://www.asiandevbank.org/>, and [Asian Buying Consortium](#) at <http://www.abcfash.com>.

[The Far Eastern Economic Review Interactive Edition](#) (Hong Kong) focuses on Asian current affairs, business, economies and investment. [Straits Times](#) (Singapore) is at <http://straitstimes.asia1.com.sg/>, and [Singapore Business Times](#) is at <http://business-times.asia1.com.sg/>.

[Dun & Bradstreet](#) has hard-to-find company information on developing markets such as Indonesia, the Philippines, Thailand, and Malaysia.

[Tradstat](#) has import and export statistics on Hong Kong and Taiwan. [Asia, Inc.](#), the Hong Kong published business magazine, contains articles of Asia's executives and their enterprises, daily financial information, and more.

[The Hong Kong Trade Development Council](#) offers comprehensive trade and business information on Hong Kong and Mainland China, online trade enquiry, trade fair registration, and more.

The [ASIA-PACIFIC DATABASE](#) covers business and economics in Asia and the Pacific.

[Dun's Market Identifiers](#) provide directory listings of businesses throughout the Asian and Pacific Rim countries. [AFX Asia](#) delivers 400+ subscription-based Asian financial news stories from all of Asia each day. Operated by providers such as Financial Times Group, AFP, Nikkei, and Australian Association Press.

The [ELC](#) file on [LEXIS-NEXIS](#) contains financial and marketing information on Southeast Asian corporations (1993). [Kompas](#) has information about companies in Australia, Hong Kong, Israel, Indonesia, Malaysia, Philippines, Singapore, South Korea, Thailand, Taiwan, etc. [Investext](#) also monitors the region closely.

Yet more Asian pointers

The [Asian Studies](#) area of the WWW Organization's international directory of networked research and educational resources (WWW Virtual Library) tracks information and research resources (ftp, gopher, wais, www) for Burma, China, Hong Kong, India, Indonesia, Japan, Korea, Laos, Malaysia, Papua New Guinea, Philippines, Singapore, Taiwan, Thailand, Tibet, and Vietnam. Check <http://coombs.anu.edu.au/asia-www-monitor.html> to follow developments regularly, or search its full-text database of past issues.

[Eurasia Research Center](#) offers links to news and other resources on the Balkans, Baltic States, Central Europe, the Caucasus, formerly Soviet Central Asia, Russia, Belarus, Iran, Ukraine, Moldavia, Turkey, Afghanistan, and Pakistan.

[The EXPORT-IMPORT-INVEST Vietnam](#) - Business Directories pages are in English, French, Spanish, and German.

Central and South America

[Organizacion de los Estados Americanos' \(OEA\)](#) "Programs and Issues" page gathers information on current OAS activities in the areas of trade, democracy, environment, human rights, drug abuse control, telecommunications and information infrastructure, and others. Every country in the Americas is a member of the OAS (except Cuba). In Spanish and English

[Business News Americas](#) brings daily news in English, Spanish, and Portuguese on

industries such as telecommunications, ecommerce, electric power, oil and gas, mining, metals, infrastructure, privatization, banking, environment. **Latin America Related Information Service** is at <http://lanic.utexas.edu/>.

Tradstat has import and export data on Brazil and Argentina. For South American census data, try http://lexis.pop.upenn.edu/world/latin_america.

The Latin American Data Base (LADB) has SourceMex (economic news and analysis on Mexico), Chronicle of Latin American Economic Affairs (reports on trade policy, privatization, monetary policy, and macro-economic figures), and Central America Update.

RNP - Rede Nacional de Pesquisa (National Research Network) has links to most ftp, gopher and WWW servers in Brazil. **Instituto Nacional da Propriedade Industrial** offers Brazilian patents data.

Investext closely monitors the region. Dow Jones has Mexico Service, InterAmerican Opportunities, and Latin America Opportunity Report.

The European Common Market and Central Europe

Those exporting to the EEC need to master languages like German, French, Italian, and Spanish besides having a working knowledge of English. Conversation is the easy part. The problem is writing, and especially when the task is to translate technical expressions to the languages used within the Common Market.

Check **the European Commission's Translation Service** for help. Its database contains around five million entries in twelve languages, including technical terms, abbreviations, acronyms and phraseology. The search interface offers several options, including source and target languages, subject field, and the kind of data (terms, abbreviations, or phraseology) sought.

The Europe Homepage offers multi-lingual information on the European Union's goals and policies. EUROPA represents EU's institutions, and is run by the European Commission. Here are also links to official documents from the Union, publications, online services, statistics, news, and other Web servers of the area.

The Common Market's free database service, **I*M-EUROPE** (Information Market Europe), is set up to "support the actions of DGXIII of the European Commission in stimulating the European electronic information services market and multimedia content industries." It offers information on topics such as the Telematics Applications Programme, the INFO2000 programme, Task Force Multimedia Educational Software, and links for more about EU's organizations and programmes.

The European Commission's **CORDIS** (Community Research and Development Information Service) is a database of all European Community information related to Research and Technological Development programmes.

You're offered multi-lingual searches in databases on topics such as News, Programmes for finding opportunities in your research areas, Projects for Who is doing What, Results for exploring Innovation, Partners for your Business Research, Publications for Key R&D, Published Items, Contacts to People who Can Help, Acronyms relevant to Community R&D, Understanding EU R&D decision making, and more. Here are also links to R&D in the European Union.

The EC's **DANTE** provides advanced international computer network services for the European research community. **The WISE Information Board** on R&D Activities in the European Union is at <http://www.igd.fhg.de/wise/>.

The **Guide To European Legal Databases** provides links to European resources on the web.

ACTS NewsClips is a bi-weekly newsfeed about developments in the European Commission's Advanced Communications Technologies and Services programme. You can also sign up for deliveries by electronic mail.

EUbusiness provides daily overviews of business news and information about the European Union. Topics include Agriculture, Competition, Consumers, Employment/Training, Eastern Europe, Energy, Environment, Food/Drink, Living/Working, Media/communication, Pharmaceuticals/health, Social policy, Trade/external relations, Transport, Economy, EMU, Tenders, Facts/Figures, Finance, Markets update, and much more.

The Zagreb Stock Exchange is at <http://www.zse.hr/>. **The Vienna Stock market** (Austria) is in German.

For economics, check out <http://netec.wustl.edu/NetEc.html> for access to **BibEc** (bibliography of working research papers), and **WoPEc** (a collection of working papers).

The European Business Directory offers economic analyses and indicators on the main European markets, and practical information for doing business in Europe. Information is available in English, French, German, Italian, and Spanish.

Dun & Bradstreet offers company profiles of more than two million European companies.

For up-to-the-minute news from England, try the **Press Association Online**'s wires. **The British IEE** (Institution of Electrical Engineers) are at <http://www.iee.org.uk/>. Search their IEE Library Online Catalog. In 1996, it held some 65,000 books and pamphlets covering all aspects of electrical engineering, electronics, manufacturing and control engineering, computing, IT, and telecommunications.

The ELC file on **LEXIS-NEXIS** contains financial and marketing information on thousands of European corporations. **Tradstat** has import and export trade statistics on all major European countries collected by European national statistical agencies and international bodies.

Data-Star is strong on information of Europe:

European Community: Tenders Electronic Daily, a database of European Community contract offers. Its Textline is an excellent source of information about European companies. CELEX (European Community Law). European Chemical News. Dun & Bradstreet European Marketing File. DRT European Business Reports. Business Opportunities in Europe. ABC EUROPE: European Export Industry. Euromonitor Market Reports. Euromonitor Market Direction. Spicers Centre for Europe - European Community Law. Spearhead - UK Analysis of EC Law.

Austria: Creditreform - Austrian Companies. Hoppenstedt - Austria. KREDITSCHUTZVERBAND - Austrian Companies.

Benelux: the Belgian newspaper De Financieel Economische Tijd (in Flemish), INFOTRADE - Belgian Company Financial Data, Hoppenstedt - Benelux.

France: The FRFF/FREFF files hold balance sheets of over 335,000 French companies (1994). Telefirm - French Companies Register. French Companies - Full Financial Data. Firmimport/Firmexport - French Importers/Exporters. Le Monde. SCRL French Companies Financial Profiles.

Germany: German Business & Industry Directory, German Business Opportunities, Aerzte Zeitung Online, BDI German Industry, Biotechnology Information. Creditreform - German Companies. German Buyers' Guide. EcoRegister - German Company Registrations. EcoNovo - German Companies in Bundesanzeiger. German Business Statistics. German Company Financial Data. FINF-TEXT - German Company News. Hoppenstedt - Germany. ManagementInfo Wirtschaft. Sueddeutsche Zeitung. Wer Gehoert zu Wem - Who Belongs to Whom. Who Supplies What? (Germany & Austria). ZVEI Electro/Electronics Buyers' Guide.

Italy: Il Sole 24 Ore, L'Impresa, and Il Mondo Economica in Italian. Italian Company Profiles - Financial. MAST - Market Structure and Trends in Italy. Sistema Ditte Operanti con l'Estero. La Stampa.

Switzerland: In its Swiss News Agency wire service, you have a choice of French or German. Credit Suisse Information on the Swiss economy. Swiss Educational Documentation. Neue Zuercher Zeitung. Serials in Swiss Libraries. Swiss Newswire. Societe Generale de Banque - Banking. Schweizer Handelszeitung. ELSA Swiss Sportwire. Dun & Bradstreet Swiss Companies Dun & Bradstreet. Swiss Companies Full Financial Data.

Scandinavia: Trademarks and applications for Denmark, Norway, Sweden and Finland.

United Kingdom: Key British Enterprises Financial Performance. ICC Full- text UK Company Reports ICC Directory of UK Companies ICC UK

Financial Datasheets. JordanWatch - UK Companies. Pharm-line - UK Pharmacy. British Trademarks. UK Importers.

Country reports, Financial Focus, Political focus, and International Economic Outlook from the Union Bank of Switzerland, and more can be found in **the Quest Economics Database** (QED) on [Data-Star](#), FT PROFILE, and Genios.

[Investext](#) offers a series of stockbroker research reports on European companies and sectors from around 400 contributors based on the continent. Their reports offer detailed analysis, important financial data, and forecasts on everything from the mayor players to the small manufacturing firms.

[LEXIS-NEXIS](#) has the Hoppenstedt German Trade Associations directory, newsletters from the Europe Information Service: Europe Energy, Europe Environment, Transport Europe and European Insight, a weekly brief on European Community-related happenings.

[LEXIS-NEXIS](#) has databases with information about English and French law, and other law material from Australia, New Zealand, Ireland, Scotland and North America. Their Martindale-Hubbell Law Directory has information on over 700,000 lawyers and law firms worldwide. The directory can be used for referrals, selection of associate counsel, and evaluation of competitive counsel. [The European Patent Office](#) (EPO) is also on the web.

Check out [Kompass](#) when planning exports to the EEC. Its database contains details about companies in Sweden, Denmark, Germany, United Kingdom, Holland, Belgium, France, Spain, Italy, Sweden and Norway. Try GENIOS for more on Germany. The German Federal Government is at <http://www.government.de>.

ILINK has the EEC-I conference (Discussion about the European Common Market). FT Profile offers full-text searches (and a clipping service) in stories from [Financial Times](#). The database is being updated daily at 00:01.

[ZiffNet's Business Database Plus](#) has Agra Europe, Belgium: Economic and Commercial Information, British Plastics & Rubber, British Telecom World, The [Economist](#), Erdol und Kohle, Erdgas, Petrochemie: Hydrocarbon Technology, EuroBusiness, Euromoney, Europe 2000, European Cosmetic Markets, European Rubber Journal, Report on the Austrian Economy, Royal Bank of Scotland Review, swissBusiness.

[Globalbase](#) has Nouvel Economiste among its many offerings. Questel offers access to 250,000 logos and images of French trademarks (1993), and patent information from several European countries.

[Dialog](#), [Orbit](#), and [STN](#) are also great sources for patents data.

Scandinavia

Before meeting with people from Norsk Hydro, go online to get recent news about the company ([Chapter 9](#)). It will only take a couple of minutes. What you find may be important for the success of your meeting.

If you know the names of your most important competitors, use their names as keywords for information about recent contracts, joint venture agreements, products (and their features), and other important information.

[Kompass](#) offers information about companies and products in Scandinavia. Information is presented in the local language of the different countries. You can search by

- company name
- product or service (optionally using an industry classification code for companies or products)
- number of employees, type of business, postal number, telephone area code, export area, year of incorporation, bank affiliation.

North America

There are so many sources focusing on North America, and we have already mentioned

several. This section is therefore kept intentionally short.

The U.S. Commerce Department's Economic and Statistics Administration offers STAT-USA (<http://www.stat-usa.gov/>), which provides statistical information on economy, energy, foreign trade, business, and industry. Fee- based subscription required.

Then try [The White House](#), the [subject index of online government information](#), and [The Government Information Locator Service](#).

[The National Technical Information Service](#) provides access to more than 100 U.S. Government operated bulletin boards and online systems.

[Official Gazette](#) is a weekly publication from the United States Patent and Trademark Office covering new patents and trademarks, expired and reinstated patents, re-examination and re-issue applications, announcements, changes in procedures and requests for comments. Its archive contains every issue from the last 20 years.

[The US Patent Database](#) offers bibliographic information about the patents, claims, reference and abstract information. You can view the images, and order patents online. The the U.S. Patent and Trademark Office is at <http://www.uspto.gov/>.

[Statistics Canada](#) is the country's national statistical agency. [Kompass](#) is also an interesting source.

[PRESSline](#) is a database of press releases, pictures and logos that is available free of charge. Companies and organizations are charged a small fee for storing their releases. In English, German, and French.

Information on the North American Free Trade Agreement (NAFTA) is available from several sites, including <http://www.nafta.net/>.

Russia and Eastern Europe

[InfoMarket](#) brings Russian Securities Market News in English, and is an invaluable source for Russian commercial financial information. [The Russian Industry Enterprises Web](#) contains information about over 100.000 Russian enterprises within agriculture, oil processing, electric energy, communications, and more.

[Russian Regional Database](#) combines official statistics with survey data to present a comparative picture within areas such as economic competitiveness; labour market change; social cohesion and stability.

[Dow Jones](#) offers [BizEkon News](#), and others. Commercial vendors [LEXIS-NEXIS](#), [Data-Star](#), FT Profile and [Reuters](#) also have many interesting sources.

[The St. Petersburg Business Journal](#) is at <http://www.spb.su/>. For more newspapers covering the region, visit [Editor & Publisher Interactive](#).

[The European Information Network](#), a Prague-based Web publishing company, posts daily Russian news reports . The site offers a databank of information about election laws, Russian government addresses and the Russian constitution.

[Friends and Partners](#), jointly "developed by citizens of the US and Russia to promote better understanding between the people of our countries," has a a Commerce/Business section.

[Maximov News](#) - Information And Guide To The Russian Federation - offers full-text news, contact and information sources from the former Soviet Union. In English and Russian.

[Business Central Europe](#) offers the latest monthly or quarterly statistics and annual historical data going back to 1990 for most countries in the region. Through DATATIMES, you can research English-language versions of [The Budapest Sun](#) and [the Prague Post](#).

[Czech Economy - Internet Resources](#) has similar information for Slovakia, Poland, Hungary, Albania, Bulgaria, Serbia-Montenegro, Romania, Slovenia, Croatia, Bosnia, Kosovo, and Macedonia. [The Prague, Budapest and Warsaw Business Journals](#) are in English and covers business news and industry information from Central Europe.

[The Central Europe Online Navigator](#) publishes daily news an industry reports on Czech and Slovak Republics, Hungary, Poland, and Russia. Includes political and economical analyses.

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Search:

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The Online World resources handbook

PART 3: WORKING SMARTER

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In some countries, the costs of communication are outrageously high, in others almost free. In some places, it is rare to experience noise on the telephone line, while it may be almost impossible even to connect at 2400 bits/s in other countries.

Another problem is one of affluence. The Internet has given us all too many powerful resources. How do I get the best out of Internet without drowning in unneeded details? What is the recommended approach? What pitfalls to avoid? How to get more done in less time without upgrading my connection to the net?

Working smarter is the theme in the third part of this book.

Contents:

- [Practical tips](#)
- [Cheaper and better communications](#)
- [Keep what you find](#)
- [You pay little for a lot!](#)
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Chapter 12: Practical tips

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Favorite Internet tools

Working smarter is a matter of having the right tools, and being able and willing to use their features. The programs below are my current favorite tools for tapping the Internet resource. They all work under Microsoft Windows.

Winsock

If you're using Windows 3x versions or DOS, then Trumpet Winsock is what you need. I have used it successfully on dial- up SLIP, PPP, SLIRP, and TIA (Internet Adapter) lines. If you need help setting it up, consult the [alt.winsock](#) newsgroup. See [Chapter 15](#), and [Appendix 2](#). The program can be retrieved from libraries all over the Internet.

Users of Windows 95 and later do not need this!

What web browser to select?

My **current favorites** are [Microsoft Internet Explorer](#), and [Opera](#). They have different strengths relative to my needs. Examples:

- A considerable amount of my private information has been stored as local web pages on my PC's harddisk for fast access. **MS Internet Explorer** beautifully understands all kinds of absolute and relative links on my harddisk, while Opera will often say "File not found."
- When writing articles, I often want to retrieve many web pages as fast as possible, and then study their contents offline. **Opera** is the fastest, hands down, because of it's ability to handle multiple pages. Click Window, Clone Window to make a quick copy of the current window, for example a menu of articles. Press Ctrl-TAB to quickly go from window to window.

Hint: Consider leaving the graphics behind to travel the Web at much higher speeds. In Internet

Explorer, click at "Tools," "Internet Options," select "MultiMedia," and unmark "Show pictures" (and maybe some other stuff while you're at it).

Have a Macintosh? Why not check out the iCab browser out of Germany? For a long list of alternatives for many platforms (including Windows and Macintosh), [click here](#).

Lynx

When I was using DOS, most of my Web accesses were done using Lynx. It lets you enjoy the Web using DOS and your old communications program. I called my Internet provider, got the Unix prompt, and just entered "lynx URL" to get it at lightening speed. See [Appendix 6](#) for details.

Electronic mail

[Eudora Pro](#) is my favorite email program. It has stronger filtering features (much needed), handles html mail well, and around 100 incoming mails per day. There is a free (advertising supported) version available, which works nicely.

Other great email programs with html handling and strong filtering features include Netscape Messenger, Microsoft Outlook, Netscape (after 3.0). You should also check the free [Pegasus Mail](#).

Chat

Check out the [mIRC](#) shareware program for Windows 3.x and Windows 95. Many IRC links are built into mIRC for you. Just click and go.

Usenet netnews

A growing number of people use web services like [Google Groups](#) to browse Usenet netnews, read and search resent postings, and look up things posted years ago. A specialized news program will give you other things:

[Free Agent](#) allows dialup modem users to set it for online or offline operation in order to balance convenience and economy. I have used my Microsoft Windows version successfully both over a PPP, SLIP, SLIRP, and TIA/SLIP dialup connection. Having a color screen is important.

The program t lets you quickly sample threads and newsgroups. You can browse articles in one newsgroup while retrieving headers for another at the same time, or download long articles while continuing to browse. It does multi-level article threading, using both the subject and the article ID. You always know exactly what posting an article is responding to. It offers Watch and Ignore commands for threads, and rapid navigation within and among threads.

You can post and receive articles with binary attachments, with automatic splitting and combining to span multiple messages. If the attachment is viewable (images or sound), then you can view it from within the news reader.

To hear what others think, check [alt.winsock](#), [news.software.readers](#), and the [CompuServe](#) WINCON forum.

Speed and safety

Read about MNP, ITU-TSS V.42, and V.42bis in [Appendix 2](#). These are popular methods for automatic error correction and compression of data. Compression gives faster transfers of data.

To use them, your modem must have these features built-in. They must also be enabled in the modem of the service that you are calling.

Compression is particularly helpful when sending or receiving text, for example news stories and conference messages. It gives faster transfers.

They are not of much help when transferring precompressed texts and programs. They may even make file transfers with protocols like ZMODEM, Kermit, and XMODEM impossible. If this happens, temporarily turn off the MNP and V.24/V42bis settings in your modem (more about this in [Appendix 2](#)).

The more advanced your software is, the more time it may take to learn how to use it efficiently. The rewards are lower telephone costs, faster transfers, and less time spent doing technical online work.

Pegasus Mail and Eudora for Internet mail let you retrieve your full mailbox in one batch, and reply to your mail offline. When finished, you can shoot them back to your mailbox for distribution in one shot.

Some BBSes and online services let you retrieve conference messages using a get or grab function. This function often comes in two versions:

- Grab to display: New messages and conference items are received in an uninterrupted stream without stops between items. Retrieval of text can happen at maximum speed.
- Grab to compressed file: New messages and conference items are selected, automatically compressed and stored in a file. The file is then transferred automatically using ZMODEM or

some other protocol.

Read about 'offline readers' in [chapter 16](#) for more about this.
Recommended.

Surfing strategies.

Frank Burns of the American online service [MetaNet](#) is spokesperson for the strategy **Scan - Focus - Act**.

On your first visits to a new online service, you SCAN to get an overview of what is being offered and find out how to use it most efficiently. Notes are made of interesting bulletins, databases, conferences, messages, news services, public domain and shareware programs, games, and more.

Capture everything to disk. Don't study it until disconnected from the service. Rate the material to prepare for your next moves: FOCUS and ACT.

New Netscape users may have problems doing this. However, it is not as complex as it sounds, and in particular if you take the trouble to retrieve shareware utilities like Cache Master or Web Saver from the net. They let you read and search the Web texts saved in Netscape's cache on your hard disk. Use <http://www.shareware.com> to locate them.

Another option is to have Netscape mail you the pages.

As you learn about offerings, users and applications, your use of the services changes. Things that caught your attention on your first visits, lose to discoveries. Some applications may be promoted to "something I want to do again," like when you decide to read a given news report on Monday mornings.

Here are some other hints:

- Find out what you do NOT need to know and have enough self-confidence immediately to discard irrelevant material. Walk quickly through the information. Select what you need now, store other interesting items on your hard disk, clip references, and drop the remainder of your capture file.
- Learn when and how to use people, computers, libraries and other resources. Prepare well before going online. Note that the online resource may not necessarily be the quickest way to the goal. If you want the name of Michael Jackson's latest album, you may get a faster answer by calling a local music shop. . . .
- Make an outline of how to search the service before going online. If required, start by going online to collect help menus and lists of search commands (unless you already have the printed user information manual). Study the instructions carefully, plan your visit, and then call back.

Often, it may be useful to do trial searches in online data captured to hard disk during previous trips. Do this to check if your use of search words is sensible.

Who knows, you may even find what you are searching for right there. Besides, you must use the correct search terms to find what you are looking for.

Write your search strategy on a piece of paper. If you know how to write macros for your communications program, consider writing some for your planned search commands. - Few people can type 240 characters or more per second. Using macros may save you time, frustration and money.

It may be wise to do your search in two steps. On your first visit: Get a LIST of selected headlines or references, and then log off the service.

Study your finds, and plan the next step. Then call back to get full-text of the most promising stories.

This strategy is often better than just 'hanging online' while thinking. When you feel the pressure of the taximeter, it is easy to make costly mistakes.

Novices should always go the easiest way. Don't be shy. Ask SOS Assistance services for help, if available. When using commercial services, invest in special communication programs with built in automatic online searching features. They are designed to make your work easier.

Limit your search and avoid general and broad search terms. It is often wise to start with a search word that is so 'narrow' that it is unlikely to find articles outside your area of interest. Your goal is not to find many stories. You want the right ones.

You should periodically go back to the SCAN phase, and not concentrate on FOCUS and ACT alone.

Using email gateways to Internet resources

Things are so simple with Netscape. If you want a file, just click on the link, and it gets transferred to

your hard disk. Still, some people opt to do it by email. One reason may be that it is the only way they can get them. Another good reason is to save time.

For most users, time is an important consideration. There is connect time (may cost you money), the number of minutes it will take to get a task done (calendar time), and the number of minutes and hours you must "work" to complete a desired task.

If you must complete a task by 11:55, then a direct connection to the remote source may be the only answer. Interactive methods like the World Wide Web, Gopher, anonymous ftp, and telnet are the probable choices.

However, as the number of people using the Internet grows, response time periodically is slow. If you are out of luck, that important file from somewhere may snail toward you at a speed less than 300 bits per second. To sign on to a remote telnet site can take minutes. You may have to wait what feels like a small eternity for the next WWW page or gopher menu to show up.

If getting more out of your hours online, then read on. Batch processing of online work can save you much waiting time.

On the Internet, there are servers set up to give you Web pages by email. There is FTPmail, the batch alternative to ftp transfers of files. Archie can be used by email. GopherMail lets you browse Gopher menus by email (see [Appendix 6](#)). Sure, it may take more time to get the desired information, but you will not waste time waiting in front of your display.

You can even search many data bases on the Web by email!

Batch searches of what others say on specialized matters is another exciting opportunity. (See the discussion on how to search LISTSERV log files, and archives of other mailing list systems, in [Chapter 7](#) and [10](#)).

Coping with other languages

The typical method is to start with [some language training](#). The next step is usually to reach for some language [dictionaries](#) or software.

On the web, you can also use an automated online language translator, like the free [Babel Fish](#) service. It allows you to paste in your English language and have it automatically translated into French, German, Italian, Spanish or Portuguese, or go the other way. Other options include Russian to English, French to German and German to French. The result is far from perfect, but may be enough to understand or make understood. Babel Fish has a World Keyboard, which let's you write with the native characters of six languages, including Cyrillic letters.

Check [FreeTranslation.com](#) (Spanish, French, and German to English, and more), and [Langenberg](#).

The World Wide Web by email

Several services let you retrieve Web pages by email. [Click here](#) for a list of servers. This page also lists FTP mail servers, gophermail servers, and Archie servers.

The method described below works with my current favorite, a Web by email service called [Agora](#) in Japan. For help instructions, send a mail containing the word Help to agora@dna.affrc.go.jp. [Web2mail](#) is an attractive alternative, as is [WWW4MAIL](#).

Request WWW pages by sending email to agora@dna.affrc.go.jp. Put the retrieval commands in the BODY of your mail, like this

```
send <URL>
```

The term "URL" may be thought of as a Web address. See [Appendix 6](#) for more and explanation. Here's an example: If you send the following command:

```
send http://www.eunet.no/~presno/presno.html
```

to the Agora Web page server, then a copy of my personal WWW page will be returned to you by email.

An interactive user of the World Wide web can "click" on marked hypertext words, or mark them in other ways, to retrieve associated pages with information. The WWWmail user does this by resubmitting URL codes found appended to the received pages to the Agora server address.

Words of warning:

- If the requested document is too large, this WWWmail service will only send you the first 5,000 lines.
- If the service is unable to connect to the requested WWW server, you will receive an error message without much explanation. The reason may be a spelling error on your part, but also that the network connection between the LISTSERV and the requested server was "bad" at the moment. Therefore, check your spelling, and try again.
- Only the first 5 lines of requests will be processed.

See <http://members.aol.com/bombagirl/freeware/email4u.txt> for more hints. Then try [the Email Faq](#). You may also find the [Website By Email](#) "tutorial on creating and maintaining an Internet presence using email-only methods." interesting.

Searching databases by mail

You can search Google by email by sending a mail to google@capeclear.com with the text of your query in the "Subject" line. You'll receive your search results via email. Example: Do the query "site:www.capeclear.com ceo" to find out Cape Clear's CEO.

It is also possible to search many databases by WWWmail. The trick is to find the correct URL to use when submitting your search terms. Some are given in our examples below.

The search URLs of some popular search engines are also given in WWWmail service's help texts. For example, send the word HELP to Agora to receive hints on searching Lycos, Yahoo, the WAIS server at Oxford University, WebCrawler, Hyper RFC, [MetaCrawler](#), and Alta Vista.

If a desired service is not on the list, you can often find out yourself: First, log on to make a manual, interactive search using almost any browser. Save the reported Web address (URL) of the resulting report for analysis. Finally, test variations of this URL with different search words to find one that works.

Using the Lynx browser, first make a search using a typical combination of search terms. When the hit report is on your screen, press "=" to show file and link information. Mail this data to yourself, or make a copy before logging off.

Then, investigate the URL under "File that you are currently viewing." Locate your original search terms among the codes of the URL, replace them by new search terms, and send the revised URL back to the search service to see if it works.

Note: Search URLs are usually long and cumbersome. Therefore, experienced users often save them as templates on disk for easy retrieval and editing on-the-fly. Many email clients, like Pegasus Mail and Eudora, let you pick from a list of permanently saved messages, edit, and resend the revised search command with a click.

Other users tie frequently used search commands to specific keystrokes. Example: Enter keyword "news" followed by Ctrl-E to have the string "SEND <http://www.newsindex.com/cgi-bin/process.cgi?query=>" put into the text of your mail. Add search words, and you're ready to send.

Searching today's news

In [Chapter 9](#), we mentioned the News Index news only search engine. To find today's articles about the term "netpc" using Agora, send this command:

```
SEND http://www.newsindex.com/cgi-bin/process.cgi?query=netpc
```

To search for two terms, like "sun" and "java", use this command:

```
SEND http://www.newsindex.com/cgi-bin/process.cgi?query=java+sun
```

Searching Alta Vista

If you want information about a person named Bill Gates, try this command (write it on one line):

```
SEND http://www.altavista.com/cgi-bin/query?sc=on&hl=on\
&q=%2BBill%2BGates&kl=XX\&pg=q
```

This command was made after an interactive AltaVista search. I simply copied the web address of my browser's result page, and pasted it into an email message to the Agora server (after the word "SEND").

In my search, I had used "+Bill+Gates" as search terms. The "+" signs forces AltaVista to only display pages containing both terms. As the + sign also works as a separator between terms, I did not bother to use a space.

In this way, you can construct complex search strings to satisfy your applications. Just store your successful search term on your disk, and edit them according to needs.

- The parameters of the search URL are separated by "&". Thus, the search term (+Bill+Gates) can be found in this part of the string (separators are boldfaced for clarity):
`\&q=%2BBill%2BGates\&`
- The "+" signs (and also some other signs) are converted to their hexadecimal equivalents, and displayed as %2b. Thus, "`\&q=%2BBill%2BGates`" is equivalent to manually entering "+Bill +Gates" at the AltaVista web form.
- If you really want to include a space between terms, try %20, as in `\&q=%2BBill %20%2BGates\&`.

- Now, to search for "apples," but not "oranges," edit the string above to become
`\&q=%2Bapples%2Doranges\&. "%2D" is the hexadecimal code for the minus sign ("-").` The mail you send to the Agora server will be:

SEND `http://www.altavista.com/cgi-bin/query?sc=on&hl=on
 &q=%2Bapples%2Doranges\&kl=XX\&pg=q`

- From time to time, AltaVista changes their search commands. Whenever this happens, you must change your email messages accordingly.

Searching [Google Groups](#)

The trick is the same as for AltaVista. Search for "Bill Gates" by using this command (on one single line):

send `http://groups.google.com/groups?q=bill+gates&hl=en&btnG=Google+Search`

Easy. To make a more complex search, first go online and do it interactively. Copy the url off your web browser when you get the hit list, and edit this url for your search-by-email applications. For Google Groups searches you must separate words with a "+" sign.

Send the word "help" to agora@kamakura.mss.co.jp for more information about using this Agora server. For more about searching the Web by email, make sure to check [Gerald Boyd's "Email Only" information pages](#).

Usenet by email

You can retrieve a list of recent postings to a given newsgroup by sending email to a WWW by email service. Use the following type of commands:

send `news:alt.winsock` (returns a list of recent postings)
 deep `news:alt.winsock` (returns the list AND the postings)

The first command (send) will give you a list like this:

```

Newsgroup alt.winsock, Articles 26012-26031

(Earlier articles[1]...) Articles in alt.winsock
"Program wanted" - Leslie Mark Styles[2]
"[HELP] twinsock (makefile vs Makefile)" - Scott Ehrlich[3]

*** References from this document ***
[orig] news:alt.winsock
[1] news:alt.winsock/25992-26011
[2] news:175@lmsprog.win-uk.net
[3] news:3d04qm$c72@narnia.ccs.neu.edu
  
```

Now, if you want article [3], just send a mail back to the WWW by email service with the following command in the body of your mail

send `news:3d04qm$c72@narnia.ccs.neu.edu`

Note: Some Agora servers may return the list of recent postings to you in [html](#) format, presented something like this:

```

<HTML><HEAD><TITLE>Newsgroup: alt.winsock</TITLE>
</HEAD><BODY><H1>
Newsgroup: alt.winsock</H1>
HERE WE CAN PUT INFORMATION AND EXTRA LINKS
<LI><A HREF="32365905.2574992@newsrv">
Re:Determining Winsock Version</A> David Beaver
<LI><A HREF="5164ar%2424k_002@fan.net.au">
NEEDED - Someone who really knows KA9Q,DOS and
PPP dialup</A> Steve
<LI><A HREF="3236b2aa.45939574@192.249.1.30">
Re:Eudora Mail Program for Win95</A>
J. Wayne Waller
  
```

These lists are harder to read unless you use an offline Web browser. To retrieve individual items, the trick is to isolate the address codes between the two html code pairs '' in the list.

Example: The first article above is written by David Beaver, and the title is "Re:Determining Winsock Version". The associated address code is given as "32365905.2574992@newsrv". You can send this code to a WWW by email service as given above using the format

send news:32365905.2574992@newsrv

More Usenet by email tricks

Many newsgroups are connected to mailing lists that you can subscribe to by email. Articles submitted to the newsgroup through these mailing lists will often pass through a moderator, who reviews the submissions before posting them.

In some cases, articles are stored in log files that may be searched. In other cases, you can have selected newsgroup articles sent to you by email.

*Some mailing lists will **not** let you search unless you are a subscriber to the given list. However, you may not have the time, nor be interested in, reading all the postings. You just want those items containing your specific keywords.*

For example, I want to track references to this book. The search term "Online World" is likely to give too many false hits. Regular searches for the word "Presno" is a better search strategy.

The trick is to adjust your subscription, so you will receive no mail. You can achieve this by sending an email to the LISTSERV in question containing this command:

SET <list name> NOMAIL

Now, search whenever you like.

For a list of newsgroups with associated mailing lists, send mail to listserv@cc1.kuleuven.ac.be containing the command "/NNHELP" for instructions. Add "/NEWSGROUPS" for a current list of available newsgroups.

Many documents that appear periodically in newsgroups are available for retrieval over the net. Read under FAQ in [Appendix 6](#) about how to retrieve.

[Reference.COM](#) (see [Chapter 11](#)) lets you search for recent Usenet articles that are already in the local database on this host. For example, to search for articles related to "information filtering," send an email message to email-queries@Reference.COM containing the following command in the TEXT of your mail:

find 'information filtering'

Several News Mail Servers let users post to Usenet news by email. Note that none of these support all existing newsgroups. Example: Send your mail to [news-group-name]@cs.utexas.edu . Replace [news-group-name] with the name of the desired newsgroup, as in mail comp-sys-misc@cs.utexas.edu .

Other News Mail Servers:

[news.group.name]-news@newsbase.cs.yale.edu
[news.group.name]@pubnews.demon.co.uk
[news.group.name]@paris.ics.uci.edu
[news.group.name]@crs4gw.crs4.it

Send a messages to mg5n+remailers@andrew.cmu.edu for a list or remailers with detailed instructions. For information on anonymous remailers, try <http://www.skypoint.com/~gimonca/anonmail.html>.

Note: All gateways will reject posts without Subject lines. Also, make you read about the Unwritten Laws about Personal Conduct below before using this feature!

Finally, for more on what you can do by email, check [G.E.Boyd's How To Do Just About Anything by E-mail](#).

Handling email overload

It is easy to get overwhelmed by the quantity of messages in mailing lists and discussion groups. Luckily, there are things you can do.

Learn more about the software you use for reading mail. Some programs have filtering features that permits automatic storage of incoming mail in folders or files depending on sender, subject, or

other characteristics. This potentially makes it easier to follow discussions on mailing lists.

Many programs let you create a list of all incoming mail organized by subject header. You may find this to be a big help as headers usually reflect what is being discussed.

Do not feel that you must read every message. If the header does not show anything interesting, just skip it. If curious, you can always look at one of the messages to see what the general area of discussion is about before deciding.

Learn about the capabilities of the LISTSERV, Majordomo, or LISTPROC that distribute the conference messages. Using features like DIGEST or INDEX can reduce your load (see [Chapter 13](#)).

A LISTSERV will also allow a subscriber to TURN OFF the mail during an absence. Some LISTSERVs will even permit a command to save the mail and send it later. There are many commands to explore.

If the mailing list is on a newer version of LISTSERV, then you may be able to join, leave, and set your defaults from the web.

Example: To join [Kidlink](#)'s newsletter distribution list, KIDNEWS, go to the web page <http://listserv.nodak.edu/scripts/wa.exe?SUBED1=kidnews&A=1>.

To join any other list at listserv.nodak.edu, replace "kidnews" at **?SUBED1=kidnews** above with the desired list name to get to its settings page.

Getting off that mailing list

A while ago, you subscribed to that mailing list. Now you cannot get off it. You have tried SIGNOFF, UNSUBSCRIBE, and other likely commands, only to receive "Bad command" messages in return.

If it is a LISTSERV mailing list, and the list you want to get off is called TOW (at listserv@listserv.nodak.edu), use the command SIGNOFF <list name> as in "SIGNOFF TOW". Put the command in the body of your mail, and send it to the LISTSERV.

Never send signoff commands to the mailing list itself, unless you want all members to learn about your ignorance.

The SIGNOFF command is not a global command that works with all types of mailing list. If it doesn't work, try UNSUBSCRIBE <list name>. If that also fails, try the HELP or INFO. You may try putting the words both on the subject line and in the body of the mail.

Sometimes signing off from a list fails because your email address has changed since you subscribed.

***Example:** A while ago, I was trying to get off a list. When I subscribed, it was made either from a mailbox with the address opresno@ulrik.uio.no, or from opresno@extern.uio.no. These addresses are now presno@eunet.no. When I tried to signoff, I was told that neither address could be removed from the mailing list.*

One solution is to write to the administrator of the list, or to the postmaster of the host where the mailing list program is running.

***Hint for Netscape users:** To get off a list that you subscribed to from another email address, set Netscape up with your old e-mail "from" address under menu Options/Preferences/Images, Network, and Mail. It's easy. Just put your old e-mail address into the box labeled "Your Email" and send a "SIGNOFF <list name>" to the LISTSERV.*

Some LISTSERV mailing lists let you send the command "REVIEW <list name>" for a list of subscribers (example: REVIEW TOW sent to the LISTSERV address above). This list usually contains the address of the administrator.

In some cases, usage of the REVIEW command is blocked. Then inspect the mailer header of messages from the mailing list. For example, if it says

From: listserv@w3.org

then there you have the address of the host computer. Try "postmaster" instead of "listserv" to reach a live person for help.

Copyright notices and legal stuff

Most commercial online services protect their offerings with copyright notices. This is especially so for database information and news.

Some vendors make you accept in writing not to store captured data on a local media (like diskettes or hard disks). Others force clients to use communication software that makes it impossible to store incoming data to disk.

The reason is simple. Information providers want to protect their income.

In most countries, you can quote from what others have written. You can cut out parts of a whole

and use in your own writing. What you can not do, however, is to copy news raw to resell to others. If an online service discovers that you're doing that, expect a law suit.

Read copyright notices to learn about the limitations on your usage of data that you receive.

Unwritten laws about personal conduct

Some services let their users be anonymous. This is the case on many chat services. If you want to pose as Donald Duck or Jack the Ripper, just do that.

Many free BBS systems let you register for full access to the service during your first visit. It is possible to use any name. Don't do that. Use your true name, unless asked to do otherwise. It's impolite and disrespectful of the other members to participate in online discussions using a false identity.

Being helpful is an important aspect of the online world. The people you meet use their time to help you and others. Often for free. The atmosphere is therefore often one of gratitude, and a positive attitude toward all members of the various groups.

If you use rude words in public, expect your mailbox to fill with angry messages from others. Those who respond carefully to personal attacks, will never regret it. Don't say things online that you would not have said in person.

REMEMBER: Words written in a moment of anger or frustration may be stored on at least one hard disk. Your 'sins' may stay there for a long time - to resurface when you least want it to.

Here are some guidelines (often called 'online netiquette'):

- If mail to a person doesn't make it through, avoid posting the message to a conference. Keep private messages private.
- It is considered extremely bad taste to post private mail from someone else on public conferences, unless they give you explicit permission to redistribute it.
- Many users end their messages with some lines about how to reach them (their email address, phone number, address, etc.). Limit your personal "signature" to four lines.
- Hint: Do not include a signature when sending commands to email based services. It can confuse the servers.
- Do not send test messages to a public conference, unless they are set up to serve this purpose.
- If someone requests that readers reply by private email, do that. Do not send to the conference, where the request appeared.
- When replying to a message in a public conference, many users 'quote' the original message prefixed by '>' or another special character, as in
- *You wrote:*
 >I strongly believe it was wrong to attack
 >Fidel Castro in this way!
- When you quote another person, edit out whatever isn't directly applicable to your reply. By including the entire message, you'll only annoy those reading it.
- Note that if you USE ALL CAPITAL LETTERS, people will think you are shouting.

For more on "netiquette," join the mailing list of the same name. In the owner's own word, it is

devoted to network etiquette, the informal set of rules, civilities, and social graces that have evolved in cyberspace, the do's and don'ts of online behavior. What are the rules? How have they evolved? How can responsible net.citizens avoid breaches of Netiquette? How should we respond to the breaches of others? Is flaming an art and if so, how can it be mastered? What's being said about Netiquette on the net and in the media?

To subscribe, send email to netiquette-request@albion.com with the following command in the subject field:

subscribe Firstname Lastname

For a copy of the "Core Rules of Netiquette" document, send an email to the same address with the following text in the subject field:

archive send core

Finally, smile with me about the following story: According to Time Magazine (7/19/93, p. 58), three women who corresponded with Mr. X over the network discovered his duplicity and went public on the network. The incident sparked a lively debate over electronic etiquette (and ruined Mr. Casanova's

chances for further romance).

File transfers through the Internet

The Internet is a network interconnecting hundreds of thousands of computer centers around the world. These centers use different types of hardware and software, and different methods of file transfer.

What method to use for file transfers depends on the source host and the type of connection and software that you are using. For those using a web browser, it is usually very simple. Just click on the file's hyperlink to start the transfer.

For those using the original method transferring files by FTP, the transfer usually takes place in two steps:

1. Transferring files from a remote data center to your local mailbox host.
2. Transfer from your local mailbox host to your personal computer.

Transfers by email

Transferring plain text files is easy. Files with imbedded word processor control codes will often have to be treated as binary files. More about this later.

Getting text files from a mailing list library on a remote computer is a special case. Sometimes, these files are available from a web page or an ftp archive. If this is the case, clicking on a hyperlink is usually all it takes.

However, sometimes you must send a retrieval command (like GET) by email to a remote center. After a while, the file will be sent to your mailbox by email. You can read it like you read other mail.

Example: Retrieve the file [MSDOS1](#). It explains how to retrieve binary art files from the [Kidlink](#) project's file libraries. You can also get it by sending an email to listserv@listserv.nodak.edu. Use the following general command syntax in your text:

```
GET <directory name>.<file name>
```

To get the MSDOS1 file, write the following command in the TEXT of your message:

```
GET KIDART.MSDOS1
```

Note that these commands must always be put in the body of the mail and not in the subject field. The file will arrive in your mailbox after a while.

Also, lists of available files are usually available by using an "INDEX <directory name>" command. To get a list of files in the KIDART directory, add the command "INDEX KIDART" in your message above.

On some LISTSERV servers, the period between list name and file name is not being used.

Libraries of other types of mailing lists may use other retrieval commands. Often, you can get information of what commands to use by sending the word HELP to a mailing service (in the Subject area or in the body of the text).

Transferring binary files

The easiest way of retrieving binary files across the Internet is by using a World Wide Web browser like Netscape, or Internet Explorer. You just give the program a file location address (URL), as in

```
ftp://ftp.eunet.no/pub/text/online.txt.Z
```

This address will give you the most current version of this handbook in Unix Z compress format. (Remove the trailing ".Z" to retrieve the ascii text version.)

Users with a direct connection to the Internet usually also have access to the FTP command (File Transfer Protocol). Some of them prefer FTP for transfers of binary files like computer programs, pictures, sound, and compressed text files.

The bad news is that the FTP command is not available to all users of Internet mail. These must use "FTP by mail," or other tricks to transfer files. More about this in a moment.

The FTP command gives access to a special file transfer service. It works in the following way:

Logon to your local email host and enter 'FTP remote-center-code', as in this example: 'ftp 134.129.111.1'.

This command will connect you to the center in North Dakota mentioned above. Here, you will be prompted for user name and password. Enter 'anonymous' as user name, and use your real name or email address as password.

This way of logging on to retrieve files is called "transfers by anonymous ftp." You can use this method on many hosts on the Internet.

When connected to the remote center, you can request transfer of the desired file to your

Note: I usually prefer Lynx for retrieval jobs using URLs like you would use with Netscape, as in "Lynx ftp://ftp.eunet.no/pub/text/online.txt".

Keep the original as backup. Use the UUDECODE.COM program to convert ART019 into a GIF formatted file. Now, view the picture with your favorite graphics program.

Sending binary files in uuencoded form has weaknesses. One is the lack of automatic error correction when sending/receiving email. Noise on the line can easily distort the picture.

File size is another problem. UUENCODING typically increases file sizes by almost one third. Some mailbox systems restrict the length of individual messages that you can receive, and the file may just be too big.

If the uuencoded file gets too big, some services can (or will by default) split it up in parts and then sent separately.

Tons of uuencoded public domain and shareware programs are available for retrieval by ordinary email.

MIME encoding can also be used (see [Appendix 6](#)), but is less common.

FTP by email

While some services accept commands like GET KIDART.ART019 by email, this is not so with the many so-called FTP libraries. Many of them can only be accessed by FTP.

Services exist that will do FTP transfers by email for those not having access to the FTP command. For more information, write a message to one of these addresses:

bitftp@vm.gmd.de	Germany
ftpmail@ftp.uni-stuttgart.de	Germany
bitftp@plearn.edu.pl	Poland
ftpxcorreo@ftp.rcp.net.pe	Peru
bitftp@pucc.princeton.edu	United States

In the TEXT of your message, put the word "HELP" for information. Check <http://src.doc.ic.ac.uk/ftpmail-servers.html> for a longer list of ftpmail servers, and check availability at Steve Harris' [FTPMail, Agora, etc. statistics page](#).

These services will fetch the desired file from the FTP library, uuencode it for email transfer and possibly split large files into several messages, thus helping you around local restrictions on the size of incoming mail messages.

Using FTP by email can be nice even for those with full Internet access, as some FTP servers are heavily loaded and interactive response can be very sluggish. It makes sense not to waste time and connect charges in these cases.

Note that FTP mail servers tend to be quite busy. Your reply may not arrive for several hours, or days, depending on when and where you send your request. Also, some large files may be split into smaller pieces and returned to you as multiple messages, and binary files may be uuencoded by the sender.

Fax services weigh less than a printer

Many online services let you send electronic mail as fax messages. This is an interesting feature when in that far away place without a printer. Send the draft contract or other texts to your hotel's fax machine or to your client's office to get a printout on paper.

For more about how to send (and receive) faxes, check "[How can I send a fax from the Internet?](#)".

Free telephone calls

Anyone can make free telephone calls through the Internet. All it takes is a computer having the right phone software, a sound card, loudspeaker, and microphone installed. If your Internet connection is good, then the sound quality will be comparable to a regular phone call.

For more about how to get started with Internet telephony, start with [the Internet Telephony Software page](#), and follow the links.

More

Then, there is online file storage. [MyDocsOnline](#) lets you upload files to their server, with a maximum of 20MB total file sizes. You can then access your files from any web-enabled device, move files between computers, or send/share with others. It's great for people who have multiple computers, students, business people that travel frequently, or anyone that is tired of using floppies or email attachments.

Search:

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The Online World resources handbook

Chapter 13: Cheaper and better communication

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In some areas, packet data services and commercial data transportation services may help keep costs down. However, in most parts of the world, accessing through the **Internet access providers** is usually the cheapest solution.

This chapter is about reducing your costs of using the web, mailing lists, and the Internet and online services in general.

Connecting

Long distance calls may be preferable for some applications. One example: A Norwegian Internet provider has a very lousy connection to the rest of the country's network. Anything but reading web pages on **their** server is too slow for my taste. The same web pages are normally received two to three times faster by calling long distance to an access provider in Oslo. Therefore, this is my favorite when working under time-pressure.

Where long-distance communication is unreliable, the ability to link a local call with an international online network may also be liberating.

Others investigate alternative routings for their data. One option is the packet data networks. Several countries have Public Data Networks (PDNs) operated by local telecommunications authorities. These services may be cheaper than direct calls for some applications, but more expensive than using other options mentioned in this chapter.

Another option is to use traditional commercial online services like [CompuServe](#) and [American Online](#).

"*CompuServe!*" you protest. "*I just want Internet.*" The interesting thing is that CompuServe, American Online, and others like them, let you connect to the Internet through their network. You can even use your web and Internet mail program. In some countries, it may be cheaper to use CompuServe and AOL as your Internet provider.

For years, it was an exciting experience to retrieve web pages from the United States through CompuServe. No local Norwegian Internet providers could provide the pages you're reading now from <http://home.eunet.no/~presno/bok/> at the same blitzing speed.

Having an extra route may also be important that day when your local access providers let you down. This regularly happens to me. Late one evening, called a journalist doing a story for the next morning edition. I provided an important web address in the US, but the journalist said access was unavailable. I checked with two local internet providers, and indeed, access to any US web address was impossible at the moment. Only by going through CompuServe, could I provide the desired information.

There are also other global networks worthy of investigation. Include The IBM

Global Network, and The Microsoft Network (MSN). (See [Appendix 1](#) for links.)

Reducing your cost of using the Web

There are so many things that you can do to reduce the cost of your use of the Web, and pointers to them are given throughout the handbook:

- The speed of your modem or network connection. A minimum of 28.8 kbps or higher is recommended for connecting with a modem. With anything less than 28.8 kbps you will notice a significant "lag time" when attempting to download software or view graphic-intensive Web pages. Since there are many places on the Web to get the same information, try to avoid such overly large, slow loading pages.
- Select an Internet access number that matches the speed of your modem. If you are dialing into an access number that only supports 28.8 kbps modems, 28.8 kbps is as fast as you will ever connect, even if you have a 56 kbps modem installed in your computer.
- Line noise on the phone line running into your home can adversely affect your ability to maintain a consistent Internet connection with a modem. To check for line noise, plug a phone into the same line that your modem uses and listen for static (while you are not connected to the Internet). Static can cause disruptions in the transmission of data to and from the Internet causing you to lose your connection. If you hear static on the line, you might want to call your phone company and have the line checked.
- Use the web at times **when traffic is low**. Web traffic tends to increase throughout the day and peaks around the early evening. As traffic increases, speed decreases!
- See [the Internet Traffic Report](#) for hints.
- Retrieve Web pages by electronic mail (see "The World Wide Web by email" in [Chapter 12](#)).
- **Leave the graphics behind** and travel the Web at much higher speeds. To set it: In Netscape, click on Options, Autoload Image, and Save Options.
- A faster PC processor (say 500 Mhz) will allow you to surf the Web at faster speeds than a slower one (say 200 Mhz).
- A computer with more available memory will tend to surf faster than one with less. One way to avoid slowdowns in this area is to avoid opening other software applications that are not needed while you are surfing the Web.
- A full or highly fragmented hard disk can act to slow Web surfing considerably. To defragment your hard disk in Windows 95 or 98, click Start > Programs > Accessories > System Tools > Disk Defragmenter. It will prompt you for the drive to defragment. Choose the drive letter that corresponds to your hard disk (usually C), click "Ok" and "Start".
- Your Web Browser's cache is a storage area on your computer's hard disk. As you surf the Web, the browser stores the Web pages you visit in the cache, up to the disk space limit that you set. Your browser can display cached Web pages faster since it doesn't have to go to the Internet to retrieve them; rather it goes right to your hard disk. Consider increasing your browser's cache size limit.
- If you're using DOS, use Lynx from your provider's Unix prompt to read Web pages where graphics don't matter. (See [Appendix 6](#).)

Then there's the issue of **offline preparation**. What else would you expect here than a plug for having the handbook on your hard disk? Registered readers can retrieve [the html version after each update](#) as one compressed file.

Decompress the transportation file, and store it in a directory of choice on your hard disk. Netscape users can click on File, and then Open File... Open the location of the handbook's index file (index.html), and add it to your browser's Bookmarks for easy access.

Retrieve a copy of the free AltaVista Discovery program (see [Chapter 14](#)) for Windows 95/98, or the Lookfor shareware program for MS-DOS from the page referenced above. Use either of these programs to locate interesting Web pages.

Quick capture, read offline.

Netscape uses a special cache directory for temporary storage of files. It is set by clicking on Options, Preferences, Cache and Network. I use a 600 KB Memory Cache, and a 1500 KB Disk cache.

Whatever files are received from the Internet are stored in this cache. They will probably remain there until specifically removed (deleted), -- even after leaving Windows. Therefore, unless you use the "Clear Disk Cache now" option on the Setup menu regularly, you can read them offline.

Everything is there. This means that you can go online, get the pages, log out, and read the pages as local files off your cache directory.

Reducing the cost of using mailing lists

The problem of using mailing lists is that all discussion items come to you in individual messages. Each message comes with its own mailer header, and this information is generally completely useless. (Read "Returned mail" in [Chapter 7](#) for details.)

Newer versions of the LISTSERV software provide settings that solve this problem, notably the DIGEST and the INDEX options. You can set these options by email to the server, or (easier) using the mailing list's web interface.

The DIGEST option

makes all daily messages come to you in one, single message. This is a big help on systems with limits on the number of messages that can be received. It will help manage the flow of message. Also, it makes the messages easier to retrieve, print, and deliver as individual messages.

The INDEX option

gives you a daily list of messages as in this abridged example from Net-Happenings:

```
Date:      Fri, 4 Feb 2000 10:15:25 -0600
Reply-To:  NET-HAPPENINGS-Search-request@HYPATIA.CS.WISC.EDU
Sender:    Net-Happenings <NET-HAPPENINGS@HYPATIA.CS.WISC.EDU>
From:      Automatic digest processor <LISTSERV@HYPATIA.CS.WISC.EDU>
Subject:   NET-HAPPENINGS Index - 3 Feb 2000 to 4 Feb 2000 - Special issue
          (#2000-61)

Index  Date  Size Poster and subject
-----
018502 02/04   55 From:      Gleason Sackmann <gleason@rrnet.com>
          Subject: K12> [ClassWeb] Technology, Learning & Children
          Symposia call for presenters

018503 02/04   20 From:      Gleason Sackmann <gleason@rrnet.com>
          Subject: UPDATED> TURTLE TRACKS Native American Newsletter
          for Children

018504 02/04   20 From:      Gleason Sackmann <gleason@rrnet.com>
          Subject: K12> The School Teacher Mailing List/ Web Site

018505 02/04   55 From:      Gleason Sackmann <gleason@rrnet.com>
          Subject: MISC> [DUC] HUMOR AND WISDOM: How to Deal With All
          of the Complaints That theVet-Pet List is TOO USEFUL

018506 02/04   54 From:      Gleason Sackmann <gleason@rrnet.com>
          Subject: K12> S.O.S. -- Help for Busy Teachers 2/4/00
```

The sizes shown are the number of lines in the messages, not counting mail headers.

To order the messages you are interested in, simply reply to this message and include the original text, just as when you are replying to a normal message and want to quote what your correspondent said. Before sending the message, delete the lines corresponding to the items you are not interested in, and make

sure your reply is going to
"NET-HAPPENINGS-Search-request@HYPATIA.CS.WISC.EDU", NOT to
"NET-HAPPENINGS@HYPATIA.CS.WISC.EDU".

Many Listservs have this as an undocumented feature.

In some mail programs, like Eudora Pro 4.2, this is very easy:

1. Mark off the index number you want to retrieve
2. Click on the "Reply" button, and a mail is automatically prepared with just the marked text in place
3. Hit the "Queue" or "Send" button to send.

[Click here](#) to see how users of the [KidlInk](#) mailing lists do it.

Using Packet Data Networks

Before you can use a packet data network, you must get a "Network User Identification" (NUI) from the PDN carrier. You must also know the Network User Address (NUA) of the hosts you want to access.

In Scandinavia, the local PDNs are called Datapak. In China, it is called CNPAC (or CHINAPAC). PDNs can be accessed by direct local calls or through leased lines. To personal users, direct calls are least expensive. A leased line may be cost efficient when the daily volume is high, like in a company.

When you communicate with online services through a PDN, the latter will split your data and bundle it in standard envelopes or 'packets'.

Each packet is marked with a code and sent out into the data stream. Based on this code, the packet is routed from computer center to computer center until it reaches its final destination. There, the information will be reassembled into its original form before being handed over to a user or online service.

It is almost like traveling by train. The price per packet or traveler is lower than what it costs to rent the whole train for your trip.

National telecommunications monopolies were the first to offer packet data services. Their rates were moderately lower than for long distance calls, but it was hard to find the relationship between real costs and prices. This is still the situation in several countries.

Throughout the world, efforts to privatize nationwide phone networks continue. In many countries, this has given us some interesting competitors offering attractive rates for similar services.

Rates differ considerably from country to country, as does the quality of transmissions. The advantage of using packet data also varies considerably, by application and by country. The best routing for retrieval of online news may be impossibly expensive for chats or complex online jobs.

We can offer no hard rules of thumb, except this:

Compare rates regularly!

What is cheapest?

Some networks and access providers charge by the year, month or hour, while others charge by volume (number of characters transferred per minute).

A reasonable fixed rate per year is always your best option, but you may not be able to find such offerings in your area.

When your transmitted volume of data is low, as is the case with chats, your best bet is to use services with a low price per minute and high prices for volume. However, it usually makes a lot of sense to avoid services charging for volume!

When volume is high, your best bet is to use services charging by the minute.

To estimate costs reliably, you need statistics. Since your usage is likely to differ from what others do, start gather experience data now. Like this:

On services only charging for connect time

Capture trip information to a log file. Register the following information: * number of minutes connected * modem speed * number of characters sent. Some communication programs can do this automatically for you.

On services charging for time and volume

Log the following information: * number of minutes connected * modem speed * number of segments or packets (measurements of volume) You need these numbers to estimate the average volume of data transferred by minute. Here are some general experiences and hints:

Long streams of data without stops are cheaper through services that only charge by the minute. Retrieving software is a typical high volume application.

Trips that include navigation from conference to conference, with a little bit of up-and downloading here and there, make the average transfer speed fall dramatically. Surfing the World Wide Web is usually in the same class. It's like driving through a big city at 150 kilometers per hour. Red lights will considerably reduce your average speed.

The actual transferred volume of text per minute will differ from place to place (geographically), and often also from call to call. It depends on factors like:

- How fast you can enter commands and how much time you spend staring at the display before pressing keys,
- How long it takes for an online service to react to your commands. For example, the response time on CompuServe at 04:00 GMT on a Friday morning (it is evening in the U.S.) is much worse than at 10:30 GMT on a Sunday morning. By now, most North American users are asleep.
- The load on your packet data network while you use the service (or the amount of noise and retransmission, when calling direct),
- The type of modem you are using (speed, compression level),
- The number of commands you (or your scripts) have to enter during your online visit. An increase in the number of commands reduces the average transfer speed.
- The amount of transfer overhead for color and screen handling (like, VT-100 or html codes) that is transferred with your text.
- Your use of menus and help texts while online, or whether you come as "expert" with a minimum of prompts.
- Whether your browser is set to capture all pictures and sound files that it comes across, or just the text.

It is impossible to calculate the practical effects of these items. You will just have to bear them in mind when estimating typical jobs, measuring speeds, calculating costs, and comparing networks.

Finding the optimal network for your needs will take time, but it is well worth the effort. Expect the figures to surprise you.

The network services in this chapter will often give you better quality transfers than a direct call. On the other hand, calling direct may give more characters transferred per minute. The average speed may drop dramatically when using packet data services.

The cost of using PDN services

Most commercial online services can be reached through national PDNs, but you may have problems finding the correct NUA (Network User Address) to get there. Your PDN may not have a directory of available "electronic telephone numbers" for you to consult.

The Norwegian PDN, Datapak, used to be my only alternative for access to foreign online services. At the time, I thought the cost was acceptable. Not so any more.

My applications require that data be pumped back and forth at maximum speed. On network services charging by a combination of volume and time, 80 percent of my costs are typically for volume, while 20 percent is for connect time.

When I logged out after a successful visit to [CompuServe](#) through Datapak, the two services gave similar reports:

Thank you for using CompuServe!

Off at 10:11 EST 24-Nov-87
Connect time = 0:15

CLR PAD (00) 00:00:14:55 537 75

The last line were from Datapak. It tells that I had received 537 segments and sent 75.

The "Segment" is Datapak's volume measure. Their segments contained up to sixty-four characters and/or carriage returns. The price is calculated accordingly.

At today's prices, Datapak is no longer my cheapest alternative even when calling CompuServe for chats. It is much cheaper to use the Internet telnet command through a local access provider. Then, the lack of speed matters less as I do not have to pay for volume.

The slower your modem speed, the more attractive is Datapak compared with direct calls.

To get access to a national PDN, you must have a user identification and a password. Getting temporary access to PDN services while traveling abroad is often hard and expensive. You're better off using some of the other global networks as your "roaming" service.

***Note:** If you have access to a national PDN, but need information about PDNs in other countries, try Hostess, the Global Network Service's information service from British Telecom in England. The NUA is 02342 1920101013 (02342 is the Data Network Identifier Code section of the address.) User name or password is not required to use this service.*

Outdial services

SprintNet used to let American users call bulletin boards in North America at lower rates through their PC Pursuit service. For a modest subscription rate they could call a local access number. Once connected, they entered an electronic phone-number to connect to a so-called 'outdial modem' in another city. Once connected to the outdial modem, they could enter dialing commands and have it call any local number. They could use PC Pursuit to call an online service in the area, or the private modem of a friend.

We call such services for Outdial service. They normally offer lower rates for access to remote bulletin boards than what it costs to call by long distance. Besides, they reduce the chances for noise on the line.

With the start of the Internet, outdial services have lost most of their appeal. PC Pursuit is no longer available. Most others are also dead.

Cheaper access to CompuServe

Wherever [CompuServe](#) has local access points, you will probably be better off using these. No special agreement is required. Your CompuServe ID is all you need. The cost of using these services will appear on your CompuServe bill.

If you have access to Internet's telnet command, then this is an option well worth checking out.

[CompuServe](#) has special deals with a list of network services, like InfoNet, Istel, FALNET, FENICS, CompuPass, LATA Networks, Tymnet/Sprintnet. Enter the command GO PHONES on [CompuServe](#) for access information, and GO RATES for rates.

I have used CompuPass from Japan, [CompuServe](#)'s own network in Brazil, Europe and the United States, Istel, InfoNet, and PDN services throughout Europe. Most of the time my application is Internet mail.

You can forward your Internet mail to CompuServe by entering the following command at your access provider's Unix prompt:

```
echo "70000.0000@compuserve.com" > ~/.forward
```

Make sure you're in your home directory when entering the command, and replace the fake CompuServe address above with your own.

When you return home, use this command to cancel the forward instruction:

```
rm ~/.forward
```

You can also use this trick to forward your mail to other Internet hosts.

When at home, I usually use CompuServe's 28,800 bps node in Oslo, Norway. Datapak is never considered. It is too expensive. CompuServe's nodes in Stockholm and Copenhagen are my backups.

Whenever CompuServe opens a new node in your vicinity, or upgrades the modem speed on one of their nodes, look at the effects on your total costs.

Use software for automatic access and navigation. They give higher volume per minute and make your accesses even more cost efficient.

Before leaving for a business trip, visit CompuServe to find local access numbers in your destination cities. The list of countries includes Australia, Belgium, Canada, Colombia, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, Mexico, Holland, Peru, South Africa, Spain, Sweden, Switzerland, England, and many more.

FidoNet - grassroots playground

FidoNet is an amateur network consisting of tens of thousands of bulletin boards all over the world. The network is "loosely coupled," meaning that most of the participating boards are not always connected. They call each others at regular intervals to exchange mail, often in the middle of the night when the rates are low. (See [Appendix 1](#))

Other grassroots networks

It doesn't take much to set up a bulletin board service, and it is as easy to connect BBS systems to each other in a dial-up network for regular exchanges of email, files and conferences.

All over the world, grassroots networks keep popping up with names like ILINK, AmNet, Suedd MB-Verbund, Starmail, MagicNet, A-NET, MausNet, Zerberus-Netz, SMBX-NET, BASA-NETZ, you name it.

Many boards offer access to more than one grassroots network, and also to the Internet. Thus, the ability to send global email is extended to new users every day.

RelayNet is one of these global network of bulletin boards. It offers exchange of email between systems. Messages and conference items entered on one system will automatically be copied to other participating boards. Your costs for "talking" with others in other parts of the world are very small.

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Search:

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The Online World resources handbook

Chapter 14: Keep what you find!

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- [Reuse data on your hard disk](#)
- [Desinformation, myths, hoaxes, fraud, deception and errors](#)

Little is gained by being skillful at locating and accumulating information, and then becoming drowned in an avalanche of data that one cannot manage - or use. This chapter starts with how to handle retrieved information, and build a personal database on your own hard disk. We continue by investigating strategies for finding interesting information on own your disk, before winding down with some words about what separates good information from bad.

Search and throw away

To novices, everything is difficult. During their first trips online, they may feel as if moving to the other side of the globe. There, they would meet other newspapers, magazines, information sources, and services. It takes time to find your way around in this new environment.

To find online gold mines, trial and error are necessary. As you get more experience, however, focus tends to shift from getting information to digesting. Retrieving the data is 'in your fingers', and doesn't bother much anymore.

The bad news is that your reading speed remains at the same old level, while the amount of retrieved data grows. Most users therefore need a strategy for handling the resource. This is my take:

- In our time, when people tend to talk more than they listen, we'll usually find more information than knowledge. Therefore, **say NO to irrelevant information!** It is rarely worth keeping.
- There is no good reason to learn things that you really do not need to know. **Practice "selective ignorance."**
- **Regularly rate your online sources.** Critically. Discard those costing you more time, money and effort than they are worth. Concentrate on those giving the best returns.
- **Regularly adjust the frequency** with which you visit selected services to match

their usefulness. What used to be daily visits, may have to be downgraded to once per week or month. Consider replacing daily news monitoring by clipping services.

Dig for 'overview'

Plan 'overview' and 'digging for details' with different frequencies. 'Overview' refers to online trips made to get an impression of what generally goes on. An example:

Using Agora World Wide Web by email servers, it is easy to request a list of articles from Usenet newsgroups at preset intervals. For example, email programs like Eudora Pro let you have the same message scheduled to be sent at a certain time and date every month. The trick is explained in Chapter 12 under [Usenet by email](#).

Digging for useful information in today's news may also be done by Agora mail coupled with a system or feature that let the web address (URL) be sent at desirable intervals. You may want to check out NetMind in [Chapter 11](#) for the job if your email program is unable to do it.

On one workstation, I use a shareware Windows utility called BarClock to warn me once per day. "You should send your Agora mail now!" The warning flashes up on my screen in such a way that it cannot be ignored. On another workstation, a MS-DOS based robot does it automatically for me. No manual intervention required.

Say you want to monitor what goes on in the [alt.winsock](#) newsgroup on a monthly basis. Prepare a monthly message containing the following:

```
To: agora@dna.affrc.go.jp
Cc:
Subject:
Text: send news:alt.winsock
```

Each 30 days, you should now receive a mail giving you a list of topics discussed in the newsgroup. It would look something like this:

```
Date: Mon, 16 Sep 1996 05:38:57 -0500 (CDT)
From: agora@dna.affrc.go.jp
Subject: Document requested (was:) (URL: news:alt.winsock)
```

```
        Newsgroup alt.winsock,  Articles 86509-86528
(Earlier articles[1]...) Articles in alt.winsock
```

```
"Re:Error Code 16"- Phil Joy[2]
"Re: Netscape Mail"- Schaft[3]
"Re: OFFLINE NEWSGROUP READER ??"- djl[4]
"Re: OFFLINE NEWSGROUP READER ??"- Matthew McDonald[5]
"Re: OFFLINE NEWSGROUP READER ??"- Derek Woodlands[6]
"Re: OFFLINE NEWSGROUP READER ??"- Matthew McDonald[7]
"Re: AOL coexistence, mcs.support"- Leonard Grossman[8]
"Re: Netscape Mail"- David Woolley[9]
"MAKE 50 K IN 1 MONTH"- The One[10]
"Re: OFFLINE NEWSGROUP READER ??"- Melanie Ley[11]
"Re: *** ANNOUNCE: new W95 FTP beta ***"- [12]
"Re: Win 95 FTP Server"- [13]
"selecting multiple items with mouse instead of ctrl"-[14]
"Re: Win 95 FTP Server"- Alun Jones[15]
"free agent purge thinger"- [16]
"help"- w4100@epix.net[17]
"Re: Win 95 FTP Server"- [18]
"Re: AOL coexistence, mcs.support"- Randy Hubbard[19]
"Upgrading win95 winsock"- boomer[20]
"I have no idea what i'm doing"- mal4273@tamu.edu[21]
```

```
Post to alt.winsock[22]
```

```
*** References from this document ***
```

```
[orig] news:alt.winsock
[1] news:alt.winsock/86489-86508
[2] news:51g25t$g1l@news.internetcni.com
[3] news:51g24d$ora@nntpl.best.com
[4] news:323bbaae.105680122@news.aimnet.com
[5] news:323bcd4a.8728606@news.netspace.net.au
[6] news:323be00d.2515074@news.mt.net.au
```

```
[7] news:323bf639.6886883@news.etspace.net.au
[8] news:51gtbh$61o@nntpl.mcs.net
[9] news:DxqgEG.wq@djwhome.demon.co.uk
[10] news:323C0C0C.63F4@cyberway.com.sg
[11] news:32404693.99526427@nntp.crl.com
[12] news:51hltp$gfp@tetsuo.communique.net
[13] news:51hlsl$gfp@tetsuo.communique.net
[14] news:51i3gi$bbg@tetsuo.communique.net
[15] news:51i7iu$100_002@alun.eden.com
[16] news:51i6n2$10sl@tetsuo.communique.net
[17] news:323CC90B.3BE7@epix.net
[18] news:51i8km$15eb@tetsuo.communique.net
[19] news:323CAADC.A2@wwnet.com
[20] news:323C9F2E.5412@sprynet.com
[21] news:51imni$4v@news.tamu.edu
[22] newspost:alt.winsock
```

Browsing the index will give you an idea about what's on the members minds for the moment. If you like, you can also request individual articles from the list.

Say you want to check out the topic "OFFLINE NEWSGROUP READER ??" To do so, send a mail to the Agora server containing the following commands:

```
send news:323bbaae.105680122@news.aimnet.com
send news:323bcd4a.8728606@news.etspace.net.au
send news:323be00d.2515074@news.mt.net.au
send news:323bf639.6886883@news.etspace.net.au
```

Note: Some Agora servers let you send for these articles by returning item numbers rather than the full addresses.

One of these articles came back with the following text (abbreviated):

```
Subject:
(URL: news:323bf639.6886883@news.etspace.net.au)
Reply to matthew@sv.net.au (Matthew McDonald) [1]
RE: OFFLINE NEWSGROUP READER ??
Sun, 15 Sep 1996 12:27:59 GMT
```

kingpin@mail.mt.net.au (Derek Woodlands) wrote:

```
>On Fri, 13 Sep 1996 22:11:37 GMT, nephite@worldaccess.com
>Jacob Proffitt) wrote:
>
>>I'm really pleased with Agent, the commercial version
>>of Free Agent. FA is also a good app, and it is free.8-)
>>
>>I agree. Free Agent is a good way to get a feel for it.
>>Except that it doesn't handle MIME. Nor does Agent .99
```

```
The next release of Agent, due any time now will support
MIME..
```

```
Regards
Matthew
```

The message also contained 14 references to the other articles in the topic thread, to the author, and other newsgroups where the message had appeared.

Several communication programs and offline readers have built- in quick scan features. For example, TAPCIS does this in CompuServe forums.

When retrieving conference messages from bulletin boards using 1stReader at high speed, then the cost of retrieving all new items may be insignificant. You might as well do it. When reading captured mail, 1stReader lets you select messages to read from a list of subjects. You can save what you want to keep, and delete the rest.

By regular scanning subject headers, you reduce the risk of missing important trends, for example because authors were using other terms on the subject line than you expected.

Scanning also lets us discover if the discussion is heading off in other, interesting directions.

After a while, you'll have a set of sources, persons, and tools that will provide you with what you need. This is your personal infrastructure of electronic information. Now,

you must maintain and cultivate it.

[Chapter 12](#) contains hints about how to search World Wide Web indexes like Lycos and Alta Vista by email. Use this method regularly to check what is being said about yourself, your company, a technology, a hobby, whatever.

Filtering incoming information

Chances are that you will retrieve more information than you can read. Sometimes it takes weeks or even months for me to get up to date with all my electronic readings.

Several email programs can automatically filter retrieved information in folders, for example based on information found in the From or To-line of incoming mail. This feature is very helpful!

Example: I get a lot of mail. Upon receipt, messages are automatically filtered into the following groups (folders):

Urgent mail	All mail coming from a predefined list of senders.
General mail	All mail that was not captured by my filtering commands.
Kidlink	Selected conference mail from a defined list of Kidlink mailing lists.
Errors	Error messages received by mailing lists that I manage (the TOW announcement list for readers of the Online World handbook is one of these lists. At listserv@listserv.nodak.edu).
Browse	Information that is less time critical, and that it is enough to browse for interesting information.
Read	Information that I want to read once I get the time. (If I don't get the time, it still there on my disk until deleted, and I can therefore search it's contents.)
Outgoing	Archive of all sent mail.

Periodically, my life is so hectic that I just have time for my Urgent mail. Whenever this happens, it is very useful to have them filtered out and stored in one place.

Example: Daily, Web by email services (see [Chapter 12](#)) provides me with lists of available news stories on the net. One of my sources is [NewsLinx](#).

I'm supposed to read through these story menus, select what I want to read, and go fetch them. However, I rarely have time to do this, so I've asked the Eudora Light email program to do part of the job for me.

Several filters are set to search for "newslinx.com" on the incoming mails' subject line. Other settings initiate a search in selected messages to see if there are stories on desired topics.

One filter look for the word "newspaper" in NewsLinx menus. Whenever the word is found, the incoming message is marked as High Priority, and the subject line changed to say "Keyword newspaper found." This helps me avoid missing useful articles on interesting topics.

Post-processing the data

Your data capture is completed, and the retrieved data is stored on the hard disk in more or several files. Your next task is to

- Read the received material.
- Cut and paste selected parts to archives or work files.
- Prepare responses to electronic mail.
- When done, delete all temporary files.

Some people just delete all mail they don't want, and let the rest remain intact in their original folders. Most mail folders are easy to search with tools like **AltaVista Discovery** and **Lookfor** (see below), so this may be a solution for them.

Personally, I get too much mail for that. When I read it, my preferred method is to cut out what I need, and store the texts without the lengthy mailer headers in a more systematic way. I do this to reduce disk storage requirements, and speed up searches.

My mail is stored in files and directories using names that show the source of the information. This makes it quick to find where to search. A set of macro commands make cutting and appending mail easy.

Often, I use the year, or a month/year code, in the file name extension. For example, the file TOW.96 contains messages retrieved from the TOW mailing list during 1996.

Some advanced email programs have these features built in. With Eudora Light it is easy. Click on Transfer, and dump the message into a mailbox (or folder) of your choice.

You may also use your favorite word processor, or something else. There are several alternatives. Personally, I use the LIST utility in my system.

LIST is my favorite MS-DOS shareware file viewer program. You can retrieve it from the Internet, and most bulletin boards. Using LIST, it is difficult to destroy your precious retrieved data while reading, cutting and pasting.

MORE ABOUT LIST: Assume that you want to postprocess Eudora's IN.MBX file, and that you are using the file name convention suggested above. Type LIST and press ENTER. A list of file names in your Eudora directory will appear on your screen. Press S to sort the list, D to have them sorted by creation date. The newest files are at the bottom of the list.

Move the cursor (using the Arrow keys) to the input file you want to read, and press ENTER. Scroll up and down in IN.MBX by pressing the PgUp/PgDn or the arrow keys.

On your screen is a piece of information that you want to keep for future reference. Mark the text with ALT-M commands (keep the ALT key pressed down, while pressing M), and then ALT-D. LIST will ask you for a file name. If the information is from the TOW mailing list, and the year is 1996, enter TOW.96, and the text is appended to what is already there.

This method allows you quickly to mark and append parts of your input file to various archive files. Press ESC to return to the file list when through. If you press D, LIST asks if you really want to delete the file. Press Y, and IN.MBX is gone. - However, you'd better use Eudora for deleting mail!

LIST lets you find information stored in your archives (string search). What you find can be marked and copied to a work file. It can also be set to invoke an editor or a word processor for the selected file.

Reuse data on your hard disk

Over time your personal archives will grow in size. You begin to experience the benefits of having all this information on your hard disk. Yesterday's news is today's history, and may be used in interesting ways.

One business executive regularly monitors key technologies, customers, competitors, and suppliers. He does it by tapping sources like [Kompas](#), Associated Press, and [Reuters](#). Interesting bits of information are regularly stored on his disk.

Tomorrow, there is an important meeting with a major customer. First, a quick search through the personal customer database to be reminded of important events since the last meeting. An unfamiliar person is also going to be present. Maybe there is some background information, for example about a recent promotion.

Next, a quick check on major competitors. Maybe they are up to something that he needs to know about.

With efficient tools for searching your hard disk, finding information takes only a few seconds. If you are still left with questions, go online to complement.

Several modern email programs have built-in search features that can do more than

search individually named files (as in mailboxes) or messages. On MS-DOS/Windows computers, you can search your files with WordPerfect, Word, LIST, the DOS utility FIND, and a long list of other programs.

Personally, I prefer programs that let me search for more than one word at the time, like in HYDRO AND PETROCHEMICAL AND CONTRACT, or EXXON OR MOBIL.

MY FAVORITE Windows 95/98 search program is [AltaVista Discovery](#). Not only does it let me perform complex searches through my megabytes of in- and outgoing email messages, it also lets me search my local web pages (including those in my cache), Word documents, Excel spreadsheets, and more.

MY FAVORITE MS-DOS search utility is the [Lookfor](#) shareware program. It is small, fast, and is superior for searches in text files. You can store your finds in work files, or print them out on paper. LOOKFOR is not an indexing program. It is ready to search anywhere, anytime.

Discipline and organization is required to get the most out of your file archives. You must decide what to do with each piece of information: Should it be printed out and be read in front of the fireplace in the evening, or should it be circulated? Should it be stored on your disk, or be refined before storage?

Use standard file names that are easy to remember. If not, risk having to view files to find out what they contain.

It may take longer to find a piece of information in a casual file on a large disk, than look up a piece of information on paper in your inbox. Therefore, finish handling your capture file while you read it on your screen:

Send the pieces to their final destination. Make immediate transfers to TO-DO files. Give the original file a name that makes it easier to move later. Have a procedure that prevents duplication of effort.

With Eudora, simply transfer messages requiring action to a mailbox named TO-DO. When the task is completed, you can transfer the letter to its final destination.

Desinformation, deception and errors

Always use several sources of information! There are people out there writing to lead you astray, in articles, forum postings, private emails, and web pages.

In early 1999, a bogus Bloomberg News story claimed that ECI Telecom Ltd. in Israel was about to purchase PairGain Technologies in the US. The story mimicked the look of Bloomberg's World Wide Web site in order to pass it off as the real thing. Many believed it to be true, and the "news" promptly drove the value of PairGain's shares up to US\$200 million.

PairGain's stock price rose by as much as 32 percent, before Bloomberg announced that the story was fake, and PairGain denied any knowledge of the deal.

Often, rumors start with a private message mentioning a theory or a suspicion. After having been copied, and copied again, it can get more exposure than you get at a broadcast station, and some will even start considering it as "truth."

If you want to learn more about the "truths of the net," visit the [Urban Legends](#) page. The [alt.folklore.urban](#) newsgroup is devoted to the discussion and debunking of urban legends and related issues. [NewsWatch](#) is another interesting place to visit. It is operated by The Center for Media and Public Affairs, a nonpartisan research organization that conducts scientific analyses of the media. They promise to "*tell you when [news is] accurate, when it's wrong, and why.*"

Without clear, convincing evidence to appease doubting minds, conspiracy theories abound, sometimes with good cause, frequently with little substance.

Stock promoters and con artists have spread rumors to pump up a stock's price and generate quick profits at the expense of gullible investors. The Internet is a place where investors should be wary of stock scams.

Desinformation hurts everybody and comes from all sides. Even famous news agencies, like Associated Press, [Reuters](#) and Agence [France-Presse](#), regularly stumble.

Most news is written by journalists reporting what they have seen, read or heard.

Their interpretation of the situation may be wrong. Supplement your news with what knowledgeable people say (by email or in conferences), when knowing the facts is important.

Another hint: Errors will occasionally be discovered and reported by the news sources, but always after the fact. Always store these reports in your archives, and make it a rule to search to the end when looking for something. Otherwise, you may never discover the corrections.

Links for warnings and more information:

- <http://ciac.llnl.gov/ciac/CIACChainLetters.html>
- <http://ciac.llnl.gov/ciac/CIACHoaxes.html>
- <http://www.kumite.com/myths/>
- <http://urbanlegends.miningco.com/>

You're also using search engines to find information on the net. When you do, remember that anyone can become a publisher. All they need is a web connection, server space, and something to say or share. Once the content goes onto a server and once a crawler finds it, the search engines will make it available to everyone. So, ask yourself where this information is coming from and why it is being placed online. the reputation and background of the site creator, their qualifications.

How do we evaluate **the quality of net information**? For an introduction, take a look at the [Information Quality on The Internet](#) page . You'll also find some useful hints in the [Practical Steps in Evaluating Internet Resources](#) page, and the [Evaluating Web Resources](#) page.

Finally, there are those who make a business out of diverting Web users from their intended destination to Web sites with advertising for gambling, psychics and pornography. One person set up 15 derivatives of the popular children's site CartoonNetwork.com, and 41 variations on the name of teen star Britney Spears to mislead people". So, do yourself a favor and check the web address as typed before clicking to access rather than guessing .

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Search:

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The Online World resources handbook

Chapter 15: You pay little for a lot!

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Calculating costs

Some years ago, a person living in Norway could read up to twenty-six pages of news from Associated Press (the US) and [Financial Times](#) (England) for about US\$0.38. At the time, this was very cheap.

The trick was to dial long distance to a 9600 bps node in Sweden when the telephone company and [CompuServe](#)'s non-prime time rates were in effect. 9600 bps gave transfers at up to 960 characters of text per second. One page of text (size A4) held around 2200 characters. A typical news story had one to two pages of text.

Reading exactly the same news through another network or service would cost 300 percent more. Through yet another online service, the cost would double again.

A full issue of the [Newsbytes](#) newsletter was at around 150,000 characters, or 68 pages of text. Retrieving it from a local BBS used to cost me around 29 cents. Retrieving it from CompuServe set me back 500 percent more. On old [NewsNet](#), at 2400 bps through Datapak, the cost increased by another US\$30.00.

The time of day was important. Some services had different rates for access during the day, the evening, and the weekend. Also, it would take much longer when network traffic was high, resulting in an increased cost per page received.

Today, these costs are indeed much lower for many!

The online news scene has changed considerably. Many users can read almost all the news they want for free via the Internet. The retrieval speeds are much higher. The number of sources for news is staggering.

However, in some countries, reading news is still expensive. Users pay big money for accessing the Internet, using the phone for communications, and buying modems.

In many places, getting connected to the Internet at high speed is limited, or outright impossible. Low capacity links connects the local Internet providers to the global Internet. The result is further decreases in actual news retrieval speeds.

If you don't pay for retrieval of online information, then this chapter may not be for you. Otherwise, stay tuned.

When you pay by the minute

When using free bulletin boards, phone charges are often your only cost item. Calculating costs is easy. Often, you will be able to receive large amounts of data at a very low cost. You will probably get far more than you have time to digest.

Some Internet providers and bulletin boards require a monthly or annual subscription fee for unlimited access. To calculate costs, divide the fee by an estimated number of calls, and add the cost of using your phone to the total.

The same applies to users of [CompuServe](#) when the Alternative Pricing plan is in effect. The total cost for a given period is based on an estimated number of calls. Calculate the sum of all connect charges, network charges (to CompuServe and others), (part of?) the basic subscription fee, plus local phone rates (for direct dialing to the service, or to reach the network's node).

Where a service uses a monthly subscription rate, add part of this to the time charges. Distribute the rate using an estimated number of online hours per month.

Example: World Wide Web

Let's assume that your modem speed is 28,000 bits/s without compression, and that your Internet provider offers connection at that speed. Divide by 10 to arrive at the theoretical data transfer speed in characters per second (2,880 cps).

If data flows uninterruptedly, you should be able to transfer 4,712 pages of text or 10 megabytes of information in one hour. However, this is just a theoretical figure for most users and applications.

In my office, the problems start at the time of connecting to the net. Only rarely do I get a good connect at 28,800 bits/s. As an average, I just get 24,000 bits/s.

The connect phase, when the two modems try to open a working relationship, typically takes 30 unproductive seconds.

If my Web browser was opened before dialling, then the next step is to open my list of favorites, and click on the entry of my favorite news provider.

Most news providers "enrich" their article texts with graphics, frames, Java, and other tricks. If cost is an issue, avoid those that are in love with fancy stuff! Also, make sure your Web browser is set **not** to display graphics. This may have a dramatic impact on time and cost.

One recently visited news provider used 1,897 characters worth of html files to display 600 characters of clean text. The page was enriched with 20 graphics file totalling 93,260 bytes. The net effect was that I had to receive 95 Kilobytes before being able to read anything!!

At 28.800 cps modem speed, I could theoretically retrieve the Web page in 33 seconds. However, since the information was split up into many files, it took much longer. It was further slowed down by high traffic on the Internet at the time. Getting the information took over three minutes!

600 characters in three minutes equals about 10 characters per second. Very slow! [NewsLinx](#) may be more typical. In October 1996, retrieving the article menu with Microsoft Internet Explorer took 1.5 minutes. The call was done through a Norwegian Internet provider. The size of the file (html) was 31 Kb. The page was enriched by 11 graphics files (GIF format) totalling another 31 Kb. The realized speed was 344 cps.

I read on average three articles from this service five times per week. A typical item is 3,500 characters long. The time to retrieve one article varies from 20 to 91 seconds depending on the amount of graphics, and load on the network. In average it takes 45 seconds. Returning to the article menu typically takes another 15 - 30 seconds.

Time spent for retrieval of my NewsLinx news can be calculated as follows: Time to get a good connection (30 seconds), plus getting the menu (1.5 minutes), plus retrieval of three articles (67.5 seconds), plus returning to the article menu three times (60 seconds). The total per day is an estimated 4.1 minutes.

Let's assume that you're not reading articles online. You're reading them off your

Web browser's local disk cache after having disconnected (or, by email after having mailing them back to yourself).

Finally, we'll have to add time spent digesting the contents of the menu to make a choice of what articles to read. Use your stop watch to arrive at your estimate.

If you on average spend 10 minutes per day on your news, and do it every weekday throughout the year, then you'll have spent over 43 hours at the end of the year.

If you pay US\$10/hour to access the Internet, then the cost amounts to US\$430. Add the cost of connecting to the service by phone to get the total cost.

Items to consider

Retrieving information stored on your Internet access provider's hard disks will usually go much faster than getting it from any other disks on the network.

The load and capacity on the pipes going from your access provider to other hosts on the Internet will probably vary considerably, even within your own country, depending on the time of day and day of the week. Therefore, when speed is a concern, some users maintain user names with several ISPs.

Personally, I have accounts on three Norwegian ISPs, plus on [CompuServe](#) in the United States. I connect to the latter by making a long distance call to Oslo in Norway.

Whenever the links from my local ISPs to Web servers in North America are clogged, going through CompuServe typically gives much faster retrieval. In one recent case, the local providers gave me the data at around 10 cps. Going through CompuServe, I realized over 1000 bps! This more than made up for the extra cost of calling long distance.

Pauses, delays and bottlenecks

Beware of pauses and delays in your transfers. They can be caused by you or others, and may have a dramatic impact. It is particularly important to take this into account when comparing alternatives using different networks.

Let me explain using an old, but relevant example: Years ago, transfers to [TWICS](#) via Datapak at 9600 bps rarely gave me higher effective speeds than 100 cps. The reason was that the connection between the Japanese telcom network and TWICS went through a 1200 bps gateway. So, regardless of my network speed, it was impossible to achieve more than 120 cps.

This is why a high speed connection to your data transporter's network does not guarantee a high speed connection to the remote computer.

I used to go through Datapak at 9600 bps to a computer center in Oslo. There, I was connected through a local area network to the host computer. The effective speed was rarely higher than 4800 bps. Calling direct gave twice the speed.

Today, I connect to a local Internet provider at up to 56,6 Kbps, but still data from some remote Web servers crawl towards me at speeds as low as 10 cps. Using an ISDN line would not give me the data noticeably faster. Bottlenecks en route from the source determine the effective speed.

Try measure the effective transfer speed before selecting a routing for your data. Transfer the same amount of text through various networks.

If future transfers are likely to take place at a given time of day, test at that time. If your planned application is retrieval of programs, retrieve programs. If you want to read news, read news from the services that you want to compare.

When a network service charging for volume (like Datapak) is part of a comparison, measuring volume is particularly important. Do not assume to know the answer in advance.

Always calculate the cost based on a fixed volume, like for transfer of 1000 characters. This is particularly important when you must use different modem speeds to access competing services!

Network load varies considerably throughout the day depending on the number of

simultaneous users, and their applications. This also applies to online services. The load is normally lowest, when most users are asleep, and during weekends. When the load is low, you get more done per minute.

Planning and self-discipline pays off

The actual cost of using a given set of services depends much on your self-discipline, the tools you use, and on how well prepared you are:

- If accessing manually, use "quick" commands rather than menus to move at maximum speed to desired sources of information.
- On the Web, let your browser's bookmark feature take you directly to the desired page rather than navigating down the tree from a home page.
- Do not set your services to be used with colors, sound, or special methods for displaying graphics, unless you have no choice, or are willing to pay the extra cost. They increase the volume of transferred text, and lower effective speed.
- Experienced Web users disable receipt of images to reduce the volume of data. Later, all it takes is to click at "Reload Images" to get images you absolutely want to see.
- If your primary interest in the Web is text, then test out Lynx, if available on your ISP's host (see [Appendix 6](#)). No windows based graphical browser can match its speed.
- Get the information you want and disconnect. It is often unnecessary to read while online. Log off to read. If cost is high, call back for more to read, disconnect, and then call back again.
- Most popular Web browsers store received pages and images temporarily in a cache on your hard disk. For example, Netscape stores them in the default \NETSCAPE\CACHE directory. Make sure that your browser uses its cache. It may increase speed considerably!
- Internet's shareware libraries have many tools designed to let you read and use the cached Web pages after your online visit. Look for programs with names like Cache Master and WebSaver.
- Learn how to write your mail offline, and send letters "in a batch" to your mailbox. In addition to the time and cost benefits, your messages are likely to contain fewer typing errors, and be better thought out.
- Consider automating your communication (see [Chapter 16](#)). I use a local BBS this way. A while ago, it gave me the following progress report: "*Time on: 17 hrs 43 min, today 0 hrs 0 min, total 827 times.*" In average, I spend around 1.3 minutes per call. The other day, I was connected for 2:48 minutes. The result was 106 kilobytes' worth of conference mail.

Modem speed and cost

2400 bps is a sensible modem speed for some applications, and used to be a good starting point for new onliners. The benefits of using a faster modem may be marginal when

- navigating your favorite service considerably reduces the effective speed, and you access the service manually.
- you pay considerably more for access at higher speed.
- the relative price of a faster modem in your country is prohibitive.
- your network does not offer higher speeds.

On the other hand, a modem doing 14400 bps or more, will give you at least six times faster communication. For some applications, this means much lower costs. Also, if doing things faster is more important than keeping costs down, then it is a wise investment.

If you plan to use the World Wide Web with a graphical browser, then

anything slower than 14.400 bits/s will be too slow. You can technically do things with a slower speed, but it is frustrating.

Your applications have a considerable impact on your costs. If you mainly use your modem for retrieval of programs and large data files from bulletin boards - and do not have to pay extra for volume - then higher modem speeds will immediately give reduced costs.

A slower speed modem may also stop you from getting what you want. For example, there are several shareware programs on my board that users of 2400 bps modems are unable to download within their allotted 30 minutes per day.

When you pay for volume

Some network services have high rates for volume, and very low rates for connect time. When using such services, automatic communication becomes less useful. Rather than connecting, getting a piece of information, disconnecting, and then going back for more, you may find it cost efficient to review menus and results while online.

When paying for volume, or per minute connected, the online service's menus become luxury items. Using quick commands for navigating is cheaper. The best is to use a program for fully automatic access.

Your comparisons will never be accurate when comparing with services charging for connect time. It is particularly difficult when the measure of volume is 'packets' rather than 'number of characters transferred'.

For example, Datapak used to report my sessions like this:

```
CLR PAD (00) 00:00:14:55 537 75
```

These numbers told that I had been connected to a service for 14 minutes and 55 seconds, 537 data 'packets' had been received, and 75 had been sent. Use these figures to calculate the cost of the call.

One data 'packet' or segment contains up to 64 characters. Think of it as a measure of the number of lines. Each line can have a maximum of 64 characters. If you send the character A and a carriage return, then this also counts as a segment. So, it is hard to use the Datapak record to estimate the real number of characters transferred. All we know is that 537 + 75 segments were transferred, and that 612 segments may contain up to 39,168 characters.

When calculating the cost of a direct call in connect charges, just the number of minutes counts. Use the time reported by the online service, and not your stop watch.

CompuServe used to give this type of report:

```
Thank you for using CompuServe!
```

```
Off at 10:11 EST 24-Nov-92
```

```
Connect time = 0:15
```

Set your software to store all incoming information, and use this to find how much data you receive. Run the test several times, and use averages when making your estimates.

It is easy to compare services that only charge by the minute.

More practical hints

It may be more expensive to call a service daily "to check the news," than to call it once per week to retrieve the same stories, if this feature is available.

Navigating by menus is more expensive than going directly to a source, or going there by stacking commands (that is, combining quick commands into one).

Some services let you read selective items in conferences by entering a search string. On RBBS-PC systems, the following command

r extended 100+ c

used to let you read all messages containing the search string 'extended' in the body of text, starting with message number 100.

If you forget the "c" parameter, the flow will stop after each message. This will reduce the average effective speed. Always use "nonstop" commands when reading stories, conference items, and other texts.

Now, read [Chapter 16](#).

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The Online World resources handbook

Chapter 16: Automatic communication

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Automatic data communication as a development strategy.

- To get a lead on your competitors.
- To avoid duplication of effort.
- To reduce costs.
- To reduce boring and repetitive work.
- To avoid having to remember technical details.

Automatic communication is both for professionals and amateurs. It helps keep your costs down. Also, it lets you do the job faster and safer. Sometimes, it is the only way to get the job done.

We all have different needs

Automation will never be the same for everybody. Our needs are too different.

Some get excited when a program can dial a bulletin board, retrieve a program, and then disconnect without having to touch the keyboard.

Some want an "answering machine" that can respond to and forward email when he or she is away from the office.

Others want a communications system that can tap selected news sources, search databases, and do post-processing on the retrieved material.

For most professionals, doing things manually takes too much time. Time is better spent reading, digesting, and using, rather than on stupid technical retrieval work. Computers can do that.

To others again, automation is a question of being able to use the online resource at all. If it takes 60 seconds to get a piece of information, it may be possible to get before running for the next meeting.

However, if it takes 15 minutes, there may not be enough time. If you must also read a help text to find out how to do it, you may not even consider doing it. Your mind is so full of other things right now.

When using a system for automatic communication, you do not have to

learn and remember online commands. The system will do it for you.

The minimum solution

Automatic data communication in its simplest form entails the following:

- One keystroke to get the communications program to dial a number, and send user name/password when the online service requests this information.
- Macro commands (like in a word processor) for navigating through an online service, searching, and to send complex commands by pressing one key.

Most communication programs have a macro language or a script language. There are also macro programs designed to be used with Microsoft Windows. In many instances, users are taking advantage of these features without even knowing it. This is the case for many of those connecting to the Internet with a simple mouse click.

If this has not been done for you, then you will probably never regret time spent on learning how to use these features. At a minimum, you should be able to have your system log on automatically to your favorite service provider.

Autologon spares you the task of remembering your user name and password. Besides, most people are only able to use the keyboard at a low speed. They easily get frustrated by having to correct typing errors.

Auto-logon to the Internet

Trumpet Winsock is a popular program used to set up a TCP/IP protocol connection with the Internet. It can dial up an Internet access provider, logon, and set up a SLIP, PPP, or a pseudo-SLIP connection to the net using SLiRP or The Internet Adapter (TIA).

You can use Trumpet by entering commands manually, but most users prefer to let the program do it for them. This is achieved by having all commands in a file called LOGIN.CMD. Trumpet reads this file when you click on Dialer, Login, and then logon to your service as instructed.

We call LOGIN.CMD a script file. It is a text file that can contain a list of commands for dialing and navigating on an online service. You can write and edit it using Windows Notepad, DOS EDIT, or another utility that allows you to save the file as DOS or ASCII text. (Most popular script languages have the same requirement.)

Trumpet's scripts can contain commands that test for the occurrence of small pieces of information sent by the access provider at given times (like the prompt "Password?").

When this information is found, Trumpet can be set to send the proper response or command (in this case, your secret password).

Let us look at a typical Trumpet LOGON.CMD file. Comments are written in lines above the given commands preceded with a #.

```
# The output command tells Trumpet to send text to
# the modem, in this case "ATZ" to reset the modem.
# The "\13" refers to ascii character number 13
# (Return). The effect is the same as if you were
# typing ATZ followed by a press on the Return
# key.
```

```
output atz\13
```

```
# The input command tells Trumpet to wait for the
# preceding string, here for "OK" followed by "\n"
# (short hand for \10, the Line Feed character).
```

```
input 10 OK\n
```

```
# The next 'output' command sends a modem setup
# string. Note that this string is particular to
# my modem. You may well need other commands.
# Also, note that the "\" character has a special
# function in Trumpet. Therefore, AT commands like
```



```

# "AT\N5" must be written as "AT\\N5".

output at&C1&d2\\V2\\N5W1S9=12S11=50\\K3\\Q2 &S1\13

# Waiting for another "OK" from the modem.

input 10 OK\n

# Sending autodial command and phone number to the
# modem

output atdt,22568862\13

# Waiting for the "CONNECT" report from the modem
# when a connection with the remote modem has been
# set up.

input 50 CONNECT

# Wait until it's safe to continue sending. Some
# modem's hang up if you transmit characters
# during a connect set to monitor the carrier
# signal detector (DCD).

wait 30 dcd

# Now, prod the remote terminal server by sending
# a Return

output \13

# Wait for the username prompt ('login:').

input 30 login:

# Enter your username. In this example the user
# name is 'Presno'.

output Presno\13

# Wait for the password prompt

input 30 sword:

# Enter the secret password. In this example the
# password is "secret"

output secret\13

# we are now logged in

```

I use this script to dial a PPP server. When Trumpet signals "PPP ENABLED," I can open Netscape for the World Wide Web, WinVN for reading news, or Pegasus for mail.

Trumpet uses a variant of this script when calling in to a Unix host to use SLiRP (or The Internet Adapter). In these applications, it waits for the host's prompt (@gaia%) before starting the SLiRP application to get PPP (or SLIP). This is achieved by adding the following commands after "# we are now logged in" above.

```

# The @ and % characters are rather unique, so
# instead of 'input 30 \64gaia\37', I just use

input 50 \37

# Finally, the pseudo-SLIP startup command

output slirp -P\13

input 20 SLiRP Ready ...

```

Trumpet signals "PPP ENABLED," and I am ready to go.

Auto-logon with Procomm

Procomm is a general communications programs. Many other programs, like Qmodem and Telix, have equivalent capabilities.

When writing a script for auto-logon to a new service, your first step is to list the commands that you believe required. Enter them in a text file (as DOS or ASCII text).

Procomm, Qmodem and Telix let you list your favorite online services in a dialing directory, and tie these entries to your scripts. Press a key to start the appropriate script file for automatic access to a service.

This simple PROCOMM script used to work for to access my now defunct bulletin board in Norway. It assumes that your name is Jens Mikkelsen, and that the secret password is FOXCROOK4. You'll have to change this before testing.

```
;
;Script file for auto-logon to SHS
;
WAITFOR "our FIRST Name? "
PAUSE 1
TRANSMIT "Jens^M"
WAITFOR "our LAST Name? "
PAUSE 1
TRANSMIT "Mikkelsen^M"
WAITFOR "ots will echo)? "
PAUSE 1
TRANSMIT "foxcrook4^M"
WAITFOR "^JMore (Y),N,NS? "
PAUSE 1
TRANSMIT "n^M"
WAITFOR "^JMore (Y),N,NS? "
PAUSE 1
TRANSMIT "n^M"
WAITFOR "R] to Continue? "
PAUSE 1
TRANSMIT "^M"
```

The commands are different from Trumpet, but easy to understand. Here is an explanation:

- the ";" character at the beginning of a line identifies it as a comment line. Procomm is to ignore it. We use such lines for notes.
- WAITFOR "our FIRST Name? " has Procomm wait for the text string "*our FIRST NAME?*." It is a part of the question "*What is your first name?*"
- PAUSE 1 halts the execution of the script file for one second.
- TRANSMIT "Jens^M" sends the name *Jens* followed by a RETURN (the code ^M in Procomm).
- WAITFOR "our LAST Name? " makes Procomm wait for the question "*What is your LAST Name?*"

The script continues like this. In WAITFOR commands, we use part of the text that is displayed on our screen once the scrolling stops.

Make sure that the search term is unique. It must not appear elsewhere in the text coming from the host computer. If it does, your name and password may be sent too early.

You can call the script HORROR.CMD, and attach it to the entry for my board in your Procomm phone directory. When you call it the next time, Procomm will execute the commands in the file and "turn the keyboard over to you" when done.

Macros

Above, we used a script to log on automatically to a service. When Procomm gives us access to the keyboard again, we must continue manually.

What we want to do online varies. Sometimes, we want to read new messages in conferences. In other cases, the purpose is to check new programs in the file library. If we find programs of interest, we may want to download them.

Shorthand macros can help you do this faster and safer. For example, one macro can take you quickly to a conference for new messages. You can make Procomm start

this macro whenever you press ALT-0 (keep the ALT key down, then press 0).

You can have the macro key ALT-1 send other commands when in the file archives.

When I started using MS-DOS computers for data communications, PC-TALK became my favorite program. It has many of the same macro capabilities that Procomm has.

With PC-TALK, I did autologon to the now defunct NewsNet service. Macro number one sent commands that gave me the contents of various newsletters. Macro #2 picked up the contents in another group. Macro #3 picked up stories from my mailbox, and macro #4 logged me off the service. My mission was completed by pressing four or five keys.

The bookmark files of Netscape's Navigator and Microsoft Explorer are also nice macro features.

Automating the full task

It's a long way from automated logon scripts and the use of macros to full automation. The major difference is that with full automation, you do not have to look at the screen while the script is working. You can do other things. Sometimes, you may not even be present when the job is being done.

On a typical morning in my house, I go directly from bed to my office to switch my communications computer on.

While I visit the bathroom, my communications program calls two Internet service providers to retrieve and send information.

When the script has disconnected, it analyzes the received data. I want important mail highlighted. Some information is to be automatically appended to storage files. Retrieved news menus are to be analyzed to see if there are any articles that I want to read (compared with a set of keywords). "Spam" messages (unsolicited advertisements) are to be deleted automatically, etc.

Sometimes, the unexpected happen. There may be noise on the phone line, or a sudden disconnect. Usually, my script can solve this without manual intervention. It is therefore allowed to work unattended most of the time.

When I get to my office after breakfast, it is all done. My communications program is set for reading and responding to today's email. I can sit down, and immediately get to work.

After having written all my replies, I say "send" to my system. For me, it's time for another cup of coffee. I am not needed by the keyboard while mail is being sent.

This is what an automatic communications system can do. My scripts also help plan and prepare online visits, and ease my work by postprocessing results.

When your communication is fully automated, you need not read incoming data while it scrolls over your screen, and then again after logging off the service. You do it only once.

How to get it? Here are some alternatives:

Alternative 1: Write your own system

You can write procedures for powerful script-driven programs like ProYam (from Omen Technology) and Crosstalk MK IV for DOS.

I started writing scripts for [ProYam](#) way back in 1985. The system is constantly expanded to include new services, refined to include more functions, and enhanced to become more robust.

My system work like an autopilot. It calls online services, navigates, retrieves, sends data, and logs off.

Postprocessing includes automatic reformatting of retrieved data, transfers to various internal databases, statistics, usage logs, and calculation of transfer costs.

Such scripts can do quite complex operations online. For example, it can

- Buy and sell stock when today's quotes are over/under given limits,
- Select news stories and other types of information based on information found in menus or titles.

Script writing is not for everybody. It is complicated, and takes a lot of time, so it may not be for you.

On the other hand, those going for it seldom regret, and you may find systems offered by others that you automate more of your work. Tailor-made communication scripts give a wonderful flexibility. The software does not cost much, but it sure takes a lot of time!

Hints for script writers:

Do not use large and complex script files before you know the online service well. The scripts let you do things quicker and safer, but there is always a possibility for unexpected problems.

Test your scripts for a long time to make them robust by "training" them to handle the unexpected. Leave them to work unattended when you are reasonably certain that they can do the job. - It may take months or years to get to that point.

Build a timeout feature into your scripts, so they do not just hang there waiting for you after a meeting with fate.

Alternative 2: Use scripts made by others

Some script authors generously let others use their creations. Earle Robinson of [CompuServe](#)'s European Forum, share his ProYam scripts for automatic usage of CompuServe with others. They are available from the PC Communications Forum library (GO PCCOM).

Enter GO XTALK on CompuServe to find advanced script files for Crosstalk Mk.4.

ZCOMM and ProYam scripts for visiting my board automatically can be freely downloaded there. They split access up into these three phases:

Phase 1	Menu driven offline preparation.
Phase 2	Automatic logon, navigation through the system, and automatic disconnection.
Phase 3	Automatic offline postprocessing.

You will find scripts for other programs on many online services.

Alternative 3: Special software

Several online services sell communication programs with built-in functions that provides you with automation. They can have offline functions for reading and responding to mail. The degree of automation varies.

There are also many programs written by third parties. Most programs assume that you use 'expert' as your default operating mode on the online service.

TapCIS, NavCIS, Autosig (ATO), OzCIS, CISOP, CompuServe Navigator (for Macintosh), CSNav/Win, AutoPilot (for Amiga), ARCTIC (for Acorn Archimedes), and QuickCIS (for Atari) are popular choices on [CompuServe](#). The DOS program TapCIS is my personal favorite. (CIM does not offer much automation!)

Journalist is an interesting program that creates a personalized newspaper view of CompuServe for Windows users. It automatically logs on to retrieve the information necessary to fill the frames in your document, and formats it according to your specifications. (Email: 71333.2163@compuserve.com)

[LEXIS-NEXIS](#) News Plus has pull-down menus and detailed selection of

commands. This MS-DOS program helps users set up detailed search commands before logging on to the LEXIS-NEXIS service. Your search results will be downloaded automatically.

Alternative 4: Offline readers

The alternatives above have one important weakness. Noise on the line can prevent the "robot" from doing the job. All it takes is for noise to give a prompt another content than is expected by your program or script (as in "En@er a number:" instead of "Enter a number:").

You can avoid noise problems by using grab or get commands ([Chapter 12](#)), and by making the online service use its minimum prompts ('expert mode'). Still, this does not give full protection.

The best is to let the online service do the navigation. Think of it as logging on to run a batch file on the remote computer. Combine this with automatic transfers of your commands, sent in of one stream of data with automatic error correction (in the software and in the modem), and you have a very robust system.

The program logs on to the service. Then the service takes over. It registers your user identity, checks your user profile for personal interests, retrieves and packs all messages, news and files into one compressed file, and sends it to you at high speed.

Your outgoing messages, search commands, commands to join or leave conferences, and more, are transferred to the remote computer in a similar packet (compressed file).

When received by the remote computer, it unpacks the transfer file and distributes messages and commands to various services following your instructions.

Your "physical" contact with the service is when your modem is disconnected. The help menus that you read belong to your program, and not the online service. You read and respond to mail in a reading module (ref. the term "offline reader").

Some offline readers give the caller access to more tools than is available on the online service itself. They may have spelling checkers, multimedia support, let you use your favorite editor or word processor, and offer various storage, search, and printing options.

They may let you sort incoming conference mail by "threads," and permit you to place obnoxious writers on a "kill" list.

Using offline readers is probably the easiest, cheapest, and safest way of using online services. You even risk writing more concise and thoughtful messages. The "readers" are popular among bulletin board users, and some commercial services are also starting to accommodate them.

There are many offline reader programs. The most advanced take over completely upon logon, and manage transfers of commands and compressed information files to and from the host. (Example: Binkley Term on FidoNet)

Global Link is an offline reader for EcoNet. Bergen By Byte offers the BBS/CS Mail Grabber/Reader, a script system used with the communications program Telix and the service's "auto-get" function.

NUPOP (MS-DOS), Eudora for Windows (Windows and Macintosh), and WinQVT/Net (Windows) are offline readers for use when calling Unix hosts.

The most popular systems on the PCBoard based Thunderball Cave BBS are Offline Express, Megareader, Session Manager, Rose Reader and EZReader. Freddie is a reader for Macintosh.

These readers are used with scripts written for various communication programs. Some of them have built in communications (and script) modules.

EZReader from Thumper Technologies (P.O. Box 471346, Tulsa, OK 74147-1346, U.S.A.) lets users retrieve mail from several online systems using transfer formats such as QWK, PCBoard capture files, ProDoor ZIPM files, XRS, MCI Mail, and others.

1stReader from Sparkware (Post Office Box 386, Hendersonville, Tennessee 37077, U.S.A.) is my personal favorite for accessing Qmail based online systems.

***Note:** Some offline readers contain all the features required for fully automated communications. Some bulletin boards allow up- and downloading to start right after CONNECT.*

Off-Line Xpress, an offline mail reader for QWK (Qwikmail) packets, does not contain a communications module. It just does pre- and postprocessing of mail packets.

You can use the Off-Line Xpress as one element in a larger automated system. For example, a system for access to PCBoard bulletin boards may consist of Off-Line Xpress software, PKZIP and PKUNZIP (popular shareware programs to compress/decompress mail packets), the QMODEM communications program, and a script to navigate to/from the QWK packet send and receive area on the BBS.

1stReader contains a powerful script based communications module. It let you compose replies, set search commands, subscriptions to services, add and drop conferences, and enter download commands offline.

Automatic automation

We have explained how to write scripts with Procomm. However, there are simpler and quicker ways. Many communications programs can make scripts automatically using a learning function. It goes like this:

Start the learning function before calling the online service. Then log on, navigate to the desired services, do what you want to automate, and disconnect.

The learning feature analyzes the received data and builds a script file for automatic communication.

If you call again with the new script, it will "drive the same route one more time."

ZCOMM and ProYam have a learning feature. This is how I made a script for accessing Semaforum BBS using ZCOMM:

ZCOMM asked for a phone number. I entered +47-370-11710. It asked for speed, and I entered 14400 bps. Next, I had to choose one of the following:

- (1) System uses IBM PC (ANSI) line drawing
- (2) 7 bits even parity
- (3) 8 bits no parity

My choice was 1.

ZCOMM dialed the number. When the connection was set up, I entered my name and password, navigated to the message section, read new messages, browsed new files in the library, and entered G for Goodbye. This was the tour that I wanted to automate.

When disconnected, I pressed the F1 key. This prompted the learning process based on a record of the online tour. The log described everything that had happened in detail, including my pauses to think. Now I was prompted by the following question:

```
'newscr.t' exists. Append/replace/quit?
```

I selected append. Then:

```
Do you want this script file as a new entry in your
telephone directory (y/n)?
```

I entered y, and named it \$semaforum. After a few seconds, my new script was ready:

```
Your new script is in the file 'newscr.t' !! You can append the file
to your current script file (for example PHODIR.T) or have the
commands executed by entering:
```

```
call semaforum.newscr.t
```

It was time to test the new wonder. I entered

```
call semaforum.newscr.t
```

at the ZCOMM command line, hit the ENTER key, and off it went. ZCOMM called the BBS and repeated everything - at far higher speed than I had done it manually. It went on-hook as planned when done.

Limitations

Auto-learn programs can create a script file that let you "drive the same route." For some applications this is enough. For others, it's just part of the way. You have to refine the script manually to get what you want.

Example:

If you some bulletin boards with an auto-learned script made yesterday, chances are that everything works well. If you call twice on the same day, however, you may be in for a surprise as the board may greet you differently on your second visit. If this is the case, then your script must take this into account.

On most online services, many things can happen at each "junction of your road." At one point in one of my scripts, up to twenty things may happen. Each event needs its own "routing."

Twenty possible events are an extreme, but three to four options at each system prompt is not unusual. All of them need to be handled by your script, if you want it to visit online services unattended while asleep.

It is quicker and simpler to use other people's scripts and programs, although this might force you to use a different program for each service.

Personally, I prefer offline readers on services where they can do the job. On other services, I usually depend on my own tailor-made scripts.

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The Online World resources handbook

Chapter 17: Gazing into the future

Thoughts about things to come.

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Newspaper of the future

Years ago, Nicholas Negroponte of Massachusetts Institute of Technology, said that today's newspapers are old-fashioned and soon to be replaced by electronic "ultra personal" newspapers.

"If the purpose is to sell news," he said, then it must be completely wrong to sell newspapers. Personally, I think it is a dreadful way of receiving the news."

MIT's Media Laboratory developed an electronic newspaper that delivered daily personalized news to each researcher. The newspaper was "written" by a computer that searched through news services' wires and other news sources according to each person's interest profile.

The system could present the stories on paper or on screen. It could convert them to speech, so the "reader" could listen to the news in the car or the shower.

In a tailor-made electronic newspaper, personal news makes big headlines. If you are off for San Francisco tomorrow, the weather forecasts for this city makes the front page. Email from your son will also get there.

"What counts in my newspaper is what I personally consider newsworthy," said Negroponte.

He claimed the personal newspaper is a way of getting a grip on the information explosion. "We cannot do it the old way anymore. We need other agents that can do prereading for us. In this case, the computer happens to be our agent."

Testing the concept

The first test version of The de Presno Daily News appeared in 1987. It did not convert news to sound. It did not appear like a newspaper page on my notebook's screen. Not because it was impossible at the time. I just did not feel the 'extras' were worth the effort.

My personal interest profile was taken care of by scripts. If I wanted news, the "news processor" went to work and "printed" a new edition. On Tuesdays, Thursdays, and Saturdays, I got an "extended edition."

This is a section from the first historical issue:

Front page, Thursday, November 21, 1987

Under the headline News From Tokyo, 'items like these:

*TOSHIBA TO MARKET INEXPENSIVE PORTABLE WORD PROCESSOR
TOHOKU UNIVERSITY CONSTRUCTING SEMICONDUCTOR
RESEARCH LAB
TOSHIBA TO SUPPLY OFFICE EQUIPMENT TO OLIVETTI
NISSAN DEVELOPS PAINT INSPECTION ROBOT
MADE-TO-ORDER POCKET COMPUTER FROM CASIO*

The articles were captured from Kyoto News Service through Down Jones/News Retrieval.

The column with news from the United States had stories from NEWSBYTES' newsletters. Hot News From England came from several sources, including The [Financial Times](#) and [Reuters](#). Headlines read:

- *THE CHRISTMAS SELLING WAR*
- *BIG MACS GOING CHEAP TO UNIVERSITY STUDENTS*

Page 2"was dedicated to technology intelligence. Page 3"had stories about telecommunications, mainly from Brainwave for [NewsNet](#)'s newsletters. Page 4"covered personal computer applications.

Several years later

The technology is here. We have services "pushing" filtered news to our desktops. We can subscribe to filtered news in many other ways. Anyone can design personal "newspapers" using powerful communication programs with extensive script features.

My personal "newspaper" now works as follows:

1. Daily, article menus are automatically retrieved from NewsLinx ([Chapter 9](#)), [Individual.com](#), and two similar Norwegian services. Retrieval is done by a system build on use of the Agora Web by email services ([Chapter 12](#)).
2. Upon receipt, my tailormade news system analyzes the menus, and suggests stories to read based on words or phrases found in the titles. Enter to read, 'n' to skip. Desired articles are automatically prepared for retrieval by Agora mail. Later that day, the articles arrive in my mailbox, and I can read them when I get time. Adding or deleting terms to search for in the menus is easy, and takes seconds.
3. My system also analyzes my incoming electronic mail for interesting contents, including those coming from selected clipping systems ([Chapter 11](#)). Interesting finds are highlighted on screen, on my newspaper's front page if you like.

News meta services, like NewsLink, individual, Riksagenten, and Nettvik, are here to stay. Then there is push. Expect more alternatives.

Having news delivered to your mailbox or screen is the easy part of the equation. Selecting and reading is the difficult part. Most people do **not** have time to read the most interesting articles published each day. I do not even have time for the daily selection menus. Without automation, I'd be lost.

Enabling Internet users to select articles automatically may well be the next important battle field.

Some complain it is too difficult to read news on a computer screen. Maybe so, but pay attention to what is happening in notebook computers. This paragraph was written

on a small PC by the fireplace in my living room. The computer is not much larger or heavier than a book.

(Sources for monitoring notebook trends: [Newsbytes](#)' IBM and Apple reports, Ziff Davis' [ZD Net](#)).

An update of MIT Media Lab's thinking on "News in the Future" can be found at <http://nif.www.media.mit.edu/>.

Electronic news by radio

Radio technology is being used to deliver Usenet newsgroup to bulletin boards (example: PageSat Inc. in the US). Also, consider this:

Businesses need a constant flow of news to remain competitive. [NewsEdge](#) markets a real-time news service called NewsEdge Live. They call it "live news processing." It continuously collects news from hundreds of news wires, including sources like [PR Newswire](#), Knight-Ridder/Tribune Business News, Dow Jones News Service, Dow Jones Professional Investor Report, [Reuters](#) Financial News.

The stories are "packaged" and immediately feed to customers' personal computers, workstations and intranets by FM, satellite, X.25 broadcast, or the Internet:

- All news stories are integrated in a live news stream all day long.
- The software manages the simultaneous receipt of news from multiple services, and alerts users to stories that match their individual interest profiles. It also maintains a full-text database of the most recent 250,000 stories on the user's server for quick searching.

Packet radio

Global amateur radio networks allow users to modem around the world, and even in outer space. Its users never get a telephone bill. They are specifically designed for email, and cannot be used to access interactive Internet services.

There are hundreds of packet radio based bulletin boards (PBBS). They are interconnected by short wave radio, VHF, UHF, and satellite links. See <http://www.wallycom.com/~wally/packet.html> for information. Technology aside, they look and feel just like standard bulletin boards, and some of them also support TCP/IP, and have web pages.

Once you have the equipment, can afford the electricity to power it up, and the time it takes to get a radio amateur license, communication itself is free. Typically, you'll need a radio (VHR transceiver), antenna, cable for connecting the antenna to the radio, and a controller (TNC - Terminal Node Controller).

Most PBBS systems are connected to a network of packet radio based boards. Some amateurs use 1200 bps, but speeds of up to 56,000 bps are being used on higher frequencies.

Hams are working on real-time digitized voice communications, still-frame (and even moving) graphics, and live multiplayer games. In some countries, there are gateways available to terrestrial public and commercial networks, such as Internet, and Usenet. Packet radio is proved as a possible technology for wireless extension of the Internet.

Radio and satellites are being used to help countries in the Third World. **Volunteers in Technical Assistance (VITA)**, a private, nonprofit organization, is one of those concerned with technology transfers in humanitarian aid to these countries.

VITA's portable packet radio system was used for global email after a volcanic eruption in the Philippines in 1991. Today, the emphasis is on Africa.

VITA's "space mailbox" passes over each single point of the earth twice every 25 hours at an altitude of 800 kilometers. When the satellite is over a ground station, the station sends files and messages for storage in the satellite's computer memory and receives incoming mail. The cost of ground station operation is based on solar energy batteries, and therefore relatively cheap.

To learn more about Vita's projects, subscribe to their mailing list by email to

listserv@auvm.american.edu. Use the command Sub DEVEL-L <First- name Last-name>.

The American Radio Relay League (ARRL) operates an Internet information service called **the ARRL Information Server**. For information, send email to info@arrl.org with the word HELP in the the text.

The WWW server for Amateur Radio will give you easy access to the Frequently Asked Questions and more. There's another one at <http://buarc.bradley.edu/>.

Cable TV

Cable TV networks increasingly offer gateways into the Internet and other online services. One possible next step is for the cable TV networks to be interconnected not unlike the Internet itself. We'll see.

Example: Continental Cablevision Inc. (U.S.A.) lets customers plug PCs and a special modem directly into its cable lines to link up with the Internet. The cable link bypasses local phone hookups and provides the capability to download whole books and other information at speeds up to 10 million bits per second.

See <http://www.teleport.com/~samc/cable1.html> for more about Cable TV communications, try

The next generation dial-up modem

New technologies with names like ADSL (Asymmetric Digital Subscriber Line), VDSL (Very High Digital Subscriber Line), and HDSL, have quietly been sneaking up from behind. These modems can transmit data at speeds from 176 kbits/s to 52 Mbits/s, depending on line length.

ASDL modems are connected to ordinary copper phone lines (2-wired), and will typically enable users to receive information at 6 mbits/s and up depending on the distance from the telephone exchange. Usually, they can only send at 176 to 640 kbits/s. This is enough for many applications, including video on demand.

See <http://www.adsl.com/> for background information, and supplement with a quick search using Alta Vista in [Chapter 10](#).

Satellite communications

Hughes Network Systems (USA) markets **DirecPC**, a small satellite dish that picks up digital signals from the air on personal computers. Users can get news, sports, and stock information as part of a "basic access" content package. The basic service also includes a "Turbo Internet" application so subscribers can receive megabytes of Internet documents at high speeds of up to 24 Mbps.

Globalstar is a wholesale provider of mobile and fixed satellite-based telephony services for voice calls, Short Messaging Service (SMS), roaming, positioning, fax, and data communications via 48 low-earth-orbiting (LEO) satellites. As a wholesaler, Globalstar sells access to its system to regional and local telecom service providers around the world. It is due to start operations in the year 2000.

Iridium went broke, and was reborn. In 2001, they offered data communications at a whopping 2,400 bps. Upgrade packages promising 10 Kbps are on the horizon...

Teledesic Corp. plans a network of 840 low- earth-orbit (LEO) satellites covering 95 percent of the earth's surface by the year 2002. The idea is that we will have access to information from almost anywhere. With a small bit of hardware, By 2005, Teledesic will let you communicate at 16 Kbps duplex anywhere on the globe. With slightly bigger equipment, up to 2 Mbps.

Bill Gates has invested heavily in Teledesic, so there might eventually be a Microsoft involvement.

A consortium lead by **Sky Station** (USA) plans an international transmission system of balloons just 21 km over earth. In the year 2000, they will offer wireless, 1.5Mbps T1

links directly to computers. The transmissions can also be used for portable videophone and Web TV applications, according to the company.

Satellite program producer Japan Image Communications Co. plans to start satellite broadcasts for home computers during 1997. Offerings will include economic news and game software on the Internet, using the JCSAT-3 communications satellite.

Other interesting satellite projects on the horizon include Skybridge (Alcatel Espace, France), CyberStar (Loral Space & Communications, USA), Lockheed Martin's Astrolink, AT&T's Voicestar, and Motorola's Celestri and M-Star.

The [biz.pagesat newsgroup](#) on Usenet is "For discussion of the Pagesat Satellite Usenet Newsfeed."

Electronic mail on the move

For years, national telephone companies, backed by ITU-TSS, Lotus, Novell, [Microsoft](#) and other software companies, pushed the X.400 email standard, while commercial online services like [CompuServe](#), Dialcom, MCI Mail, [GEIS](#), and Sprint promoted their own proprietary solutions.

Nobody really cared much about the Internet, until it suddenly was there for everybody. It has changed the global email scene completely.

In 1992, the president of [the Internet Society](#) made the following prediction:

"by the year 2000 the Internet will consist of some 100 million hosts, 3 million networks, and 1 billion users (close to the current population of the People's Republic of China). Much of this growth will certainly come from commercial traffic."

If this comes true, then proprietary email systems (like those built on X.400) will fade away and even possibly disappear.

Watch [the Internet Mail Consortium](#). Their focus is on "cooperatively managing and promoting the rapidly-expanding world of electronic mail on the Internet." Also, watch the proliferation of [free email for everybody](#) on the Internet.

The commercials go Internet

Daily, new databases and information services appear on the Internet. Most are free. World Wide Web, hypertext, and distributed text-searching systems (like WAIS) make it easier than ever to find information.

While this puts pressure on the old commercial services, it also creates new opportunities. Many have already opened shop on the Internet. Others focus on making it easier for users to connect directly from this global matrix of networks. Eventually, we may well find everybody there.

Telebase Systems resells [Dialog](#) and other professional and business database information to individual consumers through services like [IQuest](#).

Their offering is a top-level subject-oriented menu system. Subscribers can use it interactively at <http://www.telebase.com/>. Pricing depends on the database being searched. It offers databases with primarily business information from well known sources, such as Standard & Poor's, Dun & Bradstreet, TRW Business Credit, magazines, newspapers, etc.

Dun & Bradstreet is at the Web address <http://www.dnb.com/>. You will find Elsevier Science, the scientific communications branch of Reed Elsevier, at <http://www.elsevier.nl/>.

Cheaper and better communications

During Christmas 1987, a guru said that once the 9600 bps V.32 modems fell below the US\$1,200 level, they would create a new standard. Today, such modems can be bought at prices lower than US\$100. In several countries, 56 Kbs modems are emerging as the preferred choice in competition with even faster ISDN and cable modems.

Expect developments within data compression to have a further impact on the costs of global communications.

Wild dreams get real

ISDN (Integrated Service Digital Networks) already lets many users do several things simultaneously on the same telephone line. They can write and talk while using the same line for transfers of pictures, music, video, fax, voice and data.

However, ISDN is just an intermediate step towards much faster speeds for everybody: Ordinary phone modems at 56 Kbps; 2 Mbps communication by satellite; 2 Mbps by cable modem; up to 52 Mbps communication by ADSL. Increased transmission speeds are opening up for "a new world" of opportunities. Some of them are here already.

Here are some key words about what increased speeds may give us:

- Teleconference with your mom on Mother's Day or send video email.
- Chats, with the option of having pictures of the people we are talking to up on our local screen (for example in a window, each time he or she is saying something). Eventually, we may get the pictures in 3-D.
- microWonders Inc. (Toronto, Canada) promotes Internet Global Phone (IGP), free software that provides two-way voice communications over Internet connections. The program will run on any PC equipped with a SoundBlaster compatible sound card, speakers, and a microphone. The compression technology (GSM) makes real-time voice connections practical over any common modem-based Internet connection from 14.400 bits/s up.
- Fujitsu Cultural Technologies and [CompuServe](#) Information Service offer WorldsAway, a graphical 3-D chat environment where animated "avatars" interact in a virtual cocktail party. Each participant can control his or her avatar, making it walk across the room, sit down, etc., Conversation is depicted cartoon-style in a balloon over the avatar's head. Characters can move, examine, exchange and sell objects online using tokens, and can even invite other characters to their own private residences for some one-on-one chat time.
- Database searches in text and pictures, with displays of both.
- Electronic transfers of video/movies over a standard telephone line.
- The "[Internet Talk Radio](#)" have delivered radio programs over the net for a long time.
- Paramount Pictures has a Web site dedicated to the motion picture [Star Trek Generations](#). It offers a galaxy of unique Star Trek elements for retrieval, including pictures, sounds and a preview of the movie, in addition to behind-the-scenes information.
- Online amusement parks with group plays, creative offerings (drawing, painting, building of 3-D electronic sculptures), shopping (with "live" people presenting merchandise and good pictures of the offerings, test drives, etc.), casino (with real prizes), theater with live performance, online "dressing rooms" (submit a 2-D picture of yourself, and play with your looks), online car driving schools (drive a car through Tokyo or New York, or go on safari).
- [WorldPlay Entertainment](#) has played around with these ideas for quite some time.
- Your favorite books, old as new, available for on-screen reading or searching in full text. Remember, many libraries have no room to store all the new books that they receive. Also, wear and tear tend to destroy paper based books over time.
- Many books are already available online, including this one.
- Instant access to hundreds of thousands of 'data cottages'. These are computers in private homes of people around the world set up for remote access. Technical advances in the art of transferring pictures will turn some cottages into tiny online "television stations."
- Before you know it, scientists will be able to collaborate with near TV-quality video and sound connections.
- Find information about and navigate cities using three-dimensional models (VRML) that are exact mirror-like copies of their originals. Meet and interact with

citizens at virtual meeting points. View public areas in real-time. Access cultural services online. Make purchases in shops. Conduct business with officials. Use toll or advertising-financed entertainment services. Make PC and video phone calls. Visit amusement parks and casinos. Meet members of clubs and associations. See [Virtual Helsinki 2000](#) for an example.

These "wild" ideas are already around, but it will take time before they are generally available all over the globe. New networks need to be in place. Powerful communications equipment must be provided.

We also see the contours of speech-based electronic conferences with automatic translation to and from the participants' languages. Entries will be stored as text in a form that allows for advanced online searching. We may be able to choose between the following options:

- Use voice when entering messages, rather than typing them in through the keyboard. The ability to mix speech, text, sound and pictures (single frames or live pictures).
- Have messages delivered to you by voice, as text, or as a combination of these (like in a lecture with visual aids).
- Have text and voice converted to a basic text, which may in turn be converted to other languages, and be forwarded to its destination as text or voice depending on the recipients' preferences.

Pointer: [CompuServe](#)'s multilingual machine translation of its MacCIM Help Forum and World Community Forum messages. Every three minutes, English messages in the forums are translated into German, Spanish and French and German, Spanish and French messages are translated into English.

Regardless of which language version of CompuServe a user has, the user may choose whether translated messages in the forums are received in English, German or French.

Rates

The Internet is pressing commercial service rates. There is a trend away from charging by the minute or hour. Many services convert to subscription prices, a fixed price by the month, quarter or year.

Other services, among them some major database services, let users pay for what they get (no cure, no pay). MCI Mail was one of the first. There, you only pay when you send or read mail. On IQuest, you pay a fixed price for a fixed set of search results.

Anyone who buys an Internet connection can in principle be a reseller of Internet access services. This presses the cost of Internet access towards cost. In turn, new technologies promise to reduce access providers' costs dramatically. They also promise to reduce the importance of a provider's geographical locations. The users win.

Cheaper transfers of data

Privatization of the national telephone monopolies has opened further for more alternatives. Possible scenarios:

- Free access to the Internet in exchange for receipt of advertisements.
- In 1998, several organizations began offering free Internet access in countries such as Denmark, Sweden, United Kingdom.
- Major companies selling extra capacity from their own internal networks,
- Telecommunications companies exporting their services at extra low prices,
- Other pricing schemes (like a fixed amount per month with unlimited usage),
- New technology (direct transmitting satellites, FM, etc.)

Increased global competition will press end users' communications costs down toward

the magic zero.

Powerful new search tools

As the amount of available information increases, the development of adequate finding tools is gaining momentum. Still, finding and using what we can get remains a major problem, and particularly on the Internet.

Personal information agents, whether they be called "knowbots" or other things, will increasingly do a better job at scanning databases and other information offerings for specific information at a user's bidding. Gradually, this may make specialists' knowledge of what sources to use redundant.

Search services will gradually cope better with the Internet's growth in Web pages and offerings, across language and cultural barriers, and offer indexes updated by the minute.

Some of these features will be built into your local software or operations systems, while others will be services offered through the net. Some will exploit the hypertext concept, universal data linking, massive cross-indexing of information, dynamic customization of your interactions to the various services, and more.

Artificial intelligence will increase the value of searches, as they can be based on your personal searching history since your first day as a user.

Your personal information agents will make automatic decisions about what is important and what is not in a query. When you get information back, it will even be ranked by what seems to be closest to your query.

Sources for future studies

Let's end this chapter with some online services and sources focusing on the future:

[Internet Surveys](#) is a free monthly newsletter that digests the most important surveys and reports on the Internet.

The European Commission publishes an "[Information Society Trends](#)" newsletter. You can subscribe to receive it by email.

Usenet has the [comp.society.futures](#) newsgroup - about "Events in technology affecting future computing."

[Dataquest](#), a U.S. market research firm, often offers interesting free texts. George Gilder's interesting views on the communications revolution and its implications for the future are at <http://www.forbes.com/asap/gilder/>.

Why not complement what you find here by monitoring trends in associated areas (like music), to follow the development from different perspectives?

It is tempting to add a list of conferences dedicated to science fiction, but I'll leave that pleasure to you.

Have a nice trip!

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The Online World resources handbook

Appendix 1: Selected online services

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- [ECHO](#)
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- [FT Profile](#)
- [GENie](#)
- [GE Information Service Co.
\(GEIS\)](#)
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- [NEC PC-VAN](#)
- [Netnews \(see \[Usenet\]\(#\)\)](#)
- [Newsbytes News Network](#)
- [NewsNet \(\[Brainwave for
NewsNet\]\(#\)\)](#)
- [NIFTY-Serve](#)
- [OCLC](#)
- [Pergamon Financial Data Services
\(see \[Orbit\]\(#\)\)](#)
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- [STN International](#)
- [TWICS BeeLINE](#)
- [UMI/Data Courier](#)
- [Unison](#)
- [UUCP](#)
- [Usenet \(User Network\)](#)
- [The Well](#)
- [ZiffNet](#)

Making a list of online services is difficult. Daily, new services are born, while others disappear. Addresses and access numbers are constantly changing. Only one thing is certain: Some details given in this handbook will be outdated, when you read it.

[Agence France-Presse](#)

[America Online](#)

offers Internet access, the CNN Newsroom (Turner Educational Services), the National Geographic magazine, PC World and Macworld, tailor-made graphical user interfaces for various types of personal computers, and more. It had over 17.6 million subscribers

by September 1999, plus the many using the services of their [CompuServe](#) subsidiary.

APC

The Association for Progressive Communications (APC) is a worldwide partnership of member networks for peace and environmental users with host computers in several countries around the world. The APC nets have full Internet access (except FTP).

While all these services are fee based, they bring a wealth of information on environmental preservation, peace (including Greenpeace Press Releases), human rights, grant-making foundations, Third World Resources, United Nations Information Service, Pesticide Information Service, and more.

See [Appendix 7](#) for more information.

ASCII Net

Japanese PC network for hobbyists. This online service had around 120,000 members in October 1996. Full Internet connectivity.

BITNET

"Because It's Time NETwork" started as a small network for IBM computers. In October 1994, BITNET encompassed 1,481 host computers by academic and research institutions all over the world. It had around 111,000 users (source: [Matrix News](#) 1995). Today, it is a dying network.

All connected hosts form a worldwide network using the NJE (Network Job Entry) protocols and with a single list of nodes. There is no single worldwide BITNET administration.

The European part of BITNET is called EARN (European Academic Research Network), while the Canadian is called NetNorth. In Japan the name is AsiaNet. BITNET also has connections to South America. Other parts of the network have names like CAREN, ANSP, SCARNET, CERN, GULFNET, HARNET, ECUANET, and RUNCOL.

BRS

Bibliographic Retrieval Services . BRS/After Dark is a service for PC users. Has adatabases within research, business, news, and science. The service's strengths are medicine and health.

CDP Plus

Focuses on medical information. Offers databases mostly relating to biomedical fields.

CGNET

A network interconnecting a group of international research organizations.

[CIX](#) (England)

Compulink Information eXchange Ltd. (England) claims to be Europe's largest conferencing system. British online-service available by telnet, PDN services and direct dial. Full Internet access.

CIX (USA)

The Commercial Internet eXchange is a North American association of commercial Internet providers in which they agree to carry each others' packets of mail, and more.

Clarinet

A commercial supplier of wire services to Internet users: general, international, sports, technology, entertainment and financial news, plus special features and columns, press releases from major companies. Their stories are delivered by email, the web, and Usenet. The Usenet newsgroups for Clarinet begin with **clari**. (also called ClariNews).

CompuServe

has over 1,500 databases, 600 forums, 500 newspapers, online shopping from more than 170 stores and entertainment. It's like a large electronic supermarket. It was sold to [America Online](#) in September 1997.

The IQuest database service gives access to over 450 databases spanning the fields of business, government, research and news. Bibliographic and full- text searches (check <http://www.iquest.n2k.com/>).

Some IQuest databases are the property of other online services, like Brainwave for [NewsNet](#), [Dialog](#), and BRS, DataSolve (has TASS in the World Reporter database), [Data-Star](#), and [Questel-Orbit](#). However, it may be faster and cheaper to search them on CompuServe, than by directly contacting these services.

Knowledge Index offers over 120 of Dialog's more popular full-text and bibliographic databases, the full text of 33 major newspapers, scientific abstracts, reference sources, and more within 27 subject sections (1993).

CompuServe can be accessed though local access numbers in over 100 countries.

DATEX-J

A service of Deutsche Telekom (Germany) having around 800.000 subscribers (1995).

Data-Star

In 1996, it offered over 400 databases from a broad scope of disciplines. Data-Star is strong on pharmaceutical, chemical, biotechnology, and automotive industries.

Delphi

Dialog

One of the first commercial dial-up online services. In 1995, The DIALOG service offered over 450 online databases, covering almost every discipline. Besides significant science and technology databases, it also boasted a large collection of full-text sources, plus a large collection of intellectual property files covering patents, trademarks, and copyrights.

DIMDI

Commercial service providing German business and biochemical information.

Dow Jones' Interactive

covers around 5,500 business and financial information sources . This includes a mix of newspapers (96), newswires (42), market reports, and company financials. (1998). Their

Publications Library is a vast searchable database that includes all Dow Jones's publications. Also, DJI offers a comprehensive clipping service: continuous email notification of news items or articles or articles added to the Publications Library on topics and in publications selected by the user.

[Business portal.](#)

ECHO

European Commission Host Organization. Its **I'M GUIDE** provides information about online services within the European Common Market.

Exec-PC Network BBS (U.S.A.)

In January, 1995, it had over 300 incoming phone lines, and more than 650,000 files available for downloading (including the complete selection from PC-SIG California). Over 200 conferences focusing on owners of IBM compatible computers (MS/PC-DOS, Windows, OS/2, Windows, Unix), Apple Macintosh, Amiga and Atari ST.

FidoNet

is an amateur electronic mail network founded in 1984 for automatic transfers of files from one place to the other at night, when the telephone rates are low. FidoNet are in countries all over the world, and consists mainly of personal computers (IBM/Amiga/Macintosh...).

FidoNet systems exchange documents by using a modem and calling another FidoNet system. Communication can be either direct to the destination system (calling long distance) or by routing a message to a local system.

Each computer connected to FidoNet is called a node. In November 1995, it had over 35,000 nodes in 96 countries (source: FidoNet host table). The number of nodes used to be growing at about 40 percent per year, but this levelled off when the Internet's strong growth started. In 1997, it had around 30.000 nodes.

Most nodes are operated by volunteers, and access is free. FidoNet is believed to have over 2.56 million users (1994/Matrix News).

Conferences (called ECHOs or Echomail) are broadcasted between interested nodes, and may thus have thousands of readers. The selection of echomail conferences on a given FidoNet board can be as unique as the rest of the system. A typical FidoNet Echomail conference gets 50 to 100 messages each day. Any connected BBS may carry 50, 100, or more echomail conferences.

In addition to, electronic mail, Fidonet distributes programs, pictures, and text files. NetMail is Fidonet's simple, person to person, electronic mail message system. FidoNet users can also send and receive mail through the Internet.

The list of member bulletin boards, the Nodelist, may be retrieved from most boards. Each node has one line on this list, like in this example:

```
,10,Home_of_PCQ,Warszawa,Jan_Stozek,48-22-410374,9600,V32,MNP,XA
```

The commas are field separators. The first field (empty in this example) starts a zone, region, local net, Host, or shows a private space (with the keyword Pvt).

The second field (10) is the node number, and the third field (Home_of_PCQ) is the name for the node.

The fourth field (Warszawa) is a geographical notation, and the fifth field (Jan_Stozek) is the name of the owner. The sixth field is a telephone contact number, and the other fields contain various technical information used in making connections.

FidoNet has six major geographical zones: (1) North America, (2) Europe, including Russian Asia, (3) Australasia, (4) America Latina, (5) Africa, (6) the Asian Pacific.

FT Profile

has full-text articles from [Financial Times](#) in London, from several European databases (like the Hoppenstedt database), and the Japanese database Nikkei. Profile is available through Telecom-Gold, and can also be accessed through other online services. Clipping service. CD-ROM. Web address:

GEne

The General Electric Network for Information Exchange was initially set up as a joint venture between GE and Ameritech.

GE Information Service Co. (GEIS)

Online service operated by General Electric. Available in many countries. GEIS' QUIK-COMM service integrates multinational business communications for public and private mail systems. Its services include Telex Access; and QUIK-COMM to FAX, which allows users to send messages from their workstations to fax machines throughout the world.

GENIOS

German online service. Offers data about companies in the former DDR, the Hoppenstedt business directories, and more.

GlasNet

International network providing low-cost telecommunications to nonprofit, nongovernmental organizations throughout the countries of the former Soviet Union. Email, fax, telex, public conferences. Email: support@glas.apc.org.

IASNET

The Institute for Automated Systems Network was the first public switched network in the former Soviet Union. Its main goal was to provide a wide range of network services to the scientific community in the xUSSR, including access to online databases, a catalog of foreign databases, and conferencing (ADONIS).

IBM Global Network

was announced in July 1994 as a worldwide value-added network (VAN) incorporating the Advantis network. In December 1998 it was purchased by AT&T (U.S.A.), offered access in 900 cities in 100 countries, and Internet access from 1350 places in 53 countries.

Its IBM Internet Connection gives users access to the full range of Internet services (World Wide Web, Gopher, FTP, Newsgroups, Telnet and E-mail), and OS/2 Warp provides an easy-to-use graphical interface for the user.

ILINK (Interlink)

A network for exchange of conferences between bulletin boards. At the peak, they had BBSes in U.S.A., Canada, Scotland, England, Norway, France, Australia, New Zealand, Sweden, and other countries.

Infonet

Vendor of packet data services with local operations in many countries around the world.

Internet

The name comes from "inter-networking," which is the process of connecting multiple host computers and their associated networks together to create a larger network.

What started as [ARPANET](#), was by July 1996 a large group of over 134,000 interconnected independent networks in 175 countries supporting mail, news, remote login, file transfer, and many other services (source: <http://www.nw.com>). All participating hosts use the **TCP/IP** protocol.

While electronic mail and the World Wide Web are the net's most popular applications, users also have access to ftp and telnet. **Ftp** gives interactive access to remote computers for transferring files. **Telnet** gives access to a remote service for interactive dialog. You can telnet several bulletin boards through Internet, like telnet://conrad.appstate.edu. (Login as "info")

It is not possible to calculate the number of interconnected networks any more, but by July 1997, hosts in 214 countries provided net connectivity.

There are other major wide area networks, such as the [BITNET](#) and **DECnet** networks that are not based on the TCP/IP protocols and are thus not part of the Internet. However, it is possible to communicate between them and the Internet via electronic mail because of mail gateways that act as "translators" between the different network protocols involved. See [The Matrix](#) below.

The number of hosts grew from 213 in 1981, through 313,000 in 1990, to 93,047,785 in July, 2000. (Source: [Internet Software Consortium](#)). A host used to be a single machine on the net. The definition has changed due to virtual hosting, where a single machine acts like multiple systems (and has multiple domain names and IP addresses).

The number of users is claimed to double every year. In January 1994, the **Internet Number FAQ** estimated some 16 million users. Two years later, [Matrix News](#) estimated 36 million users of computers who could **distribute** information by interactive TCP/IP services (like WWW, and FTP), and 57 million users who could **access** information by interactive TCP/IP services.

By June 1998, the Internet had an estimated 129.5 million users, according to [Nua Internet Surveys](#). By November 1997, the number was 86 million users.

For a different view of the figures, check [Global Internet Statistics](#). They estimate the number of each language population on the Internet (native speakers): those who have access to the Internet on a worldwide scale (that is, who have email access) or to the Web. They classify by languages instead of by countries, since people speaking the same language form their own online community no matter what country they happen to live in.

Already by August, 1991, over half the registered networks on Internet were commercial.

In addition, private enterprise networks have an estimated 1,410,000 hosts using TCP/IP (Source: The Internet Demographic Survey, January 1994.) These offer mail exchange with the Internet, but not services such as Telnet or FTP to most parts of the Internet, and are estimated to have some 7.5 million users.

One important feature of the Internet is that no one is in charge. The Internet is essentially a voluntary association. Somehow it all works.

Some of its direction comes from a group of volunteers called [the Internet Society](#) run more like a council of elders than a business.

No one organization collects fees from Internet users or networks. Each user and service pays its own way. There are rarely any additional charges for sending and receiving electronic mail (even when sending to other networks), retrieving files, or reading Usenet Newsgroups.

For more on the Internet, check out the sources listed at the end of [Appendix 6](#).

Statistics

- [CyberAtlas](#). Also has [a free weekly newsletter](#).
- [NetFactual.Com](#)
- [The Zooknic Internet Geography Project](#)

History

- <http://www.isoc.org/guest/zakon/Internet/History/HIT.htm>
- <http://www.isoc.org/internet/history/brief.html>
- <http://www.caslon.com.au/metricsguide1.htm>

Internet and The Matrix

The Matrix is also called "**WorldNet**." It includes all the networks in Internet, and in addition a long list of networks that can send electronic mail to each other (though they may not be based on the TCP/IP protocol). Think of it as a larger network using the Internet as a telephone exchange.

The Matrix includes Internet, BITNET, DECnet, Minitel (France), Usenet, UUCP, PeaceNet, IGC, EARN, Uninett, FidoNet, [CompuServe](#), Alternex (Brazil), ATT Mail, FredsNaetet (Sweden), AppleLink, GeoNet (hosts in Germany, England, U.S.A.), GreenNet, MCI Mail, [MetaNet](#), Nicarao (Nicaragua), OTC PeaceNet/EcoNet, Pegasus (Australia), Portal, PsychNet, Telemail, [TWICS](#) (Japan), Web (Canada), The [Well](#), CARINET, DASnet, Janet (England), X.400, SprintMail, and many more.

These peripheral networks create a larger Matrix Internet that reaches 155 countries (January 1995), and provide many millions of people with lowest common denominator email connectivity.

[Matrix News estimated](#) that 71 million users were able to exchange email with other users on the Matrix, versus 27.5 million as of October 1994 .

Istel

Vendor of packet data services, who used to have operator-owned nodes in Belgium, Canada, France, Germany, Italy, Japan, Holland, Spain, Sweden, England.

[Kompass](#)

Publisher of corporate directories with affiliates all over the world. Their databank has about 1.5 million companies in 70 countries (2000). Also at www.kompass.net. More details in [Chapter 11](#).

[MCI Mail](#)

[Microsoft Network](#)

MSN started in September 1995. They claimed 250,000 members by mid October, 1,000,000 members in March, 1996, and 2.3 million customers in July 1997. The service had relationships with long distance carriers to provide local access numbers in 50 countries, and it's access software was localized in 26 languages.

[LEXIS-NEXIS](#)

A full-text legal information service offering many specialized law libraries, covering all areas of law practice.

[MetaNet](#)

Minitel

French videotex service marketed in several countries by France Telecom. It was originally based on a special videotex graphics display format (Teletel), had over 25,000 services, and appeared like a large French online hypermarche. In October 1998, it claimed over 35 million users. Access required software for emulating Minitel menus and function keys, or any VT100 compatible terminal.

NEC PC-VAN

Used to be Japan's next largest online service with around 1,77 million users by the end of 1996.

Newsbytes News Network

Brainwave for NewsNet

In 1997, NewsNet was taken over by Telebase and integrated with its Brainwave service.

The Brainwave database of newsletters contains the full text of specialized industry newsletters that provide information on companies, products, markets, and technologies; trade and geopolitical regions of the world; and government funding, rulings, and regulation and other legislative activities which impact the industries and regions covered. It provides searchers with facts, figures, analysis, and current information affecting a broad range of industries and sectors.

The database includes more than 650 specialized industry newsletters published, with additional titles added on a regular basis. Sources include such varied titles as Air/Water Pollution Report, Asian Economic News, BOC Week, Communications Daily, Defense Daily, Inside R&D, NTT Topics, and The Private Placement Letter.

For a fee, you can read individual newsletter issues, and search back issues of individual newsletters or publications within an industry classification.

NIFTY-Serve

had 2 million subscribers by September 1996, and is Japan's largest online service. To use it, your communications system must be able to display Japanese characters. Offers Newsbytes in Japanese.

Nifty-Serve is jointly operated by Fujitsu and Nissho Iwai Trading in a licensing agreement with CompuServe.

OCLC

Online Computer Library Center, Inc. is a nonprofit computer library service and research organization whose computer network and products link more than 21,000 libraries in 63 countries and territories (1996). It serves all types of libraries, including public, academic, special, corporate, law, and medical libraries.

Questel-Orbit

Specialized in patent and trademark information.

RelayNet

Also called PcRelay-Net. An international network for exchange of email and

conferences between more than 8,500 bulletin boards. The Relaynet International Message Exchange (RIME) consists of some 1,000 systems (1992).

Relcom

means 'Russian Electronic Communications.' This company provides email, other network services, a gateway to Internet, and access to Usenet. In early 1992, RELCOM had regional nodes in 25 cities of the xUSSR connecting over 1,000 organizations or 30,000 users. RELCOM had a gateway to IASNET.

Reuters Information Systems

Financial online service.

SprintMail

Commercial vendor of email services. In 1991, they had local nodes serving customers in 108 countries through its SprintNet network.

STN International

The Scientific & Technical Information Network is operated cooperatively by Fachinformationszentrum (FIZ) in Germany, Chemical Abstracts Service (CAS) of the American Chemical Society (ACS), and the Japan Information Center of Science and Technology (JICST). Databases in Science, Technology, Patents, and Business.

TWICS BeeLINE

English-language Japanese online service with PARTicipate, Caucus and Usenet netnews.

UMI/Data Courier

Unison

North American conferencing service using PARTicipate software.

UUCP

UUCP (UNIX to UNIX Copy) is a protocol, a set of files and a set of commands to copy files from one UNIX computer to another. This copying procedure is the core of the UUCP network, a loose association of systems all communicating with the UUCP protocol.

UNIX computers can participate in the UUCP network (using leased line or dial-up) through any other UNIX host. The network now also has many MS-DOS and other hosts, and consisted of 18,800 hosts in October 1994 (source: UUCP map) serving more than 564,000 users (source: Matrix News).

The UUCP network is based on two systems connecting to each other at specific intervals, and executing any work scheduled for either of them. For example, the system Oregano calls the system Basil once every two hours. If there's mail waiting for Oregano, Basil will send it at that time. Likewise, Oregano will at that time send any mail waiting for Basil.

There are databases with connectivity information (UUCP maps), and programs (pathalias) that will help you decide the correct routing of messages. However, many UUCP hosts are not registered in the UUCP map.

EUNET is a UUCP based network in Europe. JUNET is an equivalent network in Japan. There are many gateway machines that exchange mail between UUCP and the Internet. Among these, UUNET.UU.NET is among the most frequently used (<http://www.uu.net>).

Usenet (User Network)

Usenet, **Netnews**, or just "**News**" are common terms for a large many-to-many conferencing (only) system distributed through UUCP, Internet, FidoNet, and BITNET. The European portion of Usenet is called EUNET (European Unix NET).

This grassroots driven "network" has grown out of the global university and research domains. It is a service rather than a real network. It is not an organization, and has no central authority.

In 1993, Usenet's newsgroups were carried by over 69,000 host computers (sites) in five continents, and had over 1,991,000 users (source: Brian Reid). In January 1995, Reid estimated 16.5 million users. In February, the number of sites were estimated at 260,000 (source: The Internet Index). Many of these sites also have access to the Internet.

The local administrator of each node in the network decides what newsgroups to receive and make available to its users. Few systems offer access to all of them.

NetNews is organized in groups of 'conferences'. Each classification is organized into groups and subgroups according to topic. As of June 1, 1993, there were 4500 newsgroups and 2500 regional newsgroups. Several sites are carrying over 2600 topics. In July 1995, there were over 15,000 newsgroups. In December 1996, PC/Computing estimated the number of newsgroups at over 28,000.

On a typical day in December 1993, 43,000 Usenet articles were posted. In November 1996, 754 megabytes of information were posted daily to Usenet.

The groups distributed worldwide are divided into seven broad classifications:

- "**comp**" Topics of interest to both computer professionals and hobbyists, including topics in computer science, software source, and information on hardware and software systems.
 - "**sci**" Discussions marked by special and usually practical knowledge, about research in or application of the established sciences.
 - "**misc**" Groups addressing themes not easily classified under any of the other headings or which incorporate themes from multiple categories.
 - "**soc**" Groups primarily addressing social issues and socializing.
 - "**talk**" Groups largely debate-oriented and tending to feature long discussions without resolution and without much useful information.
 - "**news**" Groups concerned with the news network and software themselves.
 - "**rec**" Groups oriented toward hobbies and recreational activities.
- Also available are many "alternative" hierarchies, like:
- "**alt**" True anarchy; anything and everything can and does appear. Subjects include sex, and privacy.
 - "**biz**" Business-related groups
 - "**clari**" Newsgroups gatewayed from commercial news services and other 'official' sources.

Most Netnews hosts offer both global and local conferences. These include Australian and Australasian (**aus**), and Jewish (**shamash**) newsgroups; groups coming from BITNET (**bit**), /CL-Netz (**cl**), Z-Netz (**z-netz**), and Fidonet (**fido**) ; German (**de**), Japanese (**fj**), French (**fr**), Norwegian (**no**), Cyrillic (**relcom**), and Finnish (**sfnet**)

language groups; United Kingdom (**uk**) groups, Taiwan (**tw**), Microsoft (**microsoft**) and more.

Many newsgroups can be read through bulletin boards, commercial online services, or through gateways from connected hosts (like from some BITNET hosts).

A full list of available groups and conferences is normally available from hosts offering Netnews, and on NETNEWS servers. The [Master List of Newsgroup Hierarchies](#) lists all hierarchies (not the names of the newsgroups themselves) with a brief explanation of their affiliation, purpose or topic areas.

Harley Hahn's [Master List of Usenet Newsgroups](#) lets you search by keyword for individual newsgroups. Also, you may browse lists of newsgroups by category and topic (example: Hobbies: Scale models: Model rockets). If you have a newsreader installed, the provided link will take you right to the messages.

The FAQ "What is Usenet?" is regularly posted to [news.admin.misc](#), and [news.answers](#). Also, make sure you check out [the Usenet Info Center Launch Pad](#).

An online book titled "Netizens: On the History and Impact of Usenet and the Internet" is at <http://www.columbia.edu/~hauben/netbook/>. At [Planetweb Galactic](#), you can search the contents of Web FAQ texts.

[The Well](#)

The Whole Earth Electronic Link is a commercial online service (U.S.A.). It has its own conferencing culture, and is an interesting starting point to "study" what makes the Silicon Valley area so dynamic.

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The Online World resources handbook

Appendix 2: Getting started

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You must have a computer.

It is not important what kind of computer you have, though you may find out that it is an advantage to have a popular one. The most common type of microcomputer today is called MS-DOS computers (or IBM PC compatibles or IBM clones).

Your computer should have enough memory for communication. Available memory impacts communications speed on many modern computers!

You do not need a hard disk. Many do without. Not having one, however, means more work, and less room for storage of the nice things you may want to retrieve by modem.

Personally, I want as much hard disk space as I can possibly get. When you have read the book, I guess you'll understand why.

Others may want to delay the purchase of a hard disk until they can spare the money. If you can afford it, however, do it! It is a decision that you'll never regret.

You must have a modem

Some computers are always connected to a network. If this is your situation, then you probably have what you need already. The rest of us need a modem.

A modem is a small piece of equipment that is translating the internal, electrical signals of the computer to sound codes. These codes can be sent over an ordinary telephone line. You may think of it as a type of Morse alphabet.

In some places, a computer can be connected to the Internet and other networks through cable television networks. Cable modems use the same lines that transmit cable television to provide two-way telecommunications.

There are also ISDN and ASDL modems. Sometimes these are called Terminal

Adapters to set them apart from traditional modem technology, but from the users' perspective, modems they are.

The recipient of data also needs a modem. In his case, the sound codes will have to be translated back into their original form as digital codes. When this is done, he can view text and pictures on the screen, and use the received data in other applications.

You can buy modems on an expansion card for installation in your computer, or in a separate box. Often, a modem has already been built into the computer, when you buy it.

Whether to buy an internal or an external modem is a question of needs:

A portable computer with an internal modem is easier to bring on travels than an external modem with a modem cable and a power adapter.

An external modem can serve several computers. Some of them are so compact that they fit besides your toothbrush in the toilet bag.

An internal modem blocks one of your serial ports.

External modems

The options are many. The modems differ on speed, features, prices - and whether they are approved for usage in your country.

Some of them are connected to the phone line by cable. Others are connected to the handset (to the talk and listen part) by two rubber cups. We call such modems acoustic modems (or acoustic couplers).

Acoustic modems are useful where connecting other modems to the telephone is difficult. The bad news is that you'll get more noise on the line. Acoustic modems can therefore not be recommended for use in other cases.

Asynchronous or synchronous modems?

Formerly, data communication was done by sending job commands to a mainframe computer, and having the result returned in one batch. The modems were called synchronous. Such modems (and computers) are still in use in some large corporations.

Most of today's online services are based on an interactive dialog between the user and the remote computer. The user enters a command, for example a letter or a number in a menu, and the result is returned almost immediately. The modems used for such work are called asynchronous (See "Explanation of some words and terms" in [Appendix 4](#)).

Unless you know that you must have a synchronous modem, buy an asynchronous one.

Choice of speed

Speed is measured in many ways. One method is to use baud. Another is to use characters per second (cps) or bits per second (bps).

Bps is a measure of how many data bits that can be transferred over a data channel in one second. (Each byte is split up into bits before transfer during serial communication.)

The relationship between baud and bits per second is complex, and often misused. Bits per second is unambiguous. In this book, we will use it as bps.

We can estimate the number of characters per second by dividing the number of bps by ten. For example. 1200 bps is roughly 120 cps.

In 1987, 300, 1200 and 2400 bps asynchronous modems were the standard in many countries. Around 1990, the growth in 9600 bps modems and modem with faster speeds gained momentum. Today, 28000 bps modems are very popular.

Modem user manuals often give transfer speed by referring to some international classification codes. Here are some ITU-TSS codes with explanation:

V.21	0-300 bps full duplex	Still used by a small group. Cannot communicate with the American Bell
------	--------------------------	--

		103 standard.
V.22	1200 bps full duplex	Partly compatible with the American Bell 212a standard. Sometimes it works, sometimes it fails.
V.22bis	2400 bps full duplex	Used all over the world.
V.23	600 & 1200 bps w/75 bps return ch.	Rare protocol. Used mainly in Europe. Half duplex.
V.26ter	2400 bps full duplex	Used mainly in France
V.27ter	2400/4800 bps half duplex	Used in Group III fax
V.29	4800, 7200 and 9600 bps half duplex	Used in gr. III fax and in some (American) modems. Do not buy V.29 if you want a 9600 bps modem.
V.32	4800/9600 bps full duplex	Current standard for 9600 bps modems
V.32bis	4800/7200 /9600, 12000/14400 bps	Full duplex with faster interrogation.
V.Fast also known as V.32terbo V.FC	28800 bps	Proprietary protocols supporting speeds to 28,800 bps for uncompressed (raw) data transmission rates over regular dial-up, voice-grade lines. Using V.42bis data compression, up to 86,400 bps may be achievable. Some claim throughput of up to 115.2 kbps with V.42bis compression. Incompatibility between brands.
V.34	28800 bps	A standard high speed protocol approved by ITU-TSS (1994).
V.34bis	33.6 Kbit/sec	
V.42		Error correction protocol (an appendix yields compatibility w/MNP gr. 2,3 and 4. See MNP below). For V.22, V.22bis, V.26ter and V.32.
V.42bis		Data compression for V.42 modems. Meant to replace MNP and LAP. Text can be transferred three times faster than with MNP. With a 9600 bps modem, you may achieve speeds of up to 38400 bps. Very common.
V.90	56 Kbits/sec	Receives up to 56.000 bits/s over ordinary telephone lines, sends at 33.600 bits/s. Still under development. Proprietary systems. Both you and your online service provider must be connected to a digital line. Two types: 2x modems, and K56flex modems.

??

112
Kbits/sec

Boca Research Inc. was the first to announce such a modem (November 1997).

When you consider buying a modem with higher speed, remember that going from 1200 bps to 2400 is a 50 percent increase, while going from 1200 to 9600 bps gives 800 percent!

If you now have 9600 bits/s, going to 28.800 will potentially triple the speed.

MNP error correction and compression

The Microcom Networking Protocol (MNP) is a U.S. industry standard for modem-to-modem communication with automatic error correction and compression.

Automatic error correction is useful when there is noise on the telephone line. MNP splits the stream of data up into blocks before transmission. They are checked by the other modem upon receipt. If the contents are correct, an acknowledging message is sent back to the sending modem. If there is an error in the transmission, the sending modem is asked to retransmit.

When using compression, files are being preprocessed before transmission to decrease their size. The result is that the modem has to send fewer bytes, and the effect is higher speed.

MNP Level 3 and up send data between two modems synchronously rather than asynchronously. Since sending a start and stop bit with each transferred byte is no longer required, the effect is higher speed.

MNP-4 or higher have automatic adjustment of block length when there is noise on the line. If the line is good, longer blocks are sent. The block size is decreased if the line is bad causing many retransmissions.

MNP-5 has data compression. This gives a further increase in transfer speed by from 10 to 80 percent depending on the type of data sent. MNP-7 is capable of a three-to-one compression ratio.

Both users must have their modems set for MNP to use it.

The speed of your computer's COMM port

Installing a super fast modem does not guarantee an increase in the effective transfer speed. The serial port of your computer may be a limiting factor.

Owners of older MS-DOS computers often have UARTs (serial port processors) in the Intel 8250 or National 16450 series. With these in the computer, it is difficult to achieve speeds above 9600 bps without losing data.

Take this into account when investing in a modem.

MNP and efficiency

I call the Internet daily. My personal computer is set to communicate with a 28.800 bps modem at 57.600 bps. The modem sends data to the telephone line at 28.800 bps, this modem's maximum line speed.

Data is received by the remote computer's 28.800 bps modem at 28.800 bps, and probably forwarded to the Internet server at an unknown higher speed.

Why these differences in speed?

MNP level 5 compresses data in the modem before transfer, and gives error-free transfer to and from the Internet server at higher speed than by using 28.800 bps all the way through.

The compression effectiveness differs by the type of data. When sending text, the effective transfer speed may double. Speed will increase further if the text contains long sequences of similar characters.

Text is typically compressed by up to 63 percent. This means that a 2400 bps modem using MNP-5 may get an effective speed of around the double when transferring such data.

File transfers using MNP and V.42bis

Files are often compressed and stored in libraries before transfer. Online services do this because compressed files take less space on their hard disks. Also, it is easier for users to keep track of files sent in a library file.

You rarely get speed advantages when transferring precompressed files using MNP or V.42bis. With some modems, you must turn MNP and V.42bis compression off before retrieval of compressed files.

Dumb or intelligent modem?

Some modems are operated with switches or buttons on a panel. They do not react to commands from your computer. We call them dumb.

You must dial numbers manually, and press a key on the modem, when you hear the tone from a remote modem. Only when the modem is connected to the remote modem, can you ask your communications program to take over.

We call those modems 'intelligent' that can react to commands from your computer. Most of them react to commands according to the Hayes standard.

Buy intelligent, Hayes-compatible modems - even when other standards may seem better. Most of today's communication programs are designed to be used by such modems.

Note: Buy modems that use the Hayes extended command set.

When a communications program, like Windows built-in Terminal, tells the modem to "dial a number" or "go on hook," then the Hayes-compatible modem will do just that.

When you click on Dialer and Login in the Trumpet Winsock program, it will dial your Internet access provider automatically. When you click on Dialer and Bye, it will ask the modem will disconnect from the remote modem.

If you press ALT-D in the communications program TeliX followed by the number "2," then it will locate the number to an online service in your telephone directory, and dial that number.

When the connection with the remote modem has been set up, your modem will report back to you with a message like CONNECT 14400. This tells that a connection has been set up at 14400 bps.

If I select "k" from a menu provided by my communications program's command scripts, then my system will retrieve today's business news from Tokyo and put them up on my screen.

In the process, my system tells the modem to do several things, including "call a number," "speed 28800 bps," "redial if busy," "go on-hook when done." The only thing that I have to do, is press "k". The communications program and the modem will do the rest.

Automatic communication is impossible without an intelligent modem.

The Hayes standard

The U.S. company Hayes Microcomputer Products, Inc. pioneered command- driven modems. Their Smartmodem became a success, and "Hayes compatibility" a standard for intelligent modems.

Today, it is as unimportant to buy a Hayes modem to get access to Hayes commands, as to buy an IBM PC to run PC software.

Automatic dialing (autodial) was one of Smartmodem's important features. The modem could call a number and prepare for data communication, once a connection had been set up. If the line was busy, it could wait a while and then redial. The operator could work with other things while waiting for the equipment to be ready for communication.

The modem had automatic answer (autoanswer), that is, when someone called in,

the modem could take the phone off hook and set up a connection with a remote modem. The modem enabled a connected PC to act as an electronic answering machine.

Hayes-compatible modems can report call progress to the local screen using short numeric codes or words like CONNECT, CONNECT 1200, CONNECT 2400, NO CARRIER, NO DIALTONE, BUSY, NO ANSWER, RING etc.

There can be small differences between such modems. The message DIALTONE on one modem may be DIAL TONE on another. Most of the main progress messages, however, are the same across brands.

The old Smartmodem had switches used to configure the modem. Most modern Hayes-compatible modems come without switches and have more commands than their ancestor.

Today's Hayes-compatible modems have a core of common commands, the "real" Hayes-commands, and several unstandardized additional commands. Here is an example:

A standard on the move

On the Quattro SB2422 modem, 2400 bps speed without automatic speed detection is set by the command "AT&I1". The equivalent command on Semafor's UniMod 4161 is "AT+C0".

Automatic detection of speed is a feature that lets the modem discover the speed of the remote modem to set its own speed at the same level. (Other modems may use different commands to set this.)

When I want Windows Terminal to call a bulletin board, it first sends a sequence of Hayes commands to the Semafor modem. These commands are stored in Terminal's settings (Click Settings, Modem Commands. Originate to update or change them.)

The purpose of these commands is to "configure" the modem before calling. It sends the following:

```
AT S0=0 +C0 S7=40 S9=4 &D2
```

The cryptic codes have the following meaning:

AT	"Attention modem. Commands following.."
S0=0	No automatic answer
+C0	No automatic speed detection (fixed speed)
S7=40	Wait 40 seconds for an answer tone from the remote modem.
S9=4	Wait 4/10 seconds for detection of carrier
&D2	Go on-hook if the DTR signal is being changed.

If this command is sent to the Quattro modem, it will reply with "ERROR." The code "+C0" must be replaced with an "&I1". The rest of the commands are the same. (Note: when a modem responds with "ERROR," it has usually rejected all commands sent to it!)

This setup is held in the modem's memory when Terminal sends its dialing command: ATDT4737031378. AT stands for ATtention, as above. DT stands for Dial Tone. Here, it is used to dial the number 4737031378 using tone signaling (rather than pulse dialing).

The modem cable

If you have an external modem, you must connect your computer to the modem with a cable. Some modems are sold without a cable.

This cable may be called a serial cable, a modem cable, a RS232C cable, or something else. Make sure that you buy the correct cable for your system.

Make sure that the connectors at each end of the cable are correct. If a male connector (with pins) is required in one end and a female (with holes) in the other, do not buy a cable with two male connectors.

Some connectors have 9 pins/holes, while others have 25 or 8-pin round plugs (Apple computers). Use a shielded cable to make sure there is minimal interference with

radio and television reception.

At this point, some discover that there is no place on the PC to attach the cable. Look for a serial port at the rear of your machine, labeled MODEM, COMMUNICATIONS, SERIAL, or with a phone symbol.

If you find no suitable connector, you may have to install an asynchronous communication port in the box.

Connecting your equipment to earth

Secure your computer and modem against thunderstorms and other electrical problems. Securing the electric outlet in the wall is not enough. Problems can also enter through the telephone line.

Thunderstorms have sent electrical pulses through the telephone line destroying four modems, three PC-fax cards, one mother board, and at least one asynchronous communication port.

To prevent this from happening to you, disconnect electrical and telephone cables from your equipment during thunderstorms.

The communications program

A powerful communications program is half the job. In my case it's the whole job. Most of my work is done automatically.

The communications program will help you with the mechanical transportation of data in both directions. It lets you store incoming information for later use and reduces the risks of errors.

There are several basically different types of communications programs:

1. Programs that connect you to an Internet access provider using the TCP/IP protocol. Example: Trumpet Winsock. In some cases, this is all they do. Sending email, looking up the World Wide Web, and transferring files are done using various client programs, like Netscape or Mosaic. Other programs, like SlipKnot, can connect and perform client functions.
2. General purpose asynchronous communications programs, like Windows Terminal. These let you call a large range of BBSes, commercial online services, and Internet hosts. Your dialog with the host can be manual, or governed by automatic scripts. Connecting to the Internet using TCP/IP is rarely included.
3. Special purpose communications programs. These are canned programs designed to do specific tasks on defined services. They are rarely useful on other services, and for other applications.

Some items to consider when shopping general purpose programs:

- Seriously consider buying automatic programs ('robots') for access to individual online services, even if that means having to use several programs for different applications. (Read [Chapter 16](#) for more.)
- Menus and help texts are important for novices, and in environments with "less motivated personnel." Advanced users may find it boring.
- Ability to transfer data without errors. The program should have transfer protocols like XMODEM, Kermit, XMODEM/CRC, YMODEM and ZMODEM. The XMODEM protocol is the most commonly used. You need these protocols if you want to transfer compiled computer programs (for example, .COM and .EXE files). They are also used when transferring compressed files, graphics and music files. ZMODEM is considered the best protocol by many.
- Does it let you tailor it to your taste/needs? Some programs let you attach batches of commands to function keys and keystroke combinations. For example, by having your computer call your favorite online service by pressing the F1 key.
- Does it let you "scroll back" information having disappeared out of your screen? This may be useful when you want to respond while online to an electronic mail message. The sender's address and name, which you need to respond, have

scrolled off the screen. If you cannot review the "lost" information, you may have to disconnect and call back later to send your mail.

Connecting to the online service

The first couple of times, most people think that it is very difficult. Soon it becomes a simple routine.

On some computers, you just press a key, and that's it. On others, you have to call and press, and watch, while things are happening. Cheap is often a synonym for more work.

If you have a dumb modem connected to your personal computer, these are the typical steps that you must take:

1. Start your communications program and set it up, for example, with 28.800 bps, 8 bits word length, 1 stop bit, no parity. (This is a common setup.) Then set the program to "online."
2. Call the desired number.
3. When you hear the tone from the remote modem in the phone, press DATA to get the modems to connect to each other (that is, to start to "handshake").
4. A front panel indicator may tell you when the connection has been set up. You can start transferring data.

With an MS-DOS computer, an automatic modem and a powerful program preset for the job, the steps may be as follows:

1. Start the program and display the telephone directory. Select a service from the list by pressing a number.
2. The modem will call automatically to the service. When the connection has been set up, your user identification and password are sent at the prompts for such information. When this is done, you are free to take control.

With an MS-DOS computer, TAPCIS, and an intelligent modem, you start by selecting forums and services to access on [CompuServe](#). Enter 'o' to upload and download programs, or 'n' to have it fetch new message headers and messages. TAPCIS will dial the number, do the job, and tell you when it's done. Meanwhile, you can go out to look at the moon, or sing a song.

Getting started with Procomm

Procomm is cheap and a popular communications program for MS-DOS computers. We will use the old shareware version as an example here, though there are many better and cheaper alternatives.

The program is simple for novices, can automate the work for advanced users and be run on almost any MS-DOS computer. Here are some of its features:

Press ALT-F10 for a pull-down window text listing features and commands. Press ALT+D to call a number, update the telephone directory, or select a script file for autologon to a service.

Procomm can emulate (pretend to be) different terminal types, like IBM 3101 and DEC VT-100/VT-52. Most services covered in this book may be well served with the setting ANSI.BBS.

It let you use both dumb and intelligent Hayes-compatible modems. If you have the latter, select numbers from the telephone directory for autologon. If the number is busy, Procomm can call back until you can get through.

You can define macros to automate your work. You can have one keystroke send your user identification, another for your password, and a third key to send a sequence of commands. Macros make your communication faster and safer.

You can write script files to automate the online work further. You can transfer text files and binary files using automatic error detection/correction protocols, like XMODEM, YMODEM, Telink and Kermit, at speeds from 300 to 19200 bps. Adding

external protocols like ZMODEM is relatively simple.

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The Online World resources handbook

Appendix 3: Online with the world

Your first trip online. Typical pitfalls and simple solutions

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Practical data communication

The first thing novices want to know is how to set up the modem and computer for communication. This may take more time than expected and often seems complex for the uninitiated. You can save yourself much sweat and frustration by asking others for help.

To enable your computer for communication is a one time job. Once done, you can almost forget what you did and why.

There are so many different modems, computers and programs out there. We just cannot give practical advice on the use of all of them in one short appendix. Instead, we will use one example. Your job is to "translate" the text into a terminology that fits your tools.

Once your system is set up for communication, your first job will be to find what keys to

press to get the job done. How you use your communications program may vary considerably from our example. In general, however, it will be the same for most people doing manual communication. Once online, the environment is the same for all users.

If you plan to use automatic communications as explained in [Chapter 16](#), this chapter may not be that important. Your program will do the job for you. Still, take a few minutes and browse through the text. It may enable you to handle unexpected problems better.

Our example assumes that you have an MS-DOS computer. Not because this is the best microcomputer in the world, but because there are more of them than anything else. We assume that you have an external, intelligent Hayes-compatible modem and the communications program Procomm (version 2.4.2).

Assembling the equipment

You have the modem, the cable (to connect your modem with the computer), a phone cable (to connect your modem with the phone or the wall jack), and a communications program.

Check that the modem's power switch is off. Place the modem by the computer, and plug the power supply cord (or the power adapter cord) into the AC wall socket. Switch on the modem.

Do NOT use 115-volt equipment in 250-volt sockets!

Connect modem and computer using the modem cable. There may be several optional sockets on the computer. These are usually marked RS-232, COMMS, MODEM, or just nothing. The connector may be of a flat 25-pins, 9 pins, or a round 8-pins type. Use communication port number 1, 2, or whatever else is available for this purpose.

If you have several options, and the socket for communication port number 1 seems free, use this. If not, try one of the others.

Next, connect the modem to the telephone line. If in luck, the modem came with a phone cable that works with your setup. If so, it is simple:

1. Disconnect the phone cable from the telephone. Insert the modular plug into the right jack on the modem. This jack is often marked with the word LINE, with a drawing of a modular wall jack, or another understandable icon.
2. You may be able to connect the phone to the modem using the phone cord that came with the modem. This may allow you to use the phone for voice, when the line is not busy with communication. (You may have to make changes in this cord to make it work with the connected phone.)

This concludes the technical assembly of your equipment. Next step is to install the communications program. When this is done, we will check it out.

Installing the program

Let us assume that you have received Procomm on a diskette, and that it is set up with its default configuration. PROCOMM.EXE is the program. The other files have no importance here.

Enter Procomm and press ENTER. Our first task is to prepare it for communication:

If you are using a monochrome display, use the command

```
PROCOMM /B
```

The program will greet you by a welcome text. At the bottom of the screen, the message

"CREATING SYSTEM FILES" may appear (if these have not been created yet), followed by a message from the creators of the program.

Press ENTER when you have read the text. The screen will be blanked, and a text line will appear at the bottom.

Now is the time to test if the technical installation has been successful.

The dial tone

Lift the receiver from the phone and check if you can hear the dial tone. If you can, turn the pages to "Does the computer have contact with the modem?"

If you hear nothing, there are several possible causes:

- The phone is not working. This is easily checked. Disconnect it from the modem, and connect it to the wall (using the original cable!). If you get a dial tone now, then the phone is in order.
- The cable between the modem and the wall jack may be broken, or wrongly configured. To check this, we must first check the connection between the modem and the computer.
- Once we know that the connection between the modem and the computer is in order, we can use the modem to check our phone cable.
- The cable between the modem and the phone may be in disorder. For example, the modular phone connector may have a cabling that differs from what is assumed in your country. If there is no dial tone, then the cable between the modem and the telephone must be repaired, or replaced.

Does your computer have contact with the modem?

When you first use Procomm, it is preset for communication at 300 bps, use of port 1 and ANSI-BBS. (The control line at the bottom of your screen should read: ALT-F10 HELP, ANSI-BBS, HDX, 300 N81, LOG CLOSED, PRT OFF, CR and CR.)

- If your modem is unable to communicate at 300 bps, you must change the setup. Press ALT-P (keep the ALT key down while pressing P) to get the menu LINE SETTINGS. Choice 9 gives 2400 bps with 8 bits word length, no parity and one stop bit. This is a common setting. Select 24 "Save changes" to make the setting permanent.
- If you know that your modem is not connected to the computer's port number 1, then change this from the same menu. Choice 21 gives COM2, and choice 22 gives COM3.

If you do not know what communication port the modem has been connected to, you have to find out by testing. Do this by entering (that is, sending to the modem) the characters AT. Now, the modem is supposed to respond with an OK (or with the number "0," if the modem is set to reply with numeric codes).

If you get an "OK" or a "0" on your display, continue reading from "Does the modem have contact with the phone line?"

If you can see "AT" on your screen while you enter it, you have contact with the modem. This is true even if it does not send any confirmation. The modem may have been instructed not to confirm. If you see the AT characters, read from "Does the modem have contact with the phone line?"

If there is no contact between the modem and the computer, the screen will always remain blank. Your problem may be the cable, your choice of modem port, or the modem setup.

First, check if the modem is switched on (the power switch), and that the plugs are firmly in the jacks.

Then let's check the modem. It may have been set not to respond to your commands. Let's try to change that. Enter the following command, and press ENTER:

```
ATQ0E1V1
```

This should make your modem: give result codes on your screen (Q0), show the characters that you enter (E1), and use OK instead of the numerical result code 0 (V1).

If you still get no OK, the reason may still be in the modem. I have seen modems get "indigestion problems" when too many commands are given to them.

Try give a command to return it to its factory setting. This command is not the same on all Hayes-compatible modems. On most of them, you can use one of the following: AT&F, ATF or ATZ (on some modems ATZ is used to reset to the stored configuration). Locate the correct command to use in the modem's user manual. Then, try ATQ0E1V1 again.

If you are still without success, check your choice of modem port. If there are several communication connectors at the back of your computer, test these. If this doesn't help, connect the modem cable to the most probable jack.

Now, test the communication port for a response from the modem using another communications program setting. Press ALT-P, select another port (choice 20 - 23), press ESC and try "AT" again (or ATQ0E1V1). If there is still no reaction, test the computer's other communications connectors.

If you have a mouse connected to your computers, make sure that it is not using the same port as your communications program.

Problems with the communications port are often caused by other equipment. Remove all extra equipment (like a PC-fax card or a mouse), and all associated software (often represented by a line starting with DRIVER="in CONFIG.SYS, or a resident program driving a mouse). Remove all resident programs from memory before testing.

If you are still at the same unfortunate stage, chances are that the problem is either in the cable or the modem. If you know others who are into data communication, visit them for help. Bring your cable and your modem to have them tested in an environment where things work. It is easier to isolate a problem by testing your units in sequence on your helper's system.

First, the cable. Connect it between his computer and his modem. Test the connection to his modem with your cable as the only foreign element. If the test is successful, your cable is OK.

Next, the modem. If the test is successful, your modem is in order. The most probable cause of your problems is your computer's communications port.

In communications, many parts have to work together. You may have problems with more than one of them. Therefore, the rule is to test **step by step** to eliminate possible problems.

If you get no reply from your modem, when it is connected to your friend's computer, chances are that it needs to be repaired. Call the seller for help.

A last refuge is to buy an extra communications card for your computer . .

Does your modem have contact with the phone line?

You have contact between your computer and modem. The modem answers "OK" as assumed. We now have to test if there is contact with the phone line. That is easy.

Enter the following command and press ENTER:

```
ATQ0E1V1
```

When the modem answers OK, enter the dialing command:

```
ATDT37031378
```

The modem will try to call 37031378, the number that used to give you my BBS. Don't try it. My BBS has now been closed down. Replace the number with a local one.

Your modem will wait for CONNECT a preset number of seconds (rarely longer than 60 seconds).

If your modem does not detect the dial tone (within the preset waiting time), it will give you the following error message

```
NO DIALTONE
```

All other messages (except ERROR) declare that the modem did detect the dial tone. If it did, continue reading from "Configuring your program."

NO DIALTONE

The most probable causes of NO DIALTONE are that your phone cable is not connected, is damaged, or that it is the wrong cable for the job.

The latter cause is common in many countries. For example, a cable made for a telephone network in the United States, may not work in Norway. A cable made for connection to a switchboard, may not work when connected to a domestic phone line.

A standard, domestic American phone cable contains four lines. Two of these (line number 1 and 4) carry sounds. The others are not being used. A standard Norwegian domestic cable is set up in the same way, but here line number 1 and 3 carry sound.

Changing the configuration of such cables is often simple. Just cut the cable in two, and put the lines together correctly. This is typically required when your modem assumes that you use it in North America, while you are in a country with different cabling.

One other possible reason for the NO DIALTONE message: Your modem may be unable to recognize the tone. The solution is to tell your modem to ignore it (ATX3), and just go ahead dialing.

Some years ago, I had this problem in Hotel Watson, Mekuro, Japan. My solution was: [1] Add the following string to the modem AT setup command: "X3", [2] Use this dial command: "ATDP0W3739-9968."

The "ATDP0" portion dialed 0 to provide an external line. Thanks to the X3 setting it ignored the perceived absence of a dial tone. The "W" command portion made it wait for an external dialtone. Upon detection of the tone, the number was dialed (3739-9968).

Configuring your general purpose communications program

The modem answers. The dial tone is being detected. Procomm is installed on your hard disk. Now, check if the program has been correctly configured.

Press ALT-S to get the Setup Menu. Select 1, Modem setup, from this menu.

Choice 1, Modem init string, is a general setup command. This command will be sent to the modem each time you start Procomm. You are free to make it as long and powerful as you want. Our purpose now, however, is to check if it works.

Most modems do not react if one element in your setup command is wrong. They respond with ERROR (or the numeric code), and disregard the rest.

Procomm's standard Modem init string has the following commands:

```
ATE0 S7=60 S11=55 V1 X1 S0=0!
```

These work well with most modems, provided the speed is legal.

Go back to the blank screen (using ESC). Test the init command by entering it manually. (Do not enter the "!" character. This is Procomm's code for ENTER.)

If the modem reacts with ERROR, check with the modem manual to find out what is wrong. (Check if the values S7=60 and S11=55 are not too high.)

If you have to change the init command, go back to the Modem init string menu choice. Enter the correct commands. Remember to add the "!" at the end.

Press ESC to get to the main configuration menu and select 2, TERMINAL SETUP. Check if Terminal emulation is ANSI-BBS. Change choice 2, Duplex, to FULL. The other factory settings are NONE, CR, CR, DEST, BS, OFF, ON, 350, OFF.

Return to the SETUP MENU (press ESC). Press "s" to save the setup to disk. Your setting has now been stored, and Procomm is ready to be used.

Configuring Trumpet Winsock

The easiest is to ask your Internet access provider to do it for you. To do it yourself, click on File, Setup and fill out the form based on the data that your access provider has given.

Pay attention to Slip Port. This is where you enter the number of your communications port. Make sure you select the correct one, and not the one used by your system's mouse. Baud rate may be set to higher than your modem's dial-up rate if it is supported. If your computer has an old UART, then this figure should not be higher than 9600.

Dialing

Now, test your setup by calling your favorite online service. This is how it was possible to log on to my now defunct bulletin board in Norway using the old Procomm shareware program.

You can call manually by entering ATDT followed by the phone number. The most practical method, however, is to use the built-in phone directory.

Press ALT-D to get to the phone directory. Press "R" to revise the list, and enter Saltrod Horror Show somewhere on the list. I have it as number 2. Answer the questions like this:

```
Name: Saltrod Horror Show
Number: 009-47-370-31378
Baud: 9600
Parity: N
Databits: 8
Stop Bits: 1
Echo On? N
```

```
Command file: (press ENTER, meaning that you do not
               want to use a script at this point)
```

Baud can be anything from 300 bps to 9600 bps. It's up to you, and depends on your modem's capabilities.

When done, enter "2" and press ENTER. The modem will dial the number (that you have as item 2 on the list), and try to connect.

If the number is busy, you will get a warning. You can now leave Procomm (ALT+X), or set it for redialing (ALT+R). When set for redialing, Procomm will call back until a connection has been made. When CONNECT is received from your modem, Procomm announces the fact with a beep in the computer's loudspeaker.

Text will start scrolling over your screen. First, a short welcome text pops up. Your interactive dialog with the bulletin board can start.

The first question is "What is your First Name?" Enter your first name. Then, "What is your Last Name?" Enter your last name.

Your dialog with the remote computer will continue like this. The board will ask you questions, and you will enter your answers.

What may go wrong?

A setting that works beautifully when calling one bulletin board, may be a disaster when calling another service. Here are some typical problems:

When dialing through a switchboard (PBX)

Remember to add 9 or 0 for a city line, when dialing out from a PBX. If you forget, you'll get nowhere.

Use the following command (assuming that you must enter 0 to get a city line, and use tone signaling):

```
ATDT0W4737031378
```

If you must use 9 for a city line and pulse dialing, use the following command

```
ATDP9W4737031378
```

Register your standard dialing command in Procomm's MODEM SETUP. Enter ALT+S and then select 1, Modem Setup. Choice 2, Dialing command. The default entry is ATDT. Replace this with ATDT0W, ATDP9W or whatever makes dialing work for you.

No answer from the remote computer

Your computer has to "talk the same language" as the remote host. If the parameters of your communications program have been set incorrectly, it may be impossible to set up a connection with the service.

Sometimes, you get CONNECT, but your screen only gives you strange, unintelligible 'noise' characters. The reason may be CONNECT at an incompatible speed, a service's use of special codes for displaying text (including special language characters), or that the service requires use of a special communications program or method (as when a service starts by checking to see if you're using an offline reader).

Many online services require that you use certain settings. Most services, however, may be reached when using the following:

```
Speed: 2400 bps
8 bits word length, no parity, one stop bit
```


Some services (notably some Unix hosts) demand 7 bits, even parity, one stop bit.

Sorry, no luck!

Try again, just in case. The remote computer may have had a temporary problem, when you called. The PTT may have given you a particularly noisy telephone line on this attempt.

If this doesn't help, recheck each point in the communications process. It is so easy to do something wrong.

If nothing helps, read the service's user information manuals. You will only rarely be able to blame the communications program (unless you have made it yourself), or the equipment. Most errors are caused by finger trouble and misunderstandings.

Testing a BBS

First time visitors often experience problems, and in particular if this is their first time online using a Hayes-compatible modem.

Here are some typical problems with suggested solutions:

- Disable Guard Tones from the modem when dialing. If it has this feature, you can often turn it off. Put the required command in your Modem init string.
- Don't press ENTER to "wake up" the system. The software will usually automatically detect your speed and adjust accordingly. You may just be asking for problems by not waiting patiently (often the case when the remote software starts by checking if you use an offline reader).
- Start with your communications program set for 8 bits word length, no parity and one stop bit. Try 7 bits, even parity if there is too much noise on the line (you cannot retrieve programs using this setting, though).
- When your modem is set at a low transfer speed, it may not wait long enough for carrier from my modem. Most modems let you set this waiting time longer by giving a value to a S-register. (Read in your modem's manual about how to do this).

Partial success

Some bulletin boards offer colors and music. If your equipment is set up correctly, you can receive the welcome text in full color graphics accompanied by a melody in your computer's speaker.

If it is not, chances are that you will get many strange codes on your screen, and an ugly feeling that something is wrong.

There are two ways out of this problem:

1. Ask the bulletin board to send text only. This is usually simple to achieve from a settings menu.
2. Set your computer for colors and graphics.

Finally, you must have a communications program that allows you to display colors on your screen. Procomm set with ANSI-BBS does that.

Downloading programs

We call the transfer of programs and files from a remote computer for downloading. It means "transfer of data to your computer AND storage of the data (down) on YOUR

local disk."

You are downloading, when you call a bulletin board to retrieve a program.

When you, overwhelmed by gratitude, send one of your favorite programs back TO the bulletin board, we call it uploading.

Data can be many things. It may be news from the Washington Post, a digital picture, an executable program, a pile of invoices, a piece of music, a voice file, an animated sequence of pictures and music, or compressed library files.

Downloading "plain text" (also called "plain ASCII" or "DOS text" on MS-DOS machines) is relatively easy. Such text usually only contains characters between number 32 (space character) and 126 (the ~ character) in the ASCII table.

Characters with lower numbers have special functions (like the control characters ESCape and CTRL+C). These may not even be displayed on your screen. Characters with higher numbers are used for graphics, special national characters, and other applications.

Special transfer methods are often required, when your data contains text with characters outside ASCII number 32 through 126. Read under "Protocol transfers" below for more information about how to do this.

Downloading text

Most communication programs require that you begin by opening a file. They ask you to enter a file name. From this point and onwards all incoming text will be stored in this file until you say stop.

Communication programs do this in different ways. Some let incoming data flow through a temporary storage area using the principle first in, first out. When you open a file, it starts storing data from the beginning of the temporary storage area, though this text may have scrolled off your screen some time ago.

Most communication programs start storing data from NOW. Procomm works this way. You start downloading of text by pressing the PgDn key. A window will appear on your screen giving you a choice between various methods. Select ASCII.

In another window, you are asked to enter a file name. When done, storage of incoming data starts. You stop the process by pressing the ESC key.

Procomm has another method called "file logging." You start this by pressing ALT-F1. Procomm requests the file name, and the storage process starts. (Read under "Strip" about the difference between these methods.)

If you forget to tell Procomm to store incoming data, then you will most probably lose this data for ever.

Do not waste time and money by forgetting to store what you receive!

The term "append"

When downloading text - or anything - you must know whether you are appending information to an existing file, or overwriting it (that is, destroying the old text).

Most communication programs complain with an audible signal, when you try to overwrite an existing file. They will ask you if you really want to delete it, or append the current data.

The term "strip"

The purpose of 'strip' is to remove something from incoming data or to change it on the fly.

When you use ASCII downloading with Procomm, ALL incoming data are being stored. This includes so-called ESCape sequences. If you use File Logging, all control characters (except the line feed and new page characters) are being removed (filtered).

If you download text from a computer that uses other ASCII characters for linefeed and return, save time by having the communications program convert them on the fly to their correct form for your computer.

You define strip procedures through Procomm's SetUp menu (ALT-S). You can also request automatic conversion of characters to graphics values, or local language variants.

National characters

Special national characters cause problems in many countries. One reason is that they are represented by different internal codes on various hardware platforms, and that some networks are unable to transmit 8-bits data.

Some systems represent these special characters by a 7-bit code, others by an 8-bit code. Some depend on the computer having an internal national language ROM, or that it uses a special (resident) conversion program.

What gives good results on an MS-DOS computer, may give rubbish on a Macintosh, Amiga, Atari, or a PC using MS Windows.

Many communication programs have features that can help you solve at least some these problems. They let you make translation tables for automatic conversion of special incoming and outgoing characters.

If you call a Scandinavian online service using 7 bits even parity, many transfer the national special characters using the ASCII code equivalents of number 91, 92, 93, 123, 124, and 125. Similar, more or less formal standards are in place in other countries.

Protocol transfers

If your purpose is to transfer digitized pictures, a computer program, a batch of invoices, a piece of music or an animated sequence of pictures, it's important that each character (bit) arrives correctly. We achieve this by using protocol transfers.

These files often contain control or binary characters. You cannot transfer binary files without the use of special methods.

It is easy to understand why we need protocol transfers when retrieving plain text as tables of numbers, statistics, and financial reports. Transfer errors may have fatal results.

Protocol transfers are also required when transferring word processor text files having imbedded control codes (like text made with WordPerfect), and compressed files.

Here is an example:

Downloading public domain software

First, you need the names and features of the programs that can be downloaded from a

service. On most bulletin boards, you must enter a command to navigate to the File Library. Here, they normally greet you with a menu listing available commands.

Try H (for Help!) or ? when you are stuck.

Public domain and shareware programs are stored in subdirectories on my bulletin board. The directories have numerical names. Utility programs for MS-DOS computers are stored in directory 10. Games are stored in directory 17.

Enter L for a list of available directories (other bulletin boards may use different commands). Enter "L 17" to list the files in directory 17. This will give file names, lengths in characters (to help you estimate download time), creation dates, and a short description of each file.

You can search for files of interest. When looking for programs that can help you get more out of a printer, you may search using keywords like "printer."

Some programs are made available in text form. This is the case with older BASIC programs. (The file name extensions .BAS, .ASC or .TXT suggest that the files contain plain text.) You can download these files using ASCII.

Most programs are stored in their executable form, or as one executable file among several in a compressed transfer file (a library of files). On my board, most of these files have the file name extension .EXE or .COM.

What transfer protocol to use, depends on what is available in your communications program.

The protocol transfer method explained

The protocol transfer algorithms use methods to check the transfer with automatic error correction. In principle, they work like this:

The sending program calculates a check sum based on the contents of the file. The receiving program does the same calculation and compares the result with the senders' check sum. If the figures match, the transfer was successful. If not, all or part of the file will be retransmitted.

These are some popular protocols:

XMODEM

has automatic error detection and correction. Most modern programs have this feature. XMODEM exists in programs for MS-DOS computers, CP/M computers, Apple, TRS-80 Model 100, etc. It is the most commonly used transfer protocol.

XMODEM assumes 8-bit settings in your communications program. The file to be sent is split up into 128 bit sized blocks (or "packets") before transfer. The sender calculates the check sum and adds a check sum bit at the end of each packet. (Packing, sending and checking is done automatically by the software.)

The receiving program calculates its own check sum and compares with the sender's. If an error is detected, XMODEM will request retransmission of the last block.

XMODEM is reasonably good when there is little noise on the telephone line is low. When the line is bad, however, there is always a chance that the transfer will stop. You cannot use XMODEM on computer networks that use ASCII flow control or ESCape codes.

The transfer commands must be given to both computers. You can only transfer one file per command.

XMODEM's "packet size" (block length) is short. This has an impact on transfer speed, and especially when downloading from timesharing systems, packet switched networks, via satellites, and when using buffered (error correcting) modems.

The control method (8-bit check sum) and unprotected transactions give a low level of safety against errors in the transmission. The transferred file may contain 127 bytes with noise characters (at the end). The creation date of the file is lost in the transfer.

These weaknesses have given us better methods. Here are some of them:

XMODEM/CRC

CRC is an abbreviation for Cyclical Redundancy Check. The method guarantees 99.9969 percent free transfer. It still has the other weaknesses of ordinary XMODEM transfers.

YMODEM Batch

is faster than XMODEM and gives a high level of safety in the transfers. When used with some programs, YMODEM can transfer the files' creation time/date. You can transfer updated documents. This will replace documents with an older creation date. Only one party must enter the file name. YMODEM takes care of the rest.

Kermit

is used on many computer platforms, and especially where they use a terminal emulation mode (like VT-100) which makes the use of XMODEM impossible. Kermit is one of the few asynchronous error correction protocols that functions well exchanging files with half duplex IBM front-end machines.

Kermit can transfer more than one file at the time.

Super-Kermit

is also called Kermit with Sliding Windows. It can transfer many packets before stopping to check the transfer. The protocol is much faster than XMODEM.

ZMODEM

is the fastest known transfer protocol for many applications. All transactions are protected with a 16-bit or 32-bit CRC. ZMODEM is immune against most error conditions that prevent traditional protocols to achieve correct transfer.

ZMODEM transfers the creation date of the file and its exact contents. The file name is read once, and all transfer commands may be given by the sending program.

Decompression of files

If a file has name extensions like ZIP, LZH, ARC, PAK, LQR, LBR, ZOO, ARJ, or QQQ, you are facing a compressed file. We use such files to achieve faster transfers.

Files having the extension .EXE or .COM may be compressed files that have been converted into a self-extract format. To retrieve the files from a self-extract compressed file, just enter the file's name.

To decompress files that have not been made self-extract, you need a utility program. These programs have many names and are widely available through the Internet.

Transfer problems

Most transfer problems are caused by the communication programs and their (lack of) features.

Some Procomm users have problems with the Kermit protocol. Tip: use 8 bit word length and no parity in your program setup. 7 bits and even parity does not always work (on version 2.4.2).

Uploading

The transfer of data "the other way," that is, from your disk to a remote computer, requires that you start by making some decisions. Is the file to be sent as plain ASCII? Should I compress it in a distribution file to reduce transfer time, and make it easier to handle for the recipient?

If you are transferring a text file containing special national characters, or a text written in a Windows word processor, then it may first have to be converted to another format.

If your text contains blank lines (like blank lines between paragraphs), you may have to insert a space character at the start of all such lines. Some systems interpret a blank line as a signal telling that transmission is done. The invisible space character prevents this.

Some hosts have limitations on line length. They may require that lines be shorter than 80 characters. If you send lines that are too long, the result may be fatal.

Sending electronic mail

If you send your mail too fast, some online services tend to get digestion problems. You must be very accurate with the format of your message. It has to agree with the host machine's rules about line length, and maximum number of lines per message.

Let's assume that you want to send the following message to an electronic mailbox:

```
To: Datatid
cc: Anne-Tove Vestfossen
Sj: Merry Christmas!
Text: Thanks for the box with herring. The taste was
formidable. etc .. etc... etc...
Greetings, Odd
```

If this is all you have to say, doing it manually may be as fast as doing it automatically. However, if the line containing "etc .. etc .." is two full pages of text, you may feel differently. Then, the best may be to upload a prewritten letter.

Many Procomm users prefer to split the job in two. They enter the first four lines manually, and upload the body of the text (when the remote computer is ready to receive).

Press PgUp to get a menu of various uploading protocols. Select ASCII for transfer of plain text. Procomm will ask for the name of the file, which contains your letter. Enter the name, and the file will be sent.

Slow down with "pacing"

Sometimes, the PgUp method is just what you need. On other days, strange things may stop you in the middle of your transfer. One typical reason is that Procomm is sending it too fast for the recipient.

"Pacing" is a method used to slow the speed of the transfer to a level that the recipient can handle.

Procomm lets you set a tiny pause after each line sent. Another technique is to ask the program to wait for a given character (a "Go-character"), before allowing it to send the next line. For example: the character ":" is often used in the prompts for the next line on bulletin boards.

Protocol transfers may be easier

You may find it easier to use a transfer protocol. With Procomm, press the PgUp key, and the program will ask for a protocol. Select Kermit or something else. The program will ask for a file name, you enter it, and off it goes. You will have no problems with blank lines, or lines that are too long.

At times, even this will fail. The most common reasons are:

- The recipient requires that Procomm be set for 8-bits word length, no parity, 1 stop bit, when using this protocol, but you have it set differently.
- You think that the recipient's version of YMODEM is the same that you have. Wrong! Total failure.

Do the following to upload the file TEST.TXT to an old RBBS-PC bulletin board using XMODEM:

1. Navigate to the file area. Tell the BBS what you want by using the following command:
2. `u:test.txt;x`
3. Press PgUp, select XMODEM, enter a file name (TEST.TXT), and the transfer will start. (If you are too slow, the BBS may be tired of waiting for your commands . . .)
4. When the transfer is completed, the board will ask for a short description of the file. Enter it, and you are done.

Enter G (for Goodbye), and disconnect.

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Search:

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The Online World resources handbook

Appendix 4: Some frequently used terms

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Access number	Carrier	Ethernet	Kbits	NUA	Search engines
Acronym	Character	File Name	LAN	NUI	Server
Address	CCITT	Extensions	LDAP	Offline	Shareware
ANSI	COM port	File server	Leased-line	Offline Reader	Snail mail
ASCII	Compress	File transfer	Library	Online	Spam
ASCII download	Conference	Flame	Login	OSI	String search
Asynchronous transfer	Connect time	Freeware	Lurking	Packet	Sysop
Autodial	cps	Full duplex	Mail Gateway	Packet data networks	System
Bandwidth	Cryptography	Full-text_database	Mail server	Packet radio	T1
BBS	Cyrillic	Gateway	Megabit (Mb)	Packet switching	T3
Big5	Data	GuoBiao	MHS	Password	TAR
Binary	Database	Half duplex	MIDI	PDF	Terminal emulator
Binhex	DCE/DTE	Ham	Modem	Petabit	UUdecoding
Bits	Decompression	Handle	Moderator	Port	Unicode
Bits per second (bps)	Default	Header	Mojikyo	Prompt	Unix
Boolean	Dial-up access	Host	MPEG	Protocol	Uploading
Bounce	Downloading	Intranet	MUD	PTT	Virus
Bps	DTR	ISDN	No>m	Public domain	VRML
Browse	Duplex	ISO	NAPLPS	Qalam	X.25
BTW	ECHO	ITU	Netiquette	QWK	X.400
Bulletin board	Email	JIS	Network	Real-time	X.500
		JPEG (JPG)	Nodes	Router	ZIP
		KB		Routing	
				Script files	

Access number

Telephone number dialed to access an online service or Internet provider.

Acronym

A word formed from the initial letters of each of the successive parts or major parts of a compound term. Examples: BTW (by the way), FYI (for your information), IMHO (in my humble opinion).

[Acronym Finder](#) is a searchable database containing common acronyms and abbreviations about all subjects, with a focus on computers, technology, telecommunications, and the military.

Address

The string of characters that you must give an electronic mail program to direct a message to a particular person. The term "Internet address" often refers to an assigned number, which identifies a host on this network.

ANSI

(1) ANSI is an organization that sets standards.

(2) 'ANSI graphics' (ref. the term ANSI-BBS) is a set of cursor control codes that originated on the VT100 terminal. Many online services use them to enhance their transmission of characters to communication programs. The escape character, followed by other characters, are used to move the cursor on the screen, change color, and more.

ASCII

The American Standard Code for Information Interchange. A standard seven- bit code created to achieve compatibility between various types of data processing equipment. ASCII, pronounced "ask-key," is the common code for microcomputer equipment.

The Standard ASCII Character Set consists of 128 decimal numbers ranging from zero through 127 assigned to letters, numbers, punctuation marks, and the most common special characters. Each code can be represented by a 7 digit binary number: 0000000 through 1111111.

The Extended ASCII Character Set also consists of 128 decimal numbers and ranges from 128 through 255 representing additional special, mathematical, graphic, and foreign characters.

ASCII download

Retrieval of plain ASCII text (without special codes). Normally, it takes place without automatic error correction, but it is typically managed by XON/XOFF flow control.

Asynchronous transfer

Serial communication between two computers. When signals are sent to a computer at irregular intervals, they are described as asynchronous. Data is sent at irregular intervals by preceding each character with a start bit and following it with a stop bit.

Asynchronous transmission allows a character to be sent at random after the preceding character has been sent, without regard to any timing device. So, in case of line noise, the modem can find out right away where the next byte should start.

Autodial

When a modem dials a telephone number automatically. Autodial may be started by the user entering the number manually, or the number may be sent automatically by the communications program (for example after having been selected from a phone register).

Bandwidth

How much you can send through a connection. Usually measured in bits-per- second.

Baud

A unit of measurement that shows the number of discrete signal elements, such as bits that can be sent per second.

Bits per second (bps) is the number of binary digits sent in one second. There is a difference between bps and baud rate, and the two are often confused. For example, a device such as a modem said to send at 2400 baud is not correct. It actually sends 2400 bits per second.

Both baud rate and bps refer to the rate at which the bits within a single frame are sent. The gaps between the frames can be of variable length. Accordingly, neither baud rate nor bps refer accurately to the rate at which information is actually being transferred.

BBS

Bulletin Board or Bulletin Board System. See [Bulletin Board](#).

Big5

Coding scheme developed in Taiwan for using Chinese on computers. There are varieties of Big5 codes, the most common being ET Big5 (the code used by the Taiwanese program ETen, pronounced Yi3tian1) and HKU Big5 (the code used for programs developed at Hong Kong University).

ET Big5 files must be read with the ETen operating system. Check out the Archie server at <telnet://archie.TWNIC.NET> (login: archie) to locate software and get more information. Also, check [Mojikyo](#).

Binary

The base 2 number system in which only the digits 1 and 0 are used is called the binary system. The binary system lets us express any number, if we have enough bits, as a combination of 1's and 0's. Also used to express conditions like on/off, true/false, yes/no.

Binhex

Macintosh software and documents (other than text files) are often "encoded" into text files for transmission over the network. A common standard for such encoding is referred to as BinHex. You can usually tell that a file contains a BinHex encoded Mac file as the file name ends in ".hqx".

BinHex5.0 format is a MacBinary format, while BinHex 4.0 files are Macintosh ASCII format.

To keep transmission times short, the BinHexed files are often "compressed" using a utility like StuffIt. To reconstitute the Mac application or document you may need to "un-StuffIt." The freeware program, StuffIt Expander, will BinHex and unstuff most Mac files. Uncompression programs are available from archives on the Internet. Examples: xbin23.zip (DOS), mcvert (Unix), and binhex (VM/CMS).

Bits

Bit is an abbreviation for Binary digIT. Computer words and data are made- up of bits, the smallest unit of information.

A bit can be either zero or one, represented in a circuit by an off or on state, respectively. The bits are set on or off to store data, or to form a code that in turn sends instructions to the computer's central processing unit.

Bits per second (bps)

Bits per second (bps) is the number of binary digits sent in one second. It refers to the rate at which the bits within a single frame are sent ('frame' is another term for 'packet'). The gaps between frames can be of variable length. Accordingly, bps does not refer to the rate at which information is actually being transferred.

We usually estimate the number of characters transferred per second (cps) by dividing the number of bps by 10. Example: 2400 bps transfers around 240 characters per second.

Boolean

A Boolean search is a search that allows logical relations between parts. This means that you power your request with the ability to find all relevant documents that fulfill one condition AND (OR) another one. Other common operators include NOT and NEAR. The search algorithm is built on the algebraic theories of the English mathematician

George Booles.

Bounce

The return of a piece of mail because of an error in its delivery.

Bps

Abbreviation for bits per second. See [above](#).

Browse

To view and possibly edit a file of data on screen similar to handling text in a word processing document.

BTW

(By The Way) -- A shorthand appended to a comment written in an online forum.

Bulletin board

A computer, often a microcomputer, set up to receive calls and work as an online service. The BBSes let users communicate with each other through message bases, and exchange files. They may also offer other services (like news, database searches, and online shopping).

Carrier

Carrier is the tone modems send over a phone line before any data is sent on it. This tone has a fixed frequency and a fixed amplitude. It is then changed to show data.

Character

Here used about a letter, a number or another typographical symbol or code. For a list of special, email and .html characters, see [123Promote](#).

CCITT

The Consultative Committee for International Telephony and Telegraphy. Was an international consultative committee, organized by the United Nations. Now replaced by ITU-TSS. See [ITU](#) (below).

COM port

A COM port (or communication port) is a communications channel or pathway over which data is transferred between remote computing devices.

MS-DOS computers may have as many as four COM ports, COM1, COM2, COM3, and COM4. These are serial ports most often used with a modem to set up a communications channel over telephone lines. They can also be used to send data to a serial printer, or to connect a serial mouse.

Compress

(1) To compact data to save space.

(2) Common compression function on the Internet. Depending on the distribution of data in a file, compression may reduce its size by 25% to 70%.

COMPRESS files are often, but not always, noted with the file extension .Z. Data

archive and compression processes can be combined to form files like filename.tar.z (see TAR below).

If you download a file with a file type showing that it is compressed, you will need a program to expand it before you can use it. Search the net for files starting with 'comp' (as in COMP430D.EXE) to find programs that can expand .Z-files.

Conference

Also called mailing list, web board, SIG (Special Interest Group), Forum, RoundTable, Echo. A conference is an area on a bulletin board or online service set up as a mini board. Most conferences have separate message bases and often also file libraries and bulletins. Conferences are focused on topics, like politics, games, multimedia and product support.

Connect time

A term used for the hours, minutes, and seconds that a user is connected to an online service. On several commercial services, users have to pay for connect time.

cps

Characters per second. See [Bits per second](#).

Cryptography

Coding for privacy.

Cyrillic

There are several different coding systems for Cyrillic characters (Russian). Most important are the KOI-8 Unix standard, and CP-1225, primarily used for Microsoft Windows.

Cyrillic fonts and keyboard maps are available from several sources. See <http://www.free.net/Docs/cyrillic/notes.en.html> for information.

Data

Information of any kind, including binary, decimal or hexadecimal numbers, integer numbers, text strings, etc.

Database

A database is a highly structured file (or set of files) that tries to provide all the information assigned to a particular subject and to allow programs to access only items they need.

Online services offer databases that users can search to find full-text or bibliographic references to desired topics.

DCE/DTE

Data Communications Equipment/Data Terminal Equipment. Equipment connected to an RS232 connector must be either a DCE (like a modem or a printer) or a DTE (computer or terminal). The term defines the types of equipment that will "talk" and "listen."

Decompression

Files available from online archives are often compressed to save space, and reduce retrieval time. A FAQ about how to decompress 'anything' is regularly posted to the

[comp.compression](#) newsgroup.

Default

When a value, parameter, attribute, or option is assigned by a communications program, modem, or online system unless something else is specified, it is called the default.

For example, communication programs often have prespecified values for baud rate, bit size and parity that are used unless alternative values are given. These prespecified values are called the defaults.

Some services give users a choice between two or more options. If a selection is not made by the user, then a selection is automatically assigned, by default.

Dial-up access

An indirect connection to the Internet or an online service through a modem or a digital phone network adapter.

Downloading

The transfer of data from an online service and "down" to your computers' disk.

DTR

Data Terminal Ready is a circuit which, when ON, tells the modem that your computer is ready to communicate. Most modems are unable to tell your computer that a connection has been set up with a remote computer before this circuit has been switched off. If your computer turns this signal OFF, while it is in a dialog with a remote computer, the modem will normally disconnect.

Duplex

Describes how you see text entered by the keyboard. When the setting is HALF DUPLEX, all characters entered on your computer for transfer to an online service (or your modem) will be displayed. In addition, you will normally receive an echo from the online service (or modem). The result will often 'bbee lliikkee tthhiiss'.

When using the setting FULL DUPLEX, typed characters will not be shown. What you see, are characters echoed back to you from the online service and/or your modem.

ECHO

(1) When data is being sent, the receiving device often resends the information back so the sending device can be sure it was received correctly.

(2) Term used on FidoNet for this network's system of exchanging conferences (parallel conferencing).

Email

Abbreviation for Electronic Mail.

Ethernet

A very common method of networking computers in a LAN (Local Area Network).

File Name Extensions

Consult [the Whatis.com list of file name extensions](#) or suffixes that indicate the format or usage of a file. There's also a brief description of that format.

File server

A file server is a device "serving" files to everyone on a network. It allows everyone on the network to get files in a single place, on one computer. Typically, it is a combination computer, data management software, and large capacity hard disk drive.

File transfer

The copying of a file from one computer to another over a computer network.

Flame

A "flame" is a conference message sent by someone who disagrees so violently that they are willing to sink to personal attacks. Flames can be extremely annoying, and can get the writer banished from several conference networks.

Freeware

A program, text, or file in which the author still holds the copyright but allows the item to be used and distributed free of charge.

Full duplex

The term full-duplex means the transmission of data in two directions simultaneously as from a terminal to a computer or from the computer to the terminal. Full-duplex is simultaneous two-way communication.

Full-text database

A database containing the full text of an article, a chapter in a book, or a book. The contents are not limited to abstracted information (indexes, bibliographic information).

Gateway

In this book, the term gateway is used about an interconnection between two (or more) online services, set up to let a user of one service use the other service's offerings through the first service's user interface.

The term also has other meanings:

A gateway provides an interconnection between two networks with different communications protocols. Gateways operate at the 4th through 7th layer of the OSI model. For example, a PAD (a packet assembler/disassembler) is a device used to interface non-X.25 devices to an X.25 network. The PAD serves as a gateway. Protocol converters are gateways between networks.

The gateway, provided by an adapter card in a workstation, enables the network to perform as if it were a mainframe terminal connected directly to the mainframe.

GuoBiao

Coding scheme for using Chinese on computers developed in mainland China.

Half duplex

The term half-duplex means the transmission of data in either direction but only one direction at a time.

Ham

Amateur radio.

Handle

An alias used on a bulletin board or online service instead of your real name. Often used in chats.

Header

(1) In an email message, the part that precedes the body of a message and contains, among other things, the message originator, date and time.

(2) On a packet switched network, the portion of a package, preceding the actual data, containing source and destination addresses, and error checking and other fields.

Host

A term for host computer, remote computer or online service. Here, we use it about a timesharing computer, a BBS system, or a central computer that controls a network and delivers online services.

Intranet

An internal (corporate) network using Internet technology. Usually it involves the use of the TCP/IP protocols.

Pointers for more information:

<http://www.intrack.com/intranet/>

<http://www.innenergy.com/ix/index.html>

ISDN

A technology being offered by many telephone carriers. ISDN combines voice and digital network services in a single medium, making it possible to offer customers digital data services as well as voice connections through a single "wire." The standards that define ISDN are specified by ITU-TSS. Connection speed is typically up to 128 Kbps. For more information, visit <http://www.itu.int/home/Search/>, and enter "*isdn*" as a search term.

ISO

The International Organization for Standardization. A voluntary, nontreaty organization responsible for creating international standards in many areas, including computers and communications. Its members are the national standards organizations of the 89 member countries, including ANSI for the U.S. ISO is coordinator of the main Internet networking standards that are in use today.

ITU

The International Telecommunication Union, a United Nations treaty organization based in Geneva, Switzerland. Membership includes Telephone, governmental Post, and Telegraph Authorities, scientific and trade associations, and private companies.

ITU consists of three "sectors:" the Radiocommunication Sector, the Telecommunication Standardization Sector (TSS), and the Development Sector.

ITU-TSS sets international communications recommendations. These are often adopted as standards. It also develops interface, modem, and data network recommendations.

A wide range of ITU documents is available from their server.

ITU-TSS is the Standards Sector of ITU .

JIS

A Japanese industry standard code for presenting the Japanese character set Kanji on computers. JIS defines special ranges of user-defined characters. Only the most popular ones are included. The newer Shift JIS standard sets aside certain character codes to signal the start of a two-character sequence. Together, these define a single Kanji metacharacter.

There are many oddities to be found in handling Kanji over the network. Sending JIS-encoded messages through the Internet is done using a 7-bit code, called "OLD JIS" (standardized on JUNET). Unfortunately, it incorporates the ESC character, which some systems will filter out. This problem can be overcome by using UUENCODing.

[Kidlink](#) operates two Japanese language mailing lists: [KIDLEADER-JAPANESE](#) (for teachers and coordinators), and [KIDCAFE-JAPANESE](#) (for children only). See their "[How to send and receive Kanji text](#)" help file.

See <http://www.sla.purdue.edu/academic/fl/JapanProj/Je-mail/> for more about sending and receiving electronic mail in Japanese.

JPEG (JPG)

Standardized compression method for full-color and gray-scale images that often reduces the size of bitmapped images by a factor of 10 or more with little or no discernible image degradation. Designed to handle "real-world" scenes, for example scanned photographs. Cartoons, line drawings, and other non-realistic images are not JPEG's strong suit. On that sort of material you may get poor image quality and/or little compression.

KB

Kilobyte. A unit of data storage size that represents 1024 characters of information.

Kbits

1,000 bits.

LAN

Local Area Network. A data network intended to serve an area of only a few square kilometers or less.

LDAP

The Lightweight Directory Access Protocol. Email address directory. See [the LDAP home page](#) . The LDAP protocol is described in [RFC-1777](#), and is an open standard for directory services on the Internet.

Leased-line

Refers to a phone line that is rented for exclusive 24-hour, 7-days-a-week use from your location to another location.

Library

is used on online services about a collection of related databases (that you may search in) or files (that may be retrieved).

Login

Noun: The account name used to gain access to a computer system. Not a secret (contrast with Password).

Verb: The act of entering into a computer system, for example, "Login to the WELL and then go to the GBN conference."

Lurking

No active participation by a subscriber to a mailing list, a conference, or Usenet newsgroup. A person who is lurking is just listening to the discussion.

Mail Gateway

A machine that connects to two or more electronic mail systems (including dissimilar mail systems) and transfers messages among them.

Mail server

A software program that distributes files or information in response to requests sent by email.

Megabit (Mb)

2²⁰ bits of information. Usually used to express a data transfer rate, as in, 1 megabit/second (= 1Mbps).

MHS

(1) Message handling Service. Electronic mail software from Action Technologies licensed by Novell for its Netware operating systems. Provides message routing and store and forward capabilities. MHS has gateways into PROFS, and X.400 message systems. It also has a directory naming service and binary attachments.

(2) Message Handling System. The standard defined by ITU-TSS as X.400 and by ISO as Message-Oriented Text Interchange Standard (MOTIS). MHS is the X.400 family of services and protocols that provides the functions for global email transfer among local mail systems.

MIDI

Musical Instrument Digital Interface. A specification that standardizes the interface between computers and digital devices that simulate musical instruments. Rather than transmit bulky digitized sound samples, a computer generates music on a MIDI synthesizer by sending commands just a few bytes in length characterizing the pitch and duration of sounds (and the instruments that produce them). Each channel of a MIDI synthesizer corresponds to a different instrument, or "voice," and you can program several channels simultaneously to produce symphonic sound.

Modem

An acronym for MOdulator-DEModulator. It is a device that converts digital data from a computer or terminal into analog data that can be sent over telephone lines. On the receiving end, it converts the analog data back to digital data.

Most modern modems can handle the dialing and answering of a telephone call and generate the speed of the data transmission, measured in bits per second, or baud rates. The telephone industry sometimes refers to a modem as a dataset.

Moderator

A person, or a small group of people, who manage moderated mailing lists and newsgroups. Moderators are responsible for deciding which email submissions are passed on to list.

Mojikyo

[The Mojikyo font set](#) (aka Konjaku Mojikyo, the '*Mirror of characters of old and new days*'), is a new approach to handling Chinese characters on personal computers. It uses TrueType fonts for Japanese, Chinese, Vietnamese, Korean, 'Oracle Bone' (kookotsu-bun) and Siddham characters.

MPEG

Motion Picture Experts Group. A multimedia video playback standard that allows digital video to be compressed using a combination of JPEG image compression and differencing (encoding a video sequence by recording differences between frames rather than entire images of each frame).

There are two MPEG standards: MPEG-1, which supports a playback quality roughly equal to that of a VCR, and MPEG-2, which supports high-quality digital video.

MP3 stands MPEG-1 layer 3, a method of storing high quality music files on a disk in such a way that the file size is relatively small. More at <http://www.mp3.com/dummies.html>.

MUD

Multiple User Dimension, Multiple User Dungeon, or Multiple User Dialogue. A computer program which users can log into and explore. Each user takes control of a computerized persona/avatar/incarnation/character. You can walk around, chat with other characters, explore dangerous monster-infested areas, solve puzzles, and even create your very own rooms, descriptions and items.

For information, retrieve the various MUD FAQs from these directories

<http://www.faqs.org/faqs/games/mud-faq/>
<http://tecfa.unige.ch/pub/documentation/MUD/>

No>m

The No>m Standard Code for Information Interchange (NSCII) is a 16-bit character encoding standard used in Vietnam. No>m has been the writing system, based on ideographic (Chinese) characters, in use since the tenth century for the spoken Vietnamese language.

NAPLPS

North American Presentation-Level Protocol Syntax. A text and graphics data transmission format for sending large amounts of information between computers.

Netiquette

A pun on "etiquette" referring to proper behavior on a network.

Network

A data communications system that interconnects computer systems at various sites.

Nodes

Devices on a network that demand or supply services or where transmission paths are

connected. Node is often used instead of workstation.

NUA

Network User Address. The network address in a packet data network. The electronic number that is sent to the network to connect to an online service. Also, called X.121 address.

NUI

Network User Identification. The user name/password that you use to get access to (and use) a commercial packet switched network.

Offline

has the opposite meaning of "Online" (see [below](#)). It signifies that your computer is not in direct communication with a remote online service.

Offline Reader

A computer program making the handling of mail and files from online services easier (and cheaper). Some also provides automatic mail and file transfers.

Online

Being connected via modem or a digital phone adapter to a computer service.

OSI

Open System Interconnection. A set of protocols designed to be an international standard method for connecting unlike computers and networks. A FAQ, Introductory information about OSI, is posted each month to the [comp.protocols.iso](#), [comp.answers](#), and [news.answers newsgroups](#).

Packet

- (1) A group of bits sent by a modem that make up a byte of information.
- (2) A group of bytes sent by a file transfer protocol.

Packet data networks

Also called Packet Switching Networks (PDN). Value added networks offering long distance computer communications. They let users access a remote computer, by dialing a local node, or access point.

The packet data networks use high speed digital links, which can be land lines or satellite communications, to send data from one computer to another using packets of data. They use synchronous communications, usually with the X.25 protocol. The routes are continually optimized, and successive packets of the same message need not necessarily follow the same path.

Packet radio

is a method of communications by radio in which digital information prepared on a computer is converted to short, swift audio bursts ("packets") by a "terminal node controller" or "packet controller," and sent through a radio to another location where a similar station delivers it error-free to the receiving computer. It can send text as well as binary files.

Packet switching

Sending data in packets through a network to some remote location. The data to be sent is subdivided into individual packets of data, each having a unique identification and carrying its destination address. This allows each packet to go by a different route. The packet ID lets the data be reassembled in proper sequence.

Password

A code used to gain access to a locked system. Good passwords contain letters and non-letters and are not simple combinations such as "virtue7". A good password might be: Ho/t\$1-6.

PDF

A method for displaying information on computers made by Adobe Acrobat. [PlanetPDF](#) is a useful resource for everything PDF. Resources include news, tools and plugins, articles and papers, information for developers, tips, and a forum.

Petabit

A million billion bits.

Port

Three meanings. First, a place where information goes into or out of a computer, or both. For example, the "serial port" on a person computer is where a modem may be connected. (See [COM Port](#) above.)

On the Internet, "port" often refers to a number that is part of a URL, appearing after a colon (:) right after the domain name. Every service on an Internet server "listens" on a particular port number on that server. Most services have standard port numbers. For example, Web servers normally listen on port 80. Services can also listen on non-standard ports, in which case the port number must be specified in a URL when accessing the server, so you might see a URL of the form:

```
gopher://peg.cwis.uci.edu:7000/
```

This shows a gopher server running on a non-standard port (the standard gopher port is 70).

Finally, "port" also refers to translating a piece of software to bring it from one type of computer system to another, for example to translate a Windows program to make it run on a Macintosh.

Prompt

Several times during interactive dialogs with online services, the flow of data stops while the host computer waits for commands from the user. At this point, the service often presents the user with a reminder, a cue, a prompt. These are some typical prompts:

```
?
!
WHAT NOW?
(Read) next letter -
ulrik 1>
System News - 5000>
Enter #, <H>elp, or <CR> to continue?
Action ==> (Inbox)
Command:
Enter command or <RETURN>
-->
```

Protocol

A formal description of message formats and the rules two computers must follow to exchange messages. Protocols can describe low-level details of machine-to-machine interface (for example, the order in which bits and bytes are sent across the wire), or high-level exchanges between allocation programs (for example, the way in which two programs transfer a file across the Internet).

PTT

Postal Telegraph and Telephone. A telephone service provider, often a monopoly, in a particular country.

Public domain

Free from copyrights or patents, these programs, texts or files may be used by the public without any payments to the creators.

Qalam

is an Arabic-Latin-Arabic transliteration system between Arabic script languages and the Latin script embodied in the ASCII character set. [The Qalam system](#) is designed to transliterate Arabic script languages for computer mediated communication by individuals literate in those languages.

QWK

Qwikmail. A n offline message file format for bulletin boards offering mail through a QMail Door. The .QWK door and file format has been used to develop entire BBS networks (example: ILINK.)

There are QWK-format mail readers for Apple, Amiga, Atari, C64/C128, CoCo/OS9, CP/M, Macintosh, MS-DOS, OS/2, Unix, Windows and Windows NT.

Real-time

Having the appearance of immediate action. For example, typing messages that appear on another's monitor almost instantly.

Router

A special-purpose computer (or software package) that handles the connection between two or more networks. Routers spend all their time looking at the destination addresses of the packets passing through them, and deciding which route to send them on.

Routing

The process of delivering a message across a network or networks via the most proper path. While simple in principle, routing is a specialized, complex science, influenced by a plethora of factors. The more networks are interconnected, the more esoteric routing is set to become.

Script files

A set of commands that enable a communications program to execute a given set of tasks automatically (macro commands).

Search engines

A search engine looks up the word(s) you input in an index to Web documents. Indexes vary in size. None will be completely comprehensive and up-to-date though most are updated regularly and some are huge. Some also cover Usenet news archives, and there are others for gopher servers.

Server

A computer or a software package that provides a specific kind of service to client software running on other computers. The term can refer to a particular piece of software, such as a WWW server, or to the machine on which the software is running. (Example: mail server is down today, that's why email isn't getting out.)

A single server machine could have several different server software packages running on it, thus providing many different servers to clients on the network.

Shareware

Copyrighted programs, texts, or other types of application files sold on a try-before-you-buy basis. If you continue using the item past a certain evaluation period, you must pay the author a given "registration fee." Also often referred to as "user-supported."

Snail mail

A pejorative term referring to the national postal service in different countries.

Spam (or Spamming)

An inappropriate attempt to use a mailing list, a conference, or another networked communications facility as if it was a broadcast medium by sending the same message to many people who didn't ask for it.

String search

A method for searching a database. Works like the search function in a common word processor program.

On online services, your commands will often search the full document (including the title, subtitles, keywords, and the full text). Sometimes, string searches just return a line or a few lines around the hit. In other cases, they return the full screen or the full document.

Sysop

Common name used on bulletin boards for System Operator. This is the person in charge of maintenance and helping users.

System

Generic name for a computer with connected equipment or for an online service or bulletin board.

T1

Leased lines come in different grades of which T-1 and T-3 are examples. A T-1 link provides a communications link at up to 2.048 megabits per second.

T3

A term for a digital carrier facility used to send a DS-3 formatted digital signal at 44.746 megabits per second.

TAR

.TAR or .tar is a file name extension used by a Unix utility for archiving files, often used with "compress." The resulting files can contain both files and directories, and may include the subdirectory structure needed to restore the files. The way in which a "tarred" file is "untarred" depends on the operating system you are using. Utilities to extract on DOS machines may be retrieved from many sources around the net.

Terminal emulator

A program that allows a computer to emulate a terminal. The workstation appears as a given type of terminal to the remote host.

Unicode

A 16 bit standard system for encoding characters of all the world's languages. The first 128 codes of Unicode are the same as in ASCII. The system uses two bytes for each character rather than one, and can handle 65,536 character combinations rather than ASCII's just 256.

Unicode can house the alphabets of the world's languages, including a complete complement of Chinese, Korean and Japanese specific characters. ISO defines a four-byte character set for world alphabets, but uses Unicode as a subset.

Unix

An operating system that supports multi-user and multitasking operations.

Uploading

The act of transferring data from your computer's disk (up) to an online service and storage there.

Virus

A computer virus is a small computer program created by a computer-literate vandal with the purpose of destroying data or even applications programs in other people's computers.

VRML

The Virtual Reality Markup Language aims at extending the World Wide Web into the domain of three-dimensional graphics. VRML "worlds" can depict realistic or otherworldly places, which can contain objects that link to other documents or VRML worlds on the Web. For information, see [The Virtual Reality Entertainment Resource Guide](#).

X.25

A ITU-TSS standard communications protocol used internationally in packet data networks. It provides error-checked communication between packet data networks and their users or other networks.

Rather than sending a stream of bits like a modem, an X.25 router sends packets of data. There are different packet sizes and types. Each packet contains data to be sent, information about the packet's origin, destination, size, and its place in the order of the packets sent. There are clear packets that perform the equivalent of hanging-up the phone. There are reset, restart, and diagnostic packets. On the receiving end, the packet assembler/ disassembler (PAD) in the router translates the packets back into a readable format.

X.400

The ITU-TSS and ISO standard for electronic mail.

X.500

An ITU-TSS and ISO standard for electronic directory services.

More information

Irving Kind's [Glossary of Computer Oriented Abbreviations and Acronyms](#).

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Appendix 5: Books, newsletters, etc.

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Internet

Books are published almost daily covering everything there is to know about the Internet. Use the World Wide Web to locate things of interest. Here are some bookstores to visit:

http://www.coop-bookshop.com.au/	(Australia)
http://www.roswell.com	(Canada)
http://www.lob.de	(Germany)
http://www.paraweb.com/pcbook/intbook.htm	(Singapore)
http://www.bookshop.co.uk/	(United Kingdom)
http://mkn.co.uk/books	(United Kingdom)
http://www.amazon.com	(U.S.A.)
http://www.books.com/	(U.S.A.)

Many books are available online in full text. Check [Computer and Internet Books](#) for links.

The "[Un-official Internet Book List](#)" by Kevin Savetz is a large list of books on the Internet, its users, software, hardware, use, and abuse. Top level categories include Internet introductions and guides, Site indices and guides, Intermediate/advanced books, and Servers and system administration. You can search the book descriptions by keyword.

Internet - newsletters/magazines

[Top100Mag](#) has links to some of the most popular English language magazines.

"[Matrix News](#)," a monthly newsletter about cross-network issues. Networks frequently mentioned include USENET, UUCP, FidoNet, BITNET, the Internet, and conferencing systems like the WELL and CompuServe. Matrix News is about all computer networks worldwide that exchange electronic mail.

"[Internet World magazine](#)," Meckler Corp.

Internet Business Report. CMP Publications (Network Computing, Communications Week, etc.). Newsletter for corporate strategists interested in the Internet as a channel for information products and services, or to extend support for current operations. Monthly in an 8-page hardcopy format. For a complimentary sample issue, send email to ibr@cmp.com. Specify "free copy" in the subject line. They have a free technology information service at <http://techweb.cmp.com/techweb>.

Wired. ISSN 1058-1028. 544 2nd Street, San Francisco, CA 94107, U.S.A. A trendy, glossy magazine frequently highlighting electronic networking.

Bulletin Board systems and networks

[BoardWatch Magazine.](#)

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Search:

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Appendix 6: Web/Internet tools & pointers

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- [HTML](#)
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- [IMAP](#)
- [International Standard Top-level Country codes](#)
- [Internet number](#)
- [IP](#) (Internet Protocol)
- [IP Address](#)
- [Internet provider](#)
- [IRC](#)
- [Java](#)
- [ITR](#)
- [Linux](#)
- [LISTPROC](#)
- [LISTSERV](#)
- [Lynx](#)
- [MAILBASE](#)
- [Mailing list](#)
- [Majordomo](#)
- [MIME](#)
- [Mirror](#)
- [Netnews](#)
- [Newsgroup](#)
- [NNTP server](#)
- [Ping](#)
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- [POP3](#)
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- Resource Description Framework ([RDF](#))
- [RealAudio](#)
- [RFC](#)
- [Shockwave](#)
- [SLIP](#)
- [SMTP](#)
- [Talk](#)
- [TCP/IP](#)
- [Telnet](#)
- [URL](#)
- [Usenet](#)
- [UUCP](#)
- [VMS](#)
- [Routers](#)
- [Web Forums](#)
- [Winsock](#)
- [WWW](#) (World Wide Web)
- [For more](#)

Anonymous FTP

The procedure of connecting to a remote computer, as an anonymous or guest user, to transfer files back to your computer. Usually, you are asked to logon using the identity "anonymous," and to use your email address as a password. (See FTP below for more information.)

Archie

Directory service for locating information throughout the Internet. Used to locate files

on anonymous ftp archive sites, other online directories and resource listings.

Offers access to the "whatis" database of descriptions that include the name and a brief synopsis of the large number of public domain software, datasets and informational documents located on the Internet.

You can access Archie by email to one of these addresses:

archie@archie.au	Australian server
archie@archie.mcgill.ca	Canada
archie@archie.doc.ic.ac.uk	England
archie@archie.funet.fi	Finland
archie@archie.th-darmstadt.de	Germany
archie@archie.kuis.kyoto-u.ac.jp	Japan
archie@archie.sogang.ac.kr	Korea
archie@archie.nz	New Zealand
archie@archie.luth.se	Sweden
archie@archie.ncu.edu.tw	Taiwan
archie@archie.rutgers.edu	U.S.A.

Put the word HELP in the body of your mail for instructions.

To access Archie by telnet, just turn the addresses above into telnet addresses, like in this example:

<telnet://archie.funet.fi> Finland

Archie is also available from the following Archie Web server page:

<http://www-polisci.tamu.edu/lab/archie.htm>

ASP (Active Server Pages)

Dynamic ASP scripts add user interactivity and convenience to web pages. The result is programmable web pages that mix HTML, ODBC database reading and writing, and other services. Active Server Pages script resource: <http://www.vra.net/code/>.

Backbone

Internet's data flows on high-speed lines called backbone lines. A high-speed line or series of connections that forms a major pathway within a network. The term is relative as a backbone in a small network will likely be much smaller than many non-backbone lines in a large network.

Bandwidth

The amount of frequencies a device can handle. The amount of bandwidth a channel is capable of carrying tells you what kinds of communications can be carried on it. In computer-mediated communications, bandwidth is often used when talking about conference users' capacity for reading, digesting and responding to conference items.

Bot

is short for "roBot" in popular Internet language. Netters also use terms like IRC roBOTS, Software Agents, InfoBots, Intelligent Agents, World Wide Web Bots, Wanderers, and Spiders. You'll find a [Bot FAQ](#) file with many links to more information. There's also interesting information at the UMBC's [AgentWeb](#).

Browser

A program that lets you view various Internet resources. Netscape and Microsoft Internet Explorer are popular browsers. Internet browsers let you follow World Wide Web hyperlinks.

For links to sites where you can retrieve most popular browser programs, [click here](#). For more information, see [the Web Browsers OpenFAQ](#).

Browser Add-Ons

Software that gives your browser programs more power. Visit [this page](#) for a list of your options.

CGI

Common Gateway Interface. Used by html writers to let a page communicate with other programs running on the server. For links to information and resources, check [The CGI Resource Index](#), and [Scriptsearch](#).

[CU-SeeMe](#)

Video Conferencing over the Internet.

Cookies

A cookie is few lines of text that is part of an http transaction. It was originally invented to help you navigate the web. When you are connected to a particular Internet site, the server doesn't actually remember you from one instruction to the next, much less one visit to the next. The server therefore sends you a cookie, and uses the information contained therein to remember your preferences (without bothering you), keep track of items in your shopping cart, or simply count you accurately as a single visitor and track your navigation through the web site..

When you retrieve data from a site using a cookie, the server transmits the cookie to your browser along with the rest of the html document requested. Your browser **stores the text on your hard disk**. When you later retrieve the same Web page, the cookie is transmitted back to the server. The latter may then send an updated cookie.

You can delete any cookies that are on your disk without harm. However, if you set your browser to refuse all cookies, then you may be unable to use certain sites to their full capabilities.

Because the rendering engine used in web browsers is also woven into email clients and Usenet news readers, it is possible for someone who sends you email or posts and html article to a newsgroup to cause your machine to access images on his site when you read the mail or the article. If the sender customizes the URL in the message so that it contains your email address, he will also know exactly who you are.

[Click here](#) for more information.

CSS

Cascading Style Sheets (CSS) is an Internet tool that separates the presentation from the structural markup of a Web site. CSS keeps the structure of a document lean and fast while controlling the appearance of its content. ([Frequently asked questions regarding CSS](#)).

Domain Name System (DNS)

The Internet DNS gives names to locations on the Internet, and consists of a hierarchical sequence of names, from the most specific to the most general (left to right), separated by dots, for example nic.ddn.mil.

DNS is also a system that translates a domain name from letters (eg. www.google.com) into a numerical IP address (e.g. 204.71.200.73). Letters make it

easier for humans to remember and understand things, while computers thrive on numbers. So, these numbers are used to ensure email gets to the right address, that you get the web page you requested, and so on.

To check if a domain (web address) is taken, and who the owner is, try [Register.com](http://www.register.com).

Eudora

Popular email system for Windows, MS-DOS and Macintosh computers. Free versions are available .

FAQs

"Frequently Asked Questions" are information files about services on the Internet, and a wide range of other topics. Useful pointers to resources, and a fairly reliable source of answers that have been tested by real users.

FAQs can be found all over the Internet. Several Usenet newsgroups have one specific to their subjects. Some have several FAQs on different, pertinent subjects.

Browse Usenet's FAQs at <http://mailserv.cc.kuleuven.ac.be/faq/faq.html> and <http://www.cis.ohio-state.edu/hypertext/faq/usenet/>, or retrieve them by email (see "WWW by email" in [Chapter 12](#)). You can search (and read) Usenet FAQs at

<http://www.faqs.org/faqs/faqsearch.html>

<http://faqfinder.cs.uchicago.edu/>

[Reference.COM](#) (see [Chapter 11](#)) is an efficient way of keeping track of changes in important Usenet FAQs. For example, try the search term "australia/oz-net-faq" to keep track of the "Network Access in Australia FAQ."

Finger

A program that returns information about registered users on a host that is directly connected to the Internet via TCP/IP. You cannot use finger to find user addresses on BITNET or UUCP, or any other networks gatewayed to the TCP/IP Internet.

Useful before starting chats (known on the Internet as "talk"), to check your assumption of a person's email address, to learn more about a person, or to get other kinds of information.

For finger by email, send an 3mail to agora@dna.affrc.go.jp. Put the following command in the body of your mail:

send <http://www.mit.edu:8001/finger?<user@site>>

Replace <user@site> with your desired email address, as in

send <http://www.mit.edu:8001/finger?presno@eunet.no>

Finger is also being used as a general information system. For example, finger help@dir.su.oz.au for information about how to search some databases using finger. Databases include Archie, Internet, Newsgroups, and Postcodes (Australian Postcodes).

Finger to normg@halcyon.halcyon.com for weekly U.S. TV ratings according to the Nielsen rating system, and to solar@xi.uleth.ca for 24-hour solar x-ray flare activity reports.

A FAQ file: <http://www.citilink.com/~kae/faq/resources/finger.html>.

Firewall

Method used by several organizations to protect users from the "unsecure" network, and disallow unwanted logins or file transfers from the Internet. An Internet site will be denied a connection if an attempt is made to login to the firewall server.

Users behind a firewall can get to servers on the Internet. They can use WWW,

Gopher, FTP, and TELNET, but cannot supply resources through these protocols to people outside the company.

Check [the Firewalls FAQ](#) for definitions, justifications, what firewalls can/cannot do, virus, and other interesting links.

FTP (File Transfer Protocol)

A program for sending and receiving files to and from a remote computer to your local host. Lets you connect to many remote computers, as an anonymous or guest user, to transfer files back to your computer. Lets you list file directories on foreign systems, get or retrieve files. You cannot browse menus, send email, or search databases using FTP.

The easiest is to use ftp with a Web browser like Netscape. Just feed the browser the file's location, in a format like this <ftp://ftp.eunet.no/pub/text/online.txt.Z>. The codes after the "/" show first the host name, then the directory, and finally the file name of the desired file.

Some users type ftp at their system prompt, login on the remote system, and ask for the file they want to receive. It transfers to their local host machine. (For more on this, read under "Internet" in [Appendix 1](#).) Finally, unless their computer is directly connected to the Internet, the retrieved file must be transferred from their host machine to their PC.

Where ftp or WWW is not available, you may also use FTPMAIL ([chapter 12](#)).

FYI

"For Your Information." A subseries of RFCs that are not technical standards or descriptions of protocols that are available from <http://www.rfc-editor.org> and many other sources on the Internet.

Gopher

Gopher is a tool for exploring the Internet and to find a resource if you know what you want, but not where to find it. Gopher systems are menu-based in a top-level subject-oriented way, and provide a user-friendly front end to Internet resources, searches and information retrieval.

Gopher gets information from certain locations on the Internet to which it is connected, and brings the information to your computer. It can get information via other Gophers at other locations connected to yet other hosts. The Telnetting or file transfer protocols are transparent to the user.

To access gopher services, run a browser program. The browser reads documents, and can fetch documents and files from other sources. Some services let you fetch gopher information by electronic mail (see Gophermail below).

"Common Questions and Answers about the Internet Gopher" are posted to the Usenet newsgroups [comp.infosystems.gopher](#), [comp.answers](#), and [news.answers](#) every two weeks. (See FAQ above.)

Pointers to Gopher sources may be given in this form:

```
Type=1
Name= United States GOVERNMENT Gophers
Path=1/welcome/peg/GOPHERS/gov
Host=peg.cwis.uci.edu
Port=7000
URL: gopher://peg.uci.edu:7000/11/welcome/peg/GOPHERS/gov
```

If your browser cannot use this information directly, try to deduct the information from the URL line. In this example, it translates into 'gopher peg.uci.edu 7000', select peg / gophers/ gov.

If the gopher command is not available on your system, then you may telnet to the gopher site, and login as 'gopher' or 'info'.

The gophers of the world, sorted by country, are at

URL: <gopher://liberty.uc.wlu.edu/11/gophers/other>

Also, see Veronica below.

Gophermail

To use Gopher by electronic mail. Messages containing menus and gopher link information are mailed you in response to your requests. You reply to these messages and show which menu items you want. Lets you use the Gopher without having a direct "live" Internet network connection.

Send a message to one of the following addresses for more information:

gophermail@cr-df.rnp.br (Brazil)

gomail@ncc.go.jp (Japan)

gopher@dsv.su.se (Sweden)

If you send a blank message, a help screen will be returned to you.

GopherMail's options include:

- Requesting the Gopher menu for a specific host name,
- Message splitting after a certain file size (for those with a size limit on email messages),
- Re-using links to selected gopher menus by saving them in a local "Bookmarks" file.

Binary and Sound Files are sent as uuencoded files.

To perform a search, select that menu item with an "x" and supply your search words in the Subject: of your next reply. Note that your search criteria can be a single word or a boolean expression such as:

```
computers and (macintosh or ms-dos)
```

Home page

An Internet document created with HTML (the HyperText Markup Language) often containing graphics, text, and hypertext links to other "pages."

HotJava

A modular, applet-aware, extensible World-Wide Web browser written in the Java programming language.

HTML

The HyperText Markup Language is used to compose WWW pages. Sources for information (also, see "[WWW](#)" below):

[A Beginner's Guide to HTML](#)

[WebMaestro](#) (Spanish)

[W3Schools](#)

[HTML FAQ for beginners](#)

[HTML Alphabetical Reference List by Name](#)

[Intermediate HTML FAQ](#)

[HTML standards](#)

[Compendium of HTML Elements](#)

[Extensible Stylesheet Language](#) (XSL)

HTTP

Hypertext Transfer Protocol. Hypertext is text with pointers to other text. Thus,

hypertext is a term used of linking related information.

Some information providers on the Internet run programs that will let you access hypertext. Examples: Lynx, Mosaic.

You use a special HTTP browser program to access the information. Examples: Netscape, Internet Explorer.

IMAP

The Internet Mail Access Protocol (originally *Interactive Mail Access Protocol*) offers easier administration and more power than the old [POP](#) (Post Office Protocol). It let you remotely manipulate your mailbox on the mail host without having to retrieve it to your local PC first. You can access email stored on multiple hosts and in multiple folders on one host.

IMAP allows for the creation of hierarchical folders on the remote server, where POP3 creates local folders. Messages can be stored, sorted, filtered, and managed on the server, making it possible for users to maintain a system of folders that they can access from multiple computers.

Client programs can resynchronize mailboxes with the server, so that messages transferred to folders or deleted will appear in (or disappear from) each client's view. All clients display the same messages.

More information: [RFC 1730](#) and [RFC 1733](#).

International Standard Top-level Country codes

Top-level country codes derived from the International Standards Organization's international standard ISO 3166. For a current list, retrieve [the International E-mail FAQ](#). It is regularly being posted to the [comp.mail.misc](#), [comp.mail.uucp](#), [news.newusers.questions](#), [alt.internet.services](#), [alt.answers](#), [comp.answers](#), and [news.answers](#) newsgroups.

[The Internet Corporation for Assigned Names and Numbers](#) (ICANN) is working on introducing seven new top-level domains (TLDs) to supplement the familiar .com, .edu, .gov, and so on. The new domains will be .info, .biz, .name, .pro, .museum, .coop, and .aero.

Internet number

See IP Address

IP (Internet Protocol)

The Internet standard protocol that provides a common layer over dissimilar networks, used to move packets between host computers and through gateways if necessary.

TCP/IP packets are the basic units of communication across the Internet. The information they carry includes your system's IP address, the IP address of the server you're trying to contact, and data communicated (like the contents of a World Wide Web document). Routing information is added to the packets along the way.

For more information, see <http://info.internet.isi.edu/in-notes/rfc/files/rfc791.txt>.

IP Address

Every machine on the Internet has a unique address, called its Internet number or IP address. Usually, this address is represented by four numbers joined by periods ('.'), like 129.133.10.10.

The first two or three pieces represent the network that the system is on, called its subnet. For example, all the computers for Wesleyan University in the U.S.A. are in the subnet 129.133, while the number in the previous paragraph represents a full address to one of the university's computers.

For technical background information, see [Technical information on the DNS links](#).

Internet provider

An organization that gives customers access to the Internet via the provider's computers and connections. (See [Appendix 7](#).)

IRC

Internet Relay Chat is a multi-user, multi-channel chatting network. It allows people all over the world to talk to one another in real-time.

Each IRC user has a nickname they use. All communication with another user is either by nickname or by the channel that they or you are on. It requires that you use a service that has a direct connection to Internet.

A FAQ file, "IRC Frequently Asked Questions," is regularly posted to the [alt.irc](#) newsgroup. On the World Wide Web, the most comprehensive IRC help resource is at <http://www.irchelp.org/>.

Java

Java is two things: a programming language and a platform. See the Java Tutorial at <http://java.sun.com/docs/books/tutorial/> and [121-java-script-tutorials.com](http://www.javatutorial.com/).

[Javapowered](#) lets you retrieve free applets to use on your website. [Java-scripts.net](#) offers free cut and paste javascripts, like rotating images and banners, popup java-scripts, timer and clock javascripts, frame and window java scripts.

ITR

Internet Talk Radio. For general information (a FAQ) about the Internet Multicasting Service radio programs, send email to info@radio.com.

A list of archive sites that make the Internet Talk Radio sound files accessible via anonymous FTP is irregularly posted to the following newsgroups: [alt.internet.talk-radio](#), [alt.answers](#), [news.answers](#).

Linux

A free operating system based heavily on the POSIX and UNIX API's. It supports both 32 and 64 bit hardware. Visit <http://www.linux.org.uk/> for information and downloads.

LISTPROC

An automated mailing list distribution system similar to the LISTSERV program (see below). To subscribe to a LISTPROC list, send an email containing the following type of command in the body of your mail

```
SUBSCRIBE <list name> Your name
```

LISTSERV

An automated mailing list distribution system enabling online discussions of technical and nontechnical issues conducted by electronic mail throughout the Internet. The LISTSERV program was originally designed for the BITNET/EARN networks.

Usually, you subscribe to a LISTSERV mailing list by using the command

```
SUBSCRIBE <list name> <your name>
```

Example: If your name is Oleg Moskwa, and the list name is KIDLINK, send an email to the LISTSERV address above with the following command in the body of your text:

```
SUBSCRIBE KIDLINK Oleg Moskwa
```

Note: Some LISTSERVs will reply by sending you a request to confirm the subscription by replying with an OK and a unique number. After 48 hours (this can vary) the request is dropped, and the user will have to start over. While this may seem like a hassle, it is really in your interest. The confirmation system prevents others from subscribing you onto lists pretending to be you.

Usually, you can get off a LISTSERV mailing list by using the command SIGNOFF <list name>, as in

```
SIGNOFF KIDLINK
```

Important: All subscription commands must be sent to the LISTSERV address, and not to the mailing list itself. If you send it to the mailing list's address, the LISTSERV will forward your mail to all subscribers, and nothing may happen.

To temporarily turn off mail, use the command

```
SET <listname> NOMAIL
```

Other mailing list programs exist. Some are using the Unix readnews or rn facility. Others are called MajorDomo and LISTPROC. Commands differ. On some lists, you must use "UNSUBSCRIBE <LISTNAME>" rather than SIGNOFF.

Some may require that you ask for permission to join. A central moderator may review your contributions before mailing, or use them to compile a periodic "digest" for subscribers.

Example: To subscribe to non LISTSERV mailing lists you may have to send an email message to LIST-REQUEST@ADDRESS, where "list" is the name of the mailing list and "address" is the moderator's e-mail address, asking to be added to the list.

Lynx

If you don't have a TCP/IP connection to an Internet provider, the easiest way to access the World Wide Web is through Lynx. This text-only based browser works on any VT100 (ASCII) emulating terminal program using full screen, arrow keys, highlighting, and can be found on almost any Internet host.

Set your communications software to vt-100, dial up, logon, and type "lynx" to see if it is available. If not, try telnet to ukanaix.cc.ukans.edu (telnet://ukanaix.cc.ukans.edu). At the login prompt, enter www and press return to access a Lynx browser. Online help is available. Note: You can not use this service to access a random Web address!

If Lynx is available on your local computer, just type "g" for go, and then type the URL of the document you want. Type "h" for help.

Even if you have a TCP/IP connection, you may find Lynx faster than most Windows-based browsers for some applications. It provides fast navigation of cross-linked hypertext documents (minus multimedia) over a low-speed dial-up connection. You can even use it with a 2,400 bits/s modem.

Newer versions of the program have extensive HTML 3.2 support, supports image-maps and frames.

MAILBASE

A program functioning like a LISTSERV. For more information about the Mailbase at Newcastle University (England), send email to MAILBASE@MAILBASE.AC.UK containing the following commands:

help	(for a general help file)
send mailbase user-guide	(for a User Guide)
lists	(for a list of available forums)

Mailing list

A possibly moderated discussion group on the Internet, distributed via email from a central computer maintaining the list of people involved in the discussion.

Anyone can send a message to a single mailing list address. The message is "reflected" to everyone on the list of addresses. The members of that list can respond, and the responses are reflected, forming a discussion group.

Think of mailing lists as magazines - you subscribe and unsubscribe as your needs and interests change.

Majordomo

is another program that organizes mailing lists. Commands for subscribing and unsubscribing are similar to those used with a LISTSERV except that the name is not given at the end of the subscription line. Further, rather than sending e-mail to LISTSERV at the site that houses the list, send to majordomo@csn.org.

For a list of mailing lists served by this Majordomo server, send the command 'lists' in the body of your email message. Add the command 'help' on the next line for a short help file.

MIME

The Multi-purpose Internet Mail Extensions is a specification that offers a way to interchange text in languages with different character sets, and multi-media email among many different computer systems that use Internet mail standards.

MIME lets you create and read email messages containing these things:

- character sets other than ASCII
- enriched text (text with markup commands like <bold> to make it more readable)
- images
- sounds
- other messages (reliably encapsulated)
- tar files
- PostScript
- FTPable file pointers
- other stuff

MIME supports several pre-defined types of non-textual message contents, such as 8-bit 8000Hz-sampled mu-LAW audio, GIF image files, and PostScript programs. It also permits you to define your own types of message parts.

For details, check <ftp://ftp.eunet.be/pub/documents/faq/mail/mime-faq/>, <http://info.internet.isi.edu/in-notes/rfc/files/rfc1341.txt>, and the [comp.mail.mime](#) newsgroup.

Note: A MIME message received by someone on a host without MIME installed, may be encoded in a binary format (BASE64) and be impossible to read. If you have this problem, try the small free utility that is available through the TOW archive. Send GET TOW.MASTER (as explained in the preface of the book) for retrieval instructions and file name.

Mirror

Term used about one or several hosts on the Internet that maintain a complete copy ("mirror") of selected contents from another host on the net.

Netnews

See: Usenet.

Newsgroup

Term used for online conferences on Usenet. See [Appendix 1](#) for more.

NNTP server

Usenet netnews are being distributed globally through local servers, called NNTP servers. You should use a local server, if available, for higher speed. Reading programs, like WinVN and Netscape, require that you put the address of a NNTP server in the configuration file. Netscape example:

```
NNTP_Server=nntp-oslo.uninett.no
```

NNTP (Network News Transport Protocol) is an extension of the TCP/IP protocol that describes how newsgroup messages are transported between compatible servers. Lists of free NNTP servers: <http://home.eunet.no/~kjetilm/news.htm> and <http://www.krusty.net/usenet.shtml>.

Ping (Packet Internet Groper)

A program to test a network connection on the Internet. Used to check if a connection to another host is available, when your email seems not to reach a receiver.

Ping sends a message (an ICMP echo request packet) to a specified host, and waits for a response. It reports success or failure and statistics about its operation. It gives you the time taken for your packets to travel across the network too.

Postmaster

On the Internet, the person responsible for handling electronic mail problems, answering queries about users, and other related work at a site.

POP3

Internet's Post Office Protocol version 3.0. An off-line mail client (like Eudora or Outlook Express) connects to a mail server, as requested by the user, and downloads all the mailbox data to the client's computer. In the setup of your Internet mail client application, the IP address of the POP3 server is pointing at the host receiving our email.

By default, once the download is successful, the client deletes the data from the server, known as the *maildrop*.

You create folders in your email program in which you store individual messages, you add signatures at the time of composing without the need to store a separate signature file on your server, and you can compose and read your mail offline with a familiar interface.

See: [RFC 1225](#) for details. See [IMAP](#) for a popular alternative.

PPP

Point-to-Point Protocol. A serial communications protocol for connecting to the Internet by direct or dial-up lines. PPP systems can receive and transfer files without having to use the intermediate host as a transfer and rest stop. It is generally considered to be superior to SLIP, because it features error detection, data compression, and other elements of communications protocols not included in SLIP.

A FAQ is posted to the [comp.protocols.ppp](#), [news.answers](#), and [comp.answers](#) on a weekly basis. A must for those interested in connecting to Internet via serial lines.

Proxy servers

A proxy server is a machine which retrieves documents on command. The advantage with a proxy server is that it normally caches documents, and makes it considerably faster to retrieve documents from the proxy rather than directly from a machine eg., overseas.

Resource Description Framework (RDF)

RDF is a basis for encoding and using data about documents or Web pages which purports to facilitate the automation of their processing. See: <http://www.w3.org/RDF/>

RealAudio

Software tool that supports transmissions of real-time, live or prerecorded audio. You can get satisfactory performance using a 14.400 bits/s modem. The client software is free.

You can link to an Internet rock-n-roll station (like <http://www.netradio.net/>), set it to play, and then switch to your word processor for some real work while you listen. RadioTower Control Center (<http://www.radiotower.com/>) has links to radio stations around the world.

RFC

The Internet's Request for Comments document series. Working notes of the Internet research and development community. A document in this series may be on essentially any topic related to computer communication, and may be anything from a meeting report to the specification of a standard.

Note: Once a document is assigned an RFC number and published that RFC is never revised or re-issued with the same number. There is never a question of having the most recent version of a particular RFC. It is therefore important to make sure you have the most recent RFC on a given topic!

You can retrieve most RFC texts at <http://www.rfc-editor.org/rfc.html>, and search RFC documents at <http://www.csl.sony.co.jp/rfc/index.html>. In Spanish: <http://lucas.hispalinux.es/htmls/estandares.html>

Shockwave

Macromedia Shockwave: viewing of interactive multimedia content inside a Web browser.

Hint: Shockwave files reside on the hard drive after they've been viewed, in the Internet Cache folder. You may view them offline with tools like the free and fabulous [IrfanView](#).

SLIP

Serial Line Internet Protocol. A method for connecting to the Internet. SLIP systems can receive and transfer IP packets over a serial link, such as a dial-up or private telephone line.

IP (the Internet Protocol) is the most important of the protocols on which the Internet is based. It allows a packet to traverse multiple networks on the way to its final destination.

See the "[Personal Internet Access Using SLIP or PPP: How You Use It, How It Works](#)," and the "[PPP Client Howto](#)" texts for more information.

SMTP

Simple Mail Transfer Protocol. The Internet standard protocol for transferring electronic mail messages from one computer to another. SMTP specifies how two mail systems interact and the format of control messages they exchange to transfer mail.

SMTP mail servers do not authenticate the users when sending mail. Therefore, you can use any SMTP relay host to have your mail sent.

Talk

A command on the Internet, which may remind of IRC, but is a single link between two parties only.

TCP/IP

Transmission Control Protocol/Internet Protocol. Communications protocols that internetwork dissimilar systems connected to the Internet. TCP/IP supports services such as remote login (telnet), file transfer (FTP), mail (SMTP and POP).

An old FAQ is available at:

<http://www-iso8859-5.stack.net/pages/faqs/tcpip/tcpipfaq.html>

You should also take a look at

<ftp://rtfm.mit.edu/pub/usenet/news.answers/internet/tcp-ip>

Telnet

A program on the Internet that allows you to execute commands on remote computers as though you were logged in locally. You can browse menus, read text files, use gopher services, and search online databases. Sometimes, you can join live, interactive games and chat with other callers. Usually, you cannot download files or list file directories.

To set up a telnet connection, you need to know the name of the computer site you want to access and have a valid user name and password for that site.

The site's name can be in words, like "VM1.NODAK.EDU," or a numeric address, like "134.129.111.1". Some services require that you connect to a specific "port" on the remote system. Enter the port number, if there is one, after the Internet address.

Some telnet sites allow for guest logins. Guest accounts typically are restricted to the types of actions they can perform during a session. Although your telnet session is actually running software directly on the site's telnet computer, you will be running a program that prevents you from accessing the general capabilities of that computer. Once you are connected to a telnet site, you will often see a menu-driven system which is under the control of the telnet site, and guides you through the actions you may perform at that site.

Note: If you get a return message saying that the host was unknown or unavailable, first check if your address syntax was correct. If it is, try later. Also, your telnet address may have changed.

Another common use of telnet is for users to be able to log into their computers from remote locations. In this case, users enter their own user names and passwords and, therefore, have the same user privileges they would have when logged in without using telnet.

Accessing commercial services like [CompuServe](#) via telnet gives you the convenience and time savings of not having to log off and on as you move from one host system to another. There is normally no real time cost advantage, unless your location is closer to an Internet node than any of these services' regular access point.

Telnet is not available to users who have email only access to the Internet.

URL (Universal Resource Locator)

A Universal Resource Locator is the address of any multimedia resource on the Internet. A sort of standardized description of the location of a given network resource, and the protocol used to access the resource.

A URL may point to a WWW page file (an HTML file), a GIF image, an MPEG movie, an AU sound file, a ftp file or directory of files, a gopher menu, a Usenet news group, a telnet port, and so on. URLs identify the type and location of network and local resources.

Many users with interactive connection to the Internet, use remote network resources through local programs. These programs are called local clients, and there are such programs for anonymous ftp, irc, Mosaic, WWW, and more.

The local clients programs often require a terse, machine readable resource addressing format, called "Universal Resource Locator" (URL). It is a draft standard for

specifying an object on the Internet, such as a file or newsgroup.
Example using WWW: The URL format resource address is

http://home.eunet.no/~presno/index.html

This tells us:

the tool: http (see above)
the host: login.eunet.no
the path: /~presno/index.html

The first part of the URL, before the colon, specifies the access method. The part of the URL after the colon is interpreted specific to the access method. In general, two slashes after the colon show a machine name (machine:port is also valid).

A Gopher example: URL uses the following

gopher://nutmeg.ac.uk/archive/uunet/archive/Health.Care/report
/forward.txt

The URL tells us:

the tool: gopher
the host: nutmeg.ac.uk
the path: archive/uunet/archive/Health.Care/report
the file: forward.txt

A ftp example, showing site, directory, and file name:

ftp://ftp.rpi.edu/pub/communications/internet-cmc.html

A telnet example:

telnet://database.carl.org/

The general format is: telnet://[<user>@]<host>[:port]

A newsgroup example:

news:alt.bbs

A file example, showing site, directory, and file name:

file://localhost/mysub/mypage.html

Usenet

A global bulletin board, of sorts, in which millions of people exchange public information on every conceivable topic. For more information, see [Appendix 1](#).

UUCP

See [Appendix 1](#).

VMS

Virtual Memory System. A multiuser, multitasking, virtual memory operating system for the VAX series from Digital Equipment.

Routers

Routers are the pathfinders of the Internet. Your stream of packets may pass through large numbers of routers before they reach their destination.

Web Forums

are also called Browser Message Boards. They are conference systems using Web technology. Users must visit a particular website for each web forum to read messages from others and post their own.

See <http://bbs.augsburg.edu/~schwartz/ebbs.html> for a list of BBS Sites on the Internet, including Web browser message boards. Several Web forums are indexed at [Reference.COM](#).

Winsock

The Windows Socket standard. An application programming interface (API) designed to let Windows applications (such as a Web browser) run over a TCP/IP network.

Requires a direct connection to the Internet, or access to a SLIP, or PPP server. With Winsock, you can simultaneously run several applications that make use of the Internet.

There is a fine introduction to Winsock in [the alt.winsock FAQ](#). The Winsock Application FAQ can be retrieved by email to info@LCS.com, Subject: FAQ.

For more information, check out the newsgroup [comp.protocols.tcp-ip.ibmcp](#) and [alt.winsock](#).

WWW (World Wide Web)

A global information service that provides top level access down to documents, lists, databases, and services. It includes resources such as FTP, and Gopher.

To access the Web, use a browser program (often referred to as a "client." The browser reads documents, and can fetch documents and files from other sources.

For a comparative list of Graphics Web browsers, go to the [WWW Servers Comparison Chart](#) page. For DOS based Web browsers and tools, see <http://www.fdisk.com/doslynx/>.

If at all interested in the web's history, you must visit [Deja Vu!](#)

[The Scout Toolkit page](#) will help you identify the network tools most appropriate for your needs. Netscape and Microsoft Explorer are not the only browser programs that will let you use the web. For example, Lynx may be good for some dial-up users with slow access to the Internet, or for users with old computers.

Web pages may be retrieved by electronic mail ([Chapter 12](#)). These services are mostly for retrieval of text. Generally, most of them cannot retrieve large files containing graphics, sound, or other types of binary files.

For comprehensive information about the web, start at <http://www.w3.org>. A [Word Wide Web Frequently Asked Questions](#) file about WWW is available, while updates are posted to [news.answers](#), [comp.infosystems.gopher](#), [comp.infosystems.wais](#) and [alt.hypertext](#).

[Netcraft](#) counts the number of hosts providing a Web service (http service) on computers connected to Internet. Here's some figures showing the growth:

<u>Year</u>	<u>Month</u>	<u># of Web sites</u>	<u>% growth</u>
1995	August	18,957	-
1996	August	342,081	1,800%
1997	August	1,269,800	371%
1998	August	2,807,588	221%
1999	August	7,078,194	252%
2000	August	19,823,296	280%
2001	August	30,775,624	155%

2002 August 35,991,815 116%

In January 2000, [Inktomi and the NEC Research Institute](#) claimed there were more than one billion unique documents on the Internet on 6,409,521 servers (around 64% of the number reported by Netcraft).

For a list of mailing lists and Usenet News groups related to WWW, visit http://www.leeds.ac.uk/ucs/WWW/WWW_mailing_lists.html.

[The Web Developer's Virtual Library](#) is a must for Web page developers. Topics span Authoring, Annotation, CGI, Database, Forms, HTML, HTML Editors, Imagemaps, Images and Icons, Java, MIME, Perl, SGML and CyberVR to Mail, News, Protocols, Security, and much more.

There's a collection pointers to tools, technical documentation, and standards, both current and under development, for World Wide Web and the Internet in general, is at <http://www.mcs.com/~lunde/web/aboutwww.html>, and you should also visit [The Html Station](#).

Run your web pages through [Bobby](#), a free web-based service that will help you make web pages accessible to people with disabilities. It also finds HTML compatibility problems that prevent pages from displaying correctly on different web browsers. The [Making Accessible Web pages tips page](#) is translated into many languages..

Also, make sure you visit [the Best Viewed with any Browser Campaign](#), and its competitor, www.anybrowser.com.

For more

You may want to start with the "Internet Services FAQ" (see FAQ above).

John December's [Internet-tools list](#) contains information about network tools and information resources like Archie, Gopher, Netfind, and WWW.

[The Multilingual Internet Glossary Project](#) (NETGLOS) have terminology definitions in Bahasa Indonesia, Brazilian, Dutch, German, Spanish, French, Hrvatski, Hebrew, Portuguese, Norwegian, Zhongwen, English, and some other languages.

["Connected: An Internet Encyclopedia"](#) is a large technical reference to the protocols that run the net.

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Search:

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Appendix 7: Services Offering Access to the Internet

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Most users cannot connect directly to the Internet. They must hook their computers to "host" computers on corporate or institutional networks which are already a part of the Internet, or to a **commercial company** which has bought an Internet connection, and **re-sells access to the Internet** through that connection.

To find **Interness Access Providers** that serve a given area, try these web pages:

[Internet Access Providers Meta-List](#)

[TheDirectory.org](#)

[NetAlert.com](#)

[Netusa.net](#)

[TheList](#)

[International E-mail accessibility - World Map](#) is a system of clickable maps which lets you obtain further information about E-mail and Internet access in a country of your choice.

If you want it real cheap, check if there's a **Free-Net** offering in your area. Try: <http://www.lights.com/freenet/> on the Web for more.

If you live in the US, and want completely free access, check [the FreeISPs mailing list](#).

Travelling abroad

[EUnet Traveller](#)

With one login name and one password, you can connect through thousands of points-of-presence (POP) around the world. You don't pay when you don't connect, so you can have an EUnetTraveller account stand-by without paying for it. It has has well over 3000 "POPs" (1999). For current list of countries, see <http://traveller.eu.net/html/pops.html>.

I have used in Perú, Bolivia, Brazil, Puerto Rico, the United States, Romania, The Netherlands, Norway of course, and several other places. Neat!

CompuServe

For years, I used [CompuServe](#) for Internet access when far away from home. Today, I have it in case EUnetTraveller should fail to deliver.

The service has local nodes in a very large number of countries around the world. Type GO PHONES to get phone numbers in your destination cities. If your mail normally goes to a Unix mailbox, use the .forward file to redirect it to CompuServe before leaving home.

If you are in a country with no local access, or in a place where you have to make an expensive long distance call to a slow node, consider calling direct to CompuServe's own nodes in the United States at high speed.

Example: In Lagos, Nigeria, I connected successfully at 14,400 bits/s with compression to a CompuServe node in the United States. This was much cheaper and better than calling nearby South Africa at 2400 bits/s through an Infonet network node (1994).

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