

A Short History of the Internet

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A great deal of interest has been sparked by avid computer users the world over, regarding the "Information SuperHighway" and people desiring the ability to be "online." In this, and future articles, I will attempt to provide helpful hints, frank discussions, and how-to seminars in the areas of the Information SuperHighway, the internet, computer productivity, networking, and so on. For this first article, I would like to provide to the computing neophyte and those computing experts not quite familiar with the internet, an historical discussion of the internet's birth and development over the years as well as some benefits.

The internet, as we know it today, first began to develop in 1969 as a U.S. Department of Defense research project to develop and demonstrate the hardware and software required for the inter-connecting of distant computers to provide a means of communication between various research sites. The Department of Defense later created a subdepartment or agency, known as the Advanced Research Projects Agency, or ARPA, to offset the responsibilities of maintaining and overseeing these research experiments. It is due to the agency name of ARPA, that the internet was initially called the ARPAnet until as late as 1982. In order to be connected to the network, an individual or organization had to have some type of funding from the Department of Defense. This funding usually involved providing research by you or your company for projects under the jurisdiction of the Department of Defense.

The restrictions imposed by the Department of Defense were strictly adhered to. Unless you were involved in a Department of Defense research project, you simply were not allowed access to the network. These restrictions resulted in the formation of other networks such as BITNET, CSNET, and Usenet. These

networks were formed, and connected to the internet using - for the sake of argument - loopholes (legal issues are everywhere). These loopholes were, in general, created by the development of the National Science Foundation or the NSFnet in 1986. It was the emergence of supercomputers that prompted the National Science Foundation's involvement in the internet. Ironically, the majority of network traffic that was handled by the NSFnet was electronic mail or Email - and not super-computing related processes. Very little doubt exists that the formation of NSFnet, and its continual adaptation in meeting the needs of the computing community, placed it to become the principal driving factor in the development of the internet as we know it today.

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The NSFnet's impact on the internet community can still be felt by John Q. Public even today as a result of the NSFnet's policy on commercial use of their portion of the internet. NSFnet has issued a policy which they have entitled their "Acceptable Use Policy" or AUP, which stipulates that all traffic carried on their portion of the internet must be related to the research and education communities. These restrictions resulted in the development of the Commercial internet exchange or CIX.

Many online service providers, similar to CompuServe, America Online, and

Genie, are members of CIX. The NSFnet's AUP, however, has required these commercial providers to ensure that no internet traffic generated by their users, accesses any portion of the NSFnet internet backbone.

This has forced members of the CIX community to ensure, using specific routing programs, that their user's Email and other file manipulation operations use acceptable paths through the internet. This means that the Email I wish to send to a colleague in Palo Alto, CA must travel along the acceptable internet lines of up through Canada to the North Pole, down through Alaska, then to its final destination of Palo Alto, CA. This is irrespective of the fact that the NSFnet has a direct T3 (speed designation) backbone line from the New York City area right to Palo Alto, CA. All this really means is that my Email is delivered in an hour or so, as opposed to being delivered in real time. Real time meaning that if my colleague was currently using his/her computer and was connected to the internet, the delivery of that Email would have been instantaneous. Thereby allowing for an instantaneous reply.

In closing, the internet of today (1994) is comprised of tens of thousands of individual computer networks with the ability to communicate with each other. The number of individual computers within these networks total more than a million computer systems with the number of users accessing these systems topping the scales at more than three million users.

See you in cyberspace!



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