

General system theory and the internet design idea

Technology, Information Technology



General System Theory and the Internet Design Idea General System Theory and the Internet Design Idea The idea that gave birth to internet was originally developed by a person known as Paul Baran in 1960s. Baran, who worked for the RAND Company, wanted to assist the company in developing a communication system that could be resistant to nuclear attacks. As Skyttner (2006) points out, RAND Company, which was specialized in military defense, was facing the difficult task of designing a network system that could ensure advanced transfer of information to military computers even in the midst of nuclear attacks. The existing long-distance telephone network could not withstand the impact of a nuclear attack. Baran's idea finally matured under the Advanced Research Project Agency (ARPA).

Internet is designed in such a way that there are no centralized switches. The design is comprised of randomly spread unnamed nodes, which act as switches that route information from one node to another until it reaches its destination. The information to be sent is first divided into message blocks, which are known as packets, and then sent separately. On reaching their destination, the packets are joined again to make the original information. Internet was first used by military researchers but later was adopted by various universities. From there, the idea spread like waves and it came to the most common information network that links people from different regions of the world. Today it is identified by names such as Web or World Net because of its wide network coverage (Sivridis, 2009).

Today, Internet is used by doctors, psychologists, religious leaders and all groups of people as the main communication and research tool. According to Marshall (2012), Internet can be described as an unplanned communication

network. This is because it doesn't need any planning. The various people who use the Internet plan and organize themselves into groups of communicators. These groups of people have the freedom to choose the people they want to communicate and interact with. It is argued that internet has broken geographical boundaries and this has resulted in the idea of globalization.

Assuming the general system theory perspective, Internet has had both positive and negative impact on the society. Internet acts as the main research centre for all scholars of various disciplines. In terms of politics, issues concerning a country and other countries worldwide are shared through the Internet. This keeps people abreast of current political situation. As Skyttner (2006) remarks, the sector which has benefited much from the Internet is the commercial sector. Sales personnel and other entrepreneurs are able to sell and advertise their products to the large crowds of people that use the Internet. As Marshall (2012) explains, Internet has also given birth to the idea of globalization, which has further expanded the commercial sector.

However, as Sivridis (2009) points out, Internet has also some negative impact on the society. It is argued that there is no restriction of the information that is shared through the Internet. This has led to the misuse of Internet as a communication network. Young people are accessing socially unfit information such as pornography. Commercially, some salesmen post information which is not genuine. Some countries, such as the US, have tried to come up with the restricting measures on the use of Internet, especially for the young generation and the commercial sector. In these countries, a

company or organization has to get a license to use internet for commercial purposes.

However, Skyttner (2006) argues that despite the negative impact of the internet, it is still of major significance in today's life. Internet has broken geographical boundaries and satisfied people's desire to connect and interact with each other from every part of the world. Growth of Internet is also associated with growth in technology and, therefore, is directly associated with economical advancement.

References

Marshall, D. (2012). History of the Internet: Timeline. Retrieved from <http://www.netvalley.com/archives/mirrors/davemarsh-timeline-1.htm>

Sivridis, C. (2009). The origin of Internet: Darpanet and the origin of internet; Cold war era.

Retrieved from http://pcbheaven.com/blogpages/The_Origin_Of_Internet/

Skyttner, L. (2006). General systems theory: Problems, perspectives, and practice. (2nd Ed). Hackensak, NJ: World Scientific Publishing Company. ISBN: 9789812564672.