GUEST EDITORIAL

SUPERHIGHWAY: NMA's ACCESS TO THE INTERNET

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Now that the National Medical Association has reached its centennial, this becomes a time for reflection and looking toward the next hundred years. One of the most influential developments in recent history has been the emergence of computers. As technology develops, new innovations become part of the norm, much as the thermometer or magnetic resonance imaging have become to medicine.

One of the most far reaching and growing subsets of computing is the Internet. In simplest terms, the Internet is an interaction or interconnection between computer networks. The Internet is a process or an event. It is run by a set of agreements called protocols, between the thousands of computer networks of which it is composed. These agreements define how they will talk to each other and exchange information. It is these protocols and the information conduit they provide that give the Internet its identity.

The Internet provides a worldwide medium by which individuals are able to electronically share thoughts, resources, ideas, and knowledge. The precursor to the Internet was developed in the 1960s by the pentagon, who at the time was seeking to establish a holocaust-proof command and control system. What materialized was a network composed not of a typical hierarchical pyramid of systems, but a more flexible peer-to-peer interconnection in which no single system was in charge. Each element in the network was autonomous and independent.

Information was assembled into packets and addressed to the intended recipient. The packet then was cast adrift on the network with its address attached. It was up to the network to forward it in the general direction of its destination until it arrived. Once delivered, the packet was disassembled and the original information restored.

In recent years, the number of users on the Internet has been increasing by 20% per month. Recent estimates of the size of the Internet range from 10,000,000 to 20,000,000 users worldwide. However, there is no practical way of finding out a more exact number, since people sign on at will.

For those who are busy in practice and are not "computer literate," there are systems in libraries, universities, and government agencies where help can be sought to log on to the Internet to peruse the system through whatever means are provided for by the host computer.

One of the most popular means of accessing the Internet is e-mail, or electronic mail. Internet e-mail will allow you to get and keep in touch with almost anyone, almost anywhere. The computer does not recognize distance and so any location in the world can be accessed in about the same time and with the same ease as any other. The possibilities in terms of patient care, diagnoses, and sharing research are unending using this means of communication.

When sending mail through the US Post Office, there are 5 parts to the address: name, address, city, state, and zip code. These can be seen as answers to two basic questions needed to properly deliver a letter: who does it go to, and where are they? Electronic mail needs answers to the same two questions in order to deliver messages or files. The mail delivery system must have all the information needed to navigate through this maze of networks to the precise mailbox you intend.

In the United States, there are several categories of systems connected to the Internet. Each of these have been given a three-letter abbreviation. The most commonly used is com, which stands for commercial systems. Outside the United States, these three-letter designations generally are replaced by a two-letter country code. These two- and three-letter codes for systems are

GLOSSARY OF TERMS FREQUENTLY USED

Baud: A measure of the speed of data transmission over the telephone or by other means.

Client: A program or computer that is dependent on another program or computer for information or other necessary operating data. The computer on which it is dependent is called the Host.

Connected: One is connected to a system when an active communications path has been established. This term is used frequently when you initially dial into a system or when one system to which you are already connected is passing you off to another one.

Cyberspace: This is the name users have given to the electronic reality encountered on the Internet. It is meant to highlight the contrast between the virtual reality of the Internet and the so-called "real world."

Download: Receiving a file from another computer, usually by modem.

E-mail: Mail conveyed by electronic rather than physical means—a contraction for electronic mail.

Gateway: A channel by which two computer networks provide a means of communicating between each other.

Host: A host is any computer, system, or network to which you are connected as an outside terminal.

Log-on: To log-on to a system, you usually must enter your account identifier, name, or other information before you are allowed to use the resources of that system.

Log-off: When you are ready to terminate your connection to a system, you must log-off. It is the opposite of logging-on. Whenever possible, exit in whatever way the host provides.

Modem: This is a contraction for modulator/demodulator. It is a device that converts digital (computer) information into sound so that it can be sent over telephone lines, and once it has reached its destination, converts it back into digital form again. A modem can be viewed as a translator that operates between a computer and a telephone.

Port: Host systems on the Internet are usually large, mainframe, or minicomputers, which, like a large building, have many "doors" through which to enter and leave. In a computer system, these doors are called ports, and it is sometimes necessary to specify which port you are addressing.

Protocol: This is a set of agreements, rules, or procedures that are adhered to by two systems so that they may interact in a reliable fashion. TCP/IP is the fundamental protocol for the Internet.

Upload: The process of transferring a file from your computer to another is called an upload. It is the opposite of a download in that it moves information "up" and out of your computer instead of "down" and into it.

User account: When you become a registered user on a system, you are assigned a user account. This usually involves a "user ID" and an e-mail address.

called domains. All together, an e-mail address is basically, someone@somewhere.domain. The entire ad-dress following the @ symbol is technically called a Fully Qualified Domain Name, or FQDN. This just means that it represents a specific name of a specific system.

There are a growing number of private companies offering public Internet gateways. Since they are in business, there will be a charge. The charge varies from system to system. A basic account is generally between $10 and $35 a month on most systems. A lot of systems also are starting to charge a onetime installation fee. These typically run between $10 and $35.

If you are as comfortable with computers as you are with managed care, it is important not to be intimidated. There are several books on the market that deal with the Internet: *Riding the Internet Highway* by Sharon Fisher, New Riders Publishers, 1993; *The Internet Companion: A Beginner's Guide to Global Networking*, Tracy LaQuey, Addison-Wesley, 1993; *Internet—Getting Started*, PTR Prentice Hall, 1994.

It also is important to talk with people and find out what they're using and where you can get it. With the change in medical care and technology, it is imperative that members of the National Medical Association be a part of the superhighway. Through the Public Affairs Committee, there is a plan to send information on resolutions and other pertinent issues on the Internet. In this way, millions of users will have exposure and access both to the Association and its position on key issues facing African Americans in the medical profession.