

In the history of the INTERNET in 1973 , DARPA (the U.S. Defense Advanced Research Projects Agency) initiated a research program to investigate techniques and technologies for interlinking packet networks of various kinds . The objective to develop communication protocols which would allow networked computers to communicate transparently across multiple , linked packet networks . This was called the internetting project and the system of networks which emerged from the research was known as the “internet.” The systems produced during this research were Transmission Control Protocol (TCP) and Internet Protocol (IP). The first packet switching network developed under DARPA was called the ARPANET beginning in 1969 and has become the archival of information about the net.

In 1983 , the U.S. National Science Foundation (NSF) initiated the development of the NSFNET in an effort to begin studies in research as to how to develop the internet . Regional support for the internet was provided by various consortium networks and local support provided through each of the research and educational institutions. Within the U.S. , much of this support came from the federal and state governments , but a considerable contribution had been made by industry . In Europe and elsewhere , support arose from cooperative international efforts and through national research organizations . During the evolution of the internet , and especially after 1989 and the introduction of the Accessing Accessibility Method in 1990 , an innovative way of using telecommunications services to create a local and global commercial markets ,the internet system telecommunications companies began to integrate support for other protocol suites into its basic networking fabric. The NSFNET which had been the backdrop for most of the research and development of the commercialization of the internet was added to the ARPANET and INSTINET forming what we now consider the modern day INTERNET or worldwide web . Present emphasis in the system is on multiprotocol interworking , and in

particular , with the integration of the Open Systems Interconnection (OSI) protocols into the architecture. Both public domain and commercial, though very restrictive implementations of the roughly 100 protocols of Transmission Control Protocol or Internet Protocol (TCP/IP) suite became available in the 1980's – most of these IP's (or Internet Protocol) becoming available in the 1990's after the introduction of this method

Accessing Accessibility of using telecommunications as a local and global marketplace to stimulate commercial growth and economic expansion . By the use of the Accessing Accessibility Method – and allowing the average consumer access to internet or web use which prior to this invention was highly restricted opened the telecommunications industry to potentially billions of customer which created a strong interest in the INTERNET and stimulated growth in the economy . Accessing Accessibility not only increases access of the average consumer to the internet but also because of the demand created by the needs and the desires of the average consumer to use the internet – this invention spurs changes within the telecommunications industry itself .

It became necessary to present multiprotocol interworking and precipitated the development and integration of Open Systems Interconnection (OSI) protocols in architecture . More networking packets were necessary . More switching packets were necessary . the Accessing Accessibility Method created a demand for more capability in the internet . This created the demand for Internet Service Providers , ISP's or IP's . Those telecommunications companies that were already on board with grants from the federal government began to expand their internet capability so as to provide internet service to a growing clientele. IBM and providers like Verizon which took over MCIMAIL began to flourish . There were newcomers like WorldCom and America On line . Companies like CompuServe , Prodigy , Dow Jones , and MCIMAIL that had been around during the early days of the internet had already peaked and were beginning to restructure or withdraw. The

INTERNET really began to flourish around 1995 with the 'dot-com' boom. The Internet Technical Revolution which really began to accelerate after the introduction of this invention Accessing Accessibility Process and its subsequent commercialization as a result of the research and development of NSFNET of ideas relating to commercialization has resulted in the modern day INTERNET . Over its approximate fifteen year history , the INTERNET has functioned as a collaboration among cooperating parties .Certain key functions - the recorders of identifiers is provided by the Internet Assigned Numbers Authority (IANA). – one of its functions an internet registry which acts as a central repository for internet information which provides central allocation of system identifiers , located in various countries . The IR also maintains the Domain Name System or DNS root database which points to dns servers replicated throughout the net to associate host and network names with their IP addresses . – critical to the operation of TCP/IP protocol including electronic delivery of mail . There are a number of Network Information Centers (NICS) located throughout the internet to provide documentation , guidance , advice , and assistance .As the internet continues to grow internationally the need for high quality NICS functions increases . During the 1980's CSNET initially funded by the National Science Foundation (NSF) to provide networking for university , industry , and government computer science research groups { federal government funding via NSF funding to groups -SBA , BFTC) to do research . During the early 1990's the project entitled the Feasibility of Accessing Accessibility was submitted to these various research groups supported and funded by the NSF directly and by the federal government indirectly .CSNET used the phone net MMDF protocol for telephone-based electronic mail relaying and , in addition , pioneered the first use of tcp/ip over x.25 using commercial public database networks .

BITNET adopted the IBM RSCS protocol suite and featured direct leased line connections

between participating sites . In 1987 BITNET and CSNET merged to become CREN, the corporation for Research and Educational Networking . In the fall of 1991, CREN was discontinued having fulfilled its important role in the provision of networking services . During this early development of the internet and use of the internet – databases were more or less confined to uses within educational institutions , military operations , some corporations and Wall Street – where databases such as Dow Jones News Retrieval and MCIMAIL was the extent of commercial usage . Even with these evolutionary and revolutionary developments in telecommunications – as indeed every aspect of the internet is revolutionary and represents truly great technological advances . However the technology was still being underutilized at the time of this invention . During the time – from 1969 to 1889 as the rudimentary developments of the internet were occurring the United states economy was suffering recessions and scares due to the boom and subsequent “bust” of a U.S. economy very much based on the Texas Oil Industry , Pittsburgh Steel , Automobile Industry and others which were floundering because of the emerging middle east oil crisis. At this time also in the late 1980’s – the Savings and Loans Crisis caused the failing of many banks and financial institutions . This placed additional strain on an economy which was beginning to feel an increase in oil prices and there was a severe stagnation in the 1989-1992 U.S economy. The introduction of this invention creates a much needed boom in the U.S. economy and as commercial use of the Internet increases , the economy should improve. A testimony to the backdrop of the invention is in the following are excerpts :

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– **MANAGEMENT OF NSFNET**

HEARING before the Subcommittee on Science of the COMMITTEE ON

SCIENCE , SPACE , AND TECHNOLOGY – U.S. HOUSE OF REPRESENTATIVES –
One Hundred Second Congress second session – March 12 , 1992 [No. 120] – some of the
following was discussed :

*Decision C NSF approves ANS organization , (and privately authorizes ANS's exclusive use
of NSFNET for commercial use)-1990 Rationale – ANS was formed by the Merit , IBM ,
MCI team to leverage MCI/IBM equipment , staff, and bandwidth and to position itself for
competition in the future .p.92*

*In 1991 represented itself as the only network which could guarantee full commercial use of
the NSFNET.p.93*

*Mr. Kapor. ” , the private sector can be more efficient , cheaper , and more reliable
because it will be competitive in providing the exact same services that are today provided
on the NSFNET , and we have member companies that are not making those investments
because that opportunity is being artificially constrained ,and we would be happy to find an
appropriate forum in which to sit down and discuss that to show its technical and economic
feasibility . “p.102*

*Dr. Hood . ” I think it is important to emphasize the point that we are still engaged in the
process of building a research and education network infrastructure for the country and that
we are still engaged in a grand experiment , that we are dealing with precompetitive
technologies , and that the real value of the internet and NSFNET connectivity is delivering
information resources to the desktop of the scholar and researcher” .p.105”*

*Dr. Van Houweling “.Also , speaking from Merit's point of view , it is my
understanding that the actual amount of commercial traffic now being carried on the
backbone is in the neighborhood of just 1 to 2 percent ; it is very small” .p. 107*