THE HISTORY OF THE INTERNET

Valdecir Bertoncello[1]
Faculdades Integradas de Maringá
Centro de Ensino Superior de Maringá

RESUMO: A internet teve seu início em 1969 através do esforço da ARPA (Agência de Projetos de Pesquisa Avançados), que criou um projeto em grande escala de interconexões via rede de sistemas de computadores entre algumas agências do Governo Americano e algumas Universidades. Entre elas estão a Universidade de Utah, Universidade da Califórnia em los Angeles, Universidade da Califórnia em Santa bárbara e o Instituto de Pesquisa de Stanford. Este grupo formou a ARPANET (Agência Avançada de Pesquisa e Projetos de Redes). Este projeto tomou um grande vulto no decorrer do tempo, o que passou a ter especial atenção do Departamento de Defesa Americano, que queria não só controlar como comandar a nova rede. Em 1983, houve a divisão em duas partes da ARPA, uma rede de computadores militares e uma rede de computadores voltada à pesquisa. A partir do momento em que a internet passou a ter uso mais comercial foram criadas nomenclaturas e condições próprias. Assim, alguns símbolos e abreviaturas passaram a ter significados específicos na rede. Esta simbologia passou a ser utilizada como identificadores de tipos de sites, país de origem da página, endereços de e-mail, e outros. A Internet, em menos de 30 anos de experiência, já alcançou um número espetacular de usuários do mundo todo produtos e serviços que são oferecidos e comercializados pela rede. Em um tempo muito curto já se tornou um dos maiores adventos do final deste século, bem como abriu uma porta para as novas descobertas e aplicações do novo milênio.

ABSTRACT: The internet had its beginning in 1969 due to the effort of ARPA (Advanced Research and project Agency), that created a great scale project of interconnection through a net of computer systems between some of the American Government agencies and some universities. Among them there are the University of California in Santa Barbara and the Institute of Research of Stanford. This group formed the ARPANET (Advanced Research and Projects Agency Net). This project has grown enormously with time calling the attention of the American Department of Defense which wanted not only to control but also to command this new network. In 1983, there was the division of ARPA into two parts, one network of military computers and, one network of computers aimed at research. From the moment that the internet had its more commercial use, appropriate names and codes were created. Therefore, some of the symbols and abbreviations started to have specific meaning in the net. This symbology started to be used as means of identification for different types of sites, country of origin pages, e-mail addresses and others. This Internet, in less than thirty years of existence, has also generated a new market which has provided users from all over the world with the services and products offered and traded though the net. In a very short time it has become one of the biggest advents in the end of this century, which has also opened the door to new discoveries and applications in the new millennium.

Introduction

The internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. The Internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and development of information infrastructure.

History

The Internet is a worldwide network of computers and people. Built upon state-of-the-art technology, the Internet makes it possible for thousands of dissimilar physical networks – networks that aren't connected and operated as a single communication system.

The Internet began as an effort by the Advanced Research projects Agency (ARPA) TO CREATE A LARGE SCALE NETWORK SO THE COMPUTER SYSTEMS OF GOVERNMENT AGENCIES AND UNIVERSITIES COULD BE INTERCONNECTED. In 1969, the first four connection points were linked together forming what was called the Advanced Research Projects Agency Network (ARPANET). The four sites that were selected include the University of Utah, the University of California at Los Angeles, the University of California at Santa Barbara, and Stanford Research Institute (now SRI International) (WINSTON, 1998).

The US Army and the Internet

The Department of Defense (DoD) was interested in the early development of the Internet as a framework for building an indestructible command and control network. ARPA was to invent a system for transferring data across its network in such a way that if parts of the network were destroyed as the result of a nuclear attack, alternate paths would be available (TRINKLE, 1997).

This goal led to the development of a technology called packet switching.

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[1] Coordenador e Professor do Curso de Processamento de Dados das Faculdades Integradas de Maringá - CESUMAR

"In packet switching, one large piece of data such as a book, is divided into smaller chunks before being routed to its destination. Each one of these chunks is called a datagram. A datagram 'knows' its final destination, but in getting there the datagrams will take different paths and go in different directions at different times. Eventually they all end up in the same place together in the correct order to form the original book". (DERN, 1994, p. 39)

During its early years, ARPANET experienced continued growth as it recognized the need to communicate with other developing networks. In 1983 it became known as the ARPA Internet. The DoD divided it into two connected networks: MILNET, a network of military computers, and ARPANET the network of research computers.

The Internet Addressing System

Every computer (referred to as a **host** on the Internet) has its own unique address, and every person that uses the Internet has his or her own address. Two addressing systems are used on the Internet: one uses a hierarchical naming system called the Domain Name System.

A domain name looks like this: **eli.ufl.edu**

As can you see, domain names consist of a series of subnames separated by periods. When you read the address from left to right the subnames go from most specific to most general. Subnames make references to values such as country, type of organization, organization name, and computer name. The above address tells you that there is a computer named "eli" located at University of Florida that is an educational institution.

If user wants to send e-mail to an individual at the preceding address, she or he would attach his or her username in front of the domain name and it would appear like this:

patti@eli.ufl.edu

In this case, the "at" sign @ separates the usernames from the domain name. There are several heads and domains, depending on the type of institution. For example, a suffix "**.edu**" is for educational institution. **Table 1** is a list of all the institutes:

Domain	Institution
Edu	Educational Institutions
Com	Commercial Businesses and for-profit organizations
Gov	U.S. Government organizations
Int	International organizations
Mil	U.S. military organizations
Net	Networking organizations
Org	Non-profit organizations

Table 1: Domain types.

When machines in foreign countries are assigned addresses, geographical top level domains are used. The country's two-letter international abbreviation in the standard.

Thus, the domain name **cesumar.edu.br** has as its top-level domain **br**, which stands for Brazil. Examples in **Table 2** include other geographical top-level domains:

Domain	Country
Ar	Argentina
Aq	Antarctica
Au	Australia
Be	Belgium
Br	Brazil
Cl	Chile

Table 2: Examples Country domains

History of the Future

The Internet has changed much in the two decades since it came into existence. It was conceived in the era of time-sharing, but has survived into the era of personal computers, client-server and peer-to-peer computing, and the network computer. It was designed before LANs[2] existed, but has accommodated that new network technology, as well as the more recent ATM and frame switched services. It was envisioned as supporting a range of functions from file sharing and remote login to resource sharing and collaboration, and has spawned electronic and more recently the World Wide Web. But most important, it started as the creation of a small band of dedicated researchers, and has grown to be a commercial success with billions of dollars of annual investment (LEWIS-GUODO, 1998).

One should not conclude that the Internet has now finished changing. The Internet, although a network in name and geography, is a creature of the computer, not the traditional network of the telephone or television industry. It will, indeed it must, continue to change and evolve at the

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[2] LAN is a network to interconnected workstations sharing the resources of a single processor or server within a relatively small geographic area.

speed of the computer industry if it is to remain relevant. It is now changing to provide such new services as real time transport, in order to support, for example, audio and video streams. The availability of pervasive networking (i.e., the Internet) along with powerful affordable computing and communications in portable form (i.e., laptop computers, two-way pagers, PDAs, cellular phones), is making possible a new paradigm of nomadic computing and communications,

This evolution will bring us new applications – Internet telephone and, in the new future, Internet television. It is evolving to permit more sophisticate forms of pricing and cost recovery, a perhaps painful requirement in this commercial world. It is changing to accommodate yet another generation of underlying network technologies with different characteristics and requirements, from broadband residential access to satellites. New modes of access and new forms of service will spawn new applications, which in turn will drive further evolution of the net itself.

The most pressing question for the future of the Internet is not how the technology will change, but how the process of change and evolution itself will be managed. As this paper describes, the architecture of the Internet has always been driven by a core group of designers, but the form of that group has changed as the number of interested parties has gown. With the success of the Internet has come a proliferation of stakeholders – stakeholders now with an economic as well as an intellectual investment in the network. We now see, a struggle, in the debates over control of the domain name space and the form of the next generation IP addresses. They will eventually lead to the nest social structure that will guide the Internet in the future. The form of that structure will be harder to find, given the large number of concerned stake-holders. At the same time, the industry struggles to find the economic rationale for the large number of concerned stake-holders. At the same time, the industry struggles to find the economic rationale for the large investment needed for the future growth, for example to upgrade residential access to a more suitable technology. If the Internet stumbles, it will not be because we lack for technology, vision, or motivation. It will be because we cannot set a direction and March collectively into the future.

Conclusion

In today's world it is impossible to imagine the world without the Internet, because everyday people utilize the Web. The Internet is implicit in the day life of millions of people. More and more computer companies discover and development of new things to use on the Internet. For example, it is impossible to know how the internet will be from today until 2020. However the truth is that the Internet is the door of a new communication system. In less then 30 years the Internet has a spectacular number of users and domains with a lot of information. It is only the start; in a little time this technology will control the communications systems throughout the world.

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Parabéns:
VOCÊ FOI INFECTADO PELO VIRUS LEGADO!