CULTURA & SAÚDE

ISSN 2595-7546
Vol. 3 · No. 3 · August 2003
São Paulo, Brasil

ARTICLE · CULTURA & SAÚDE

# The Internet

*From ARPANet to the World Wide Web: origins, services, and pitfalls of the network*

**Alexandre Campos Moraes Amato**

*Resident in General Surgery, Hospital Jaraguá – São Paulo*

Received for publication in August 2003 · Section: Article · Language: English

ABSTRACT

The author offers an introductory overview of the Internet, tracing its origin in 1969 as ARPANet, a US military network designed to withstand bombardment, through its commercial release and worldwide spread. He explains its operation based on the TCP/IP protocol, the role of electronic mail, and the creation of the World Wide Web in 1991, whose success he attributes to hypertext and the graphical interface of Mosaic. He describes the diversity of the network's services, beyond the Web and e-mail, and comments on its cultural and linguistic diversity, with English predominating. The text also warns of the medium's pitfalls: the free publishing by non-specialists, outdated content, the distraction caused by an excess of links, and the commercial manipulation of search engines, all of which demand a critical stance from users to separate reliable information from the dubious.

KEYWORDS: *internet; arpanet; world wide web; tcp/ip; electronic mail; information*

*Resident in General Surgery, Hospital Jaraguá – São Paulo*

In 1969, at the height of the Cold War, the Internet was created. Originally it linked research laboratories together and was called ARPANet (Advanced Research Projects Agency). It was a network belonging to the United States Department of Defense, designed to be decentralized and to survive a bombardment. When it came into use at universities and laboratories, it began to be called the Internet and spread throughout the world.

The Internet is the grouping of some forty thousand other networks around the world communicating through a single protocol, TCP/IP (*Transmission Control Protocol / Internet Protocol*). For two decades it remained restricted to academic and scientific use. In 1987, its commercial use was authorized in the United States, and in 1995 in Brazil. The Internet's explosion occurred in 1992 in the USA, when countless access providers for the home user appeared.

Electronic mail (*e-mail*) is one of the network's oldest features. It allows any user with an address to send an electronic letter to any other user, anywhere in the world. Owing to its many advantages—speed, ease of sending, and others—it was widely embraced by society.

The *World Wide Web*, the Internet as the media portrays it, was created in 1991 in Switzerland. It was conceived as a simple way to disseminate scientific documents and to interconnect computers. The creation of *Mosaic*, a program intended to make access possible in a graphical environment, allowed new users to use the network—overcoming the previous difficulty of learning commands in computer language and the limitation of displaying only text. The secret of the *World Wide Web*'s success is hypertext, in which texts and images are linked together through keywords.

Today, the Internet has moved away from its original purpose and has become a medium of communication for everyone. It is capable of freeing us from the limitations of space and time, so that we can visit the Louvre Museum and, seconds later, be reading the local newspaper.

The Internet is a worldwide network with no central computer, providing a variety of services. In the media, the

most commonly discussed are the *World Wide Web*, electronic mail (*e-mail*), and *FTP*. However, it is made up of many other services, such as: discussion groups, mailing lists, *Telnet, Finger, Gopher, WAIS, P2P, Chat*, and others.

Each service can be accessed by a different, specific program, but the use of browsers is enough to access the most used and most efficient services for research.

Cultural and linguistic diversity is characteristic of the Internet, and clashes between cultures and beliefs may occur. English is the predominant language, though it is not an official one.

For all its virtues, the Internet is also full of pitfalls, and it is necessary to know them in order to avoid them. Even people of low income and with no connection to universities are able to publish information that, without the great network, would never have been made public. This has both good and bad sides. Everyone is free to publish texts on whatever subjects they wish, regardless of whether or not they are experts on the matter. The characteristic of constant change can lead to obsolescence, which becomes something of a paradox: even though it is extremely easy to publish on the network, it must be remembered that nothing need be done for one's pages to remain published forever, leading them to become outdated. Such ease makes room for excellent works and for dreadful ones alike, which obliges the reader to adopt a critical and attentive stance to avoid this trap.

The excess of *links* on pages can lead the reader to distraction, straying from the original aim and wandering through subjects unrelated to the current research. Knowing that most Internet users do not go beyond the first ten results in search engines, many merchants pay to have their information ranked ahead of others, so that the first results are not always the best or the most reliable. This fact once again requires the user's constant vigilance to separate the wheat from the chaff.

© Cultura & Saúde · ISSN 2595-7546 · culturaesaude.med.br · English edition