**What is the Internet**

USING the Internet, David, a teacher in the United States, acquired course materials. A Canadian father accessed it to stay in contact with his daughter in Russia. Loma, a housewife, used it to examine scientific research on the early beginnings of the universe. A farmer turned to it to find information about new planting methods that make use of satellites. Corporations are drawn to it because of its power to advertise their products and services to millions of potential customers. People around the globe read the latest national and international news by means of its vast reporting and information services.

What is this computer phenomenon called the Internet, or the Net? Do you personally have need of it? Before you decide to get “on” the Internet, you may want to know something about it. In spite of all the hype, there are reasons to exercise caution, especially if there are children in the home.

What Is It?

Imagine a room filled with many spiders, each spinning its own web. The webs are so interconnected that the spiders can travel freely within this maze. You now have a simplified view of the Internet—a global collection of many different types of computers and computer networks that are linked together. Just as a telephone enables you to talk to someone on the other side of the earth who also has a phone, the Internet enables a person to sit at his computer and exchange information with other computers and computer users anyplace in the world.

Some refer to the Internet as the information superhighway. Just as a road allows travel through different areas of a country, so the Internet allows information to flow through many different interconnected computer networks. As messages travel, each network that is reached contains information that assists in connecting to the adjacent network. The final destination may be in a different city or country.

Each network can “speak” with its neighbor network by means of a common set of rules created by the Internet designers. Worldwide, how many networks are connected? Some estimates say over 30,-000. According to recent surveys, these networks connect over 10,000,000 computers and some 30,000,000 users throughout the world. It is estimated that the number of connected computers is doubling each year.

What can people locate on the Internet? It offers a rapidly growing collection of information, with topics ranging from medicine to science and technology. It features exhaustive material on the arts as well as research material for students and coverage of recreation, entertainment, sports, shopping, and employment opportunities. The Internet provides access to almanacs, dictionaries, encyclopedias, and maps.

There are, however, some disturbing aspects to consider. Can everything on the Internet be regarded as wholesome? What services and resources does the Internet offer? What precautions are in order? The following articles will discuss these questions.

**Services and Resources of the Internet**

A COMMON resource provided by the Internet is a worldwide system for sending and receiving electronic mail, known as E-mail. In fact, E-mail represents a large portion of all Internet traffic and is for many the only Internet resource they use. How does it work? To answer that question, let's review the ordinary mail system first.

Imagine that you live in Canada and wish to send a letter to your daughter living in Moscow. After properly addressing the envelope, you mail it, starting the letter's journey. At a postal facility, the letter is routed to the next location, perhaps a regional or national distribution center, and then to a local post office near your daughter.

A similar process occurs with E-mail. After your letter is composed on your computer, you must specify an E-mail address that identifies your daughter. Once you send this electronic letter, it travels from your computer, often through a device called a modem, which connects your computer to the Internet via the telephone network. Off it goes, bound for various computers that act like local and national postal routing facilities. They have enough information to get the letter to a destination computer, where your daughter can retrieve it.

Unlike the regular mail, E-mail often reaches its destination, even on other continents, in minutes or less unless some part of the network is heavily congested or temporarily out of order. When your daughter inspects her electronic mailbox, she will discover your E-mail. The speed of E-mail and the ease with which it can be sent even to multiple recipients all over the world make it a popular form of communication.

Newsgroups

Another popular service is called Usenet. Usenet offers access to newsgroups for group discussions on specific topics. Some newsgroups focus on buying or selling various consumer items. There are thousands of newsgroups, and once a user has gained access to Usenet, there is no cost to subscribe to them.

Let's imagine that someone has joined a newsgroup involved in stamp collecting. As new messages about this hobby are sent by others subscribing to this group, the messages become available to this newcomer. This person reviews not only what someone has sent to the newsgroup but also what others have written in response. If, for example, someone requests information about a particular stamp series, shortly afterward there may be many responses from around the world, offering information that would be immediately available to all who subscribe to this newsgroup.

A variation of this idea is the Bulletin Board System (BBS). BBSs are similar to Usenet, except that all files are located on a single computer, usually maintained by one person or group. The content of news-groups reflects the varied interests, viewpoints, and moral values of those who use them, so discretion is needed.

File Sharing and Topic Searching

One of the original Internet goals was global information sharing. The teacher mentioned in the previous article located another educator on the Internet who was willing to share already developed course materials. Within minutes the files were transferred, despite a 2,000-mile distance.

What help is available when one does not know where a subject may be located within the Internet? Just as we locate a phone number by using a telephone directory, a user may find locations of interest on the Internet by first gaining access to what are known as search sites. The user supplies a word or a phrase; the site then replies with a list of Internet locations where information can be found. Generally, the search is free and takes only a few seconds!

The farmer mentioned earlier had heard of a new technique called precision farming, which uses computers and satellite maps. By entering that phrase at a search site, he found the names of farmers who were using it as well as detailed information about the method.

The World Wide Web

The part of the Internet called World Wide Web (or. Web) allows authors to use an old-fashioned idea—that of footnotes— in a new way. When an author of a magazine article or a book inserts a footnote symbol, we scan the bottom of the page and are possibly directed to another page or book. Authors of Internet computer documents can do essentially the same thing using a technique that will underline or highlight a word, a phrase, or an image in their document.

The highlighted word or image is a clue to the reader that an associated Internet resource, often another document, exists. This Internet document can be fetched and displayed immediately for the reader. The document may even be on a different computer and located in another country. David Peal, author *of Access the Internet!,* notes that this technique “links you to actual documents, not just references to them.”

The Web also supports the storage and retrieval, or playing, of photographs, graphics, animations, videos, and sounds. Loma, the housewife mentioned at the outset of the previous article, obtained and played a short color movie of the current theories regarding the universe. She heard the narration through her computer's audio system.

Surfing the Net

By using a Web browser, a person can easily and quickly view information and colorful graphics that may be stored on computers in many different countries. Using a Web browser can be similar in some ways to actual travel, only easier. One can visit the Web exhibits of the Dead Sea Scrolls or the Holocaust Memorial Museum. This ability to move nimbly back and forth from one Internet Web site to another is commonly called surfing the Net.

Businesses and other organizations have become interested in the Web as a means to advertise their products or services as well as to offer other kinds of information. They create a Web page, a sort of electronic storefront window. Once an organization's Web page address is known, potential customers can use a browser to go “shopping,” or information browsing. As in any marketplace, however, not all products, services, or information provided on the Internet are wholesome.

Researchers are trying to make the Internet secure enough for confidential and safeguarded transactions. (We will talk more about security later.) Another worldwide Internet—dubbed by some Internet II—is being developed because of the increased traffic that this commercial activity has generated.

What Is “Chat”?

Another common service of the Internet is the Internet Relay Chat, or Chat. Chat allows a group of people, using aliases, to send messages to one another immediately. While used by a variety of age groups, it is especially popular among young people. Once connected, the user is brought into contact with a large number of other users from all around the world.

So-called chat rooms, or chat channels, are created that feature a particular theme, such as science fiction, movies, sports, or romance. All the messages typed within a chat room appear almost simultaneously on the computer screens of all participants for that chat room.

A chat room is much like a party of people mingling and talking at the same general time, except that all are typing short messages instead. Chat rooms are usually active 24 hours a day. Of course, Christians realize that the Bible principles about association, such as the one found at 1 Corinthians 15: 33, apply to participation in chat groups just as they apply to all aspects of life.

Who Pays for the Internet?

You may be wondering, ‘Who pays the charges for the large distances one can travel on the Internet?’ The expense is shared by all users, corporate and individual. However, the end user is not necessarily presented with a long-distance telephone bill, even if he has visited many international sites. Most users have an account with a local commercial Internet service provider, who in many cases bills the user a fixed monthly fee. Providers generally supply a local number to avoid extra phone costs. A typical monthly access fee is approximately $20 (U.S.).

As you can see, the potential of the Internet is enormous. But should you get on this information superhighway?

**Do you Really Need the Internet?**

SHOULD you use the Internet? Of course, this is a personal matter, one that you should weigh carefully. What factors might influence your decision?

Need—Have You Calculated the Expense?

Much of the recent growth of the Internet is due to strong marketing efforts of the business world. Clearly, their motive is to create a sense of need. Once this perceived need is cultivated, some organizations then require a membership or annual subscription fee for the information or service that you initially accessed without cost. This fee is in addition to your monthly Internet access costs. Some on-line newspapers are a common example of this practice.

Have you calculated the expense of equipment and software versus your actual need? (Compare Luke 14:28.) Are there public libraries or schools with access to the Internet? Using these resources at first may help you to assess your need without making a large initial investment in a personal computer and related equipment. It may be that appropriate public Internet resources can be used, as needed, until it is clear how often such resources are actually required. Remember, the Internet existed for more than two decades before the general public even became aware of it, let alone felt a need for it!

Security —Is Your Privacy Protected?

Another key concern is confidentiality. For example, your E-mail message should be seen only by your intended recipient. While the letter is in transit, however, a clever and possibly unscrupulous person or group could intercept or monitor your correspondence. To protect messages, some people use E-mail software products to scramble their letter's sensitive contents before mailing it. At the other end, the receiving party may need similar software for unscrambling the message.

Recently, much discussion has focused on the exchange of credit-card and other sensitive information for commercial use on the Internet. Although substantial innovations are expected to strengthen security, the noted computer security analyst Dorothy Denning states: “Completely secure systems are not possible, but the risk can be reduced considerably, probably to a level commensurate with the value of the information stored on the systems and the threat posed by both hackers and insiders.” Absolute security is not realizable in any computer system, whether connected to the Internet or not.

Can You Afford the Time?

Another important issue is your time. How long will it take to install and learn the tools to navigate the Internet? Also, one experienced Internet instructor pointed out that surfing the Internet “can be one of the most addictive and time-intensive activities for a new Internet user.” Why is this?

There are large numbers of interesting subjects and countless new things to discover. In effect, the Internet is a vast collection of libraries with visually appealing documents. Navigating through just a fraction of it can easily whittle away most of the evening hours before you even think of sleep. (See the box “How Valuable Is Your Time?” on page 13.) Of course, this doesn't mean that all Web navigators lack control. However, it would be wise to place time and content restraints on Web surfing—especially for youngsters. Many families do the same with television. This will protect time set aside for family and spiritual activities. —Deuteronomy 6:6,7; Matthew 5:3.

Are You Missing Out?

In time. Internet technology will be more fully deployed in developing areas of the world. However, recall the people mentioned at the beginning of the first article. Most of the information they obtained could have been acquired by using libraries, telephones, conventional mail, or newspapers. Of course, some of these methods may involve more time and expense. Still, for the majority of people throughout the earth, these more traditional methods will likely continue for a time to be the primary means of communication.

**The Internet**

**Why Be Cautious?**

THE Internet certainly has potential for educational use and day-to-day communication. Yet, stripped of its high-tech gloss, the Internet is beset with some of the same problems that have long afflicted television, telephones, newspapers, and libraries. Thus, an appropriate question may be, Is the content of the Internet suitable for my family and me?

Numerous reports have commented on the availability of pornographic material on the Internet. Does this suggest, though, that the Internet is merely a cesspool full of sexually perverted deviants? Some contend that this is a gross exaggeration. They argue that one must make a conscious and deliberate effort to locate objectionable material.

It is true that one must make an intentional effort to find unwholesome material, but others argue that it can be located with much greater ease on the Internet than elsewhere. With a few keystrokes, a user can locate erotic material, such as sexually explicit photos including audio and video clips.

The issue of how much pornography is available on the Internet is currently a hotly debated subject. Some feel that reports suggesting a pervasive problem may be exaggerated. Yet, if you learned that there were not 100 poisonous snakes in your backyard but only a few, would you be any less concerned for your family's safety? Those who have access to the Internet would be wise to exercise caution.

Beware of Those Who Prey on Children!

Recent news coverage has shown that some pedophiles join on-line interactive chat discussions with young people. Posing as young children, these adults have slyly extracted names and addresses from unsuspecting youngsters.

The National Center for Missing and Exploited Children (NCMEC) has documented some of this activity. For example, in 1996, police found two South Carolina, U.S.A., girls, ages 13 and 15, who had been missing for a week. They had gone to another state with an 18-year-old male they met on the Internet. A 35-year-old man was charged with luring a 14-year-old boy into an illicit sexual encounter when his parents were not home. Both cases began with dialogue in an Internet chat room. Another adult, in 1995, met a 15-year-old boy on-line and boldly went to his school to meet him. Still another adult admitted to having sex with a 14-year-old girl. She had used her father's computer to communicate with teenagers via on-line bulletin boards. She too met this adult on-line. All these youngsters had eventually been persuaded to reveal their identities.

**Need for Parental Guidance**

While cases such as the above are relatively infrequent, parents must nevertheless examine this matter carefully. What resources are available to parents to protect their children from being targets of crime and exploitation?

Companies are beginning to offer tools that range from rating systems similar to those for movies, to word-detection software that filters out undesirable content, to proof-of-age systems. Some approaches block material even before it reaches the family's computer. Most of these approaches are not foolproof, however, and can be circumvented by various methods. Remember, the original design of the Internet was to make it resistant to disruptions, so censorship is difficult.

In an interview with *Awake!,* a police sergeant who supervises a child exploitation investigation group in California offered this advice: “There is no substitute for parental guidance. I have a 12-year-old child myself. My wife and I have allowed him to use the Internet, but we make it a family affair and place careful safeguards on the amount of time we'll spend.” This father is especially cautious regarding chat rooms, and he places firm restrictions on their use. He adds: “The personal computer is not in my son's room but in an open area of the home.”

Parents need to take an active interest in deciding what use of the Internet, if any, they will permit for their children. What practical and reasonable precautions should be considered?

Staff writer David Plotnikoff of the *San Jose Mercury News* offers some useful tips to parents who decide to have Internet access at home.

* Your youngsters' experience is most positive when they work with you, as they learn the value of your judgment and guidance. Without your direction, he warns, “all the information on the Net is just like water without a glass.” The rules you insist on are “an extension of the common-sense things you've told your kids all along.” An example would be your rules regarding speaking to strangers.
* The Internet is a public place and should not be used as a baby-sitting service. “After all, you wouldn't just drop your 10-year-old off in a big city and tell him or her to go have fun for a few hours, would you?”
* Learn to recognize the difference between Internet locations for playing games or chatting and places for getting help with homework.

The NCMEC pamphlet *Child Safety on the Information Highway* offers several guidelines to young people:

* Don't reveal personal information such as your address, your home telephone number, or the name and location of your school. Don't send photos without your parents' permission.
* Inform your parents immediately if you receive information that makes you feel uncomfortable. Never respond to messages that are mean or aggressive. Tell your parents right away so that they can contact the on-line service.