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What Is the Internet?

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At the most basic level, the Internet is the name for a group of worldwide computer-based information resources connected together. It is often defined as a network of networks of computers. Today, according to the Internet Society, there are more than 30 million sites (computers) connected throughout the world. Every week, it is estimated that over 1 million sites join the Internet.

One of the major challenges in using the Internet is that there is no clear map of how all those networks are connected. There is also no master list of what information or resource is available where! Because there is no overall structured grand plan, the shape and face of the Internet is constantly changing to meet the needs of the people who use it. The Internet can be likened to a cloud in this way; it's amorphous, without boundaries and constantly changing shape and space. Even in the catalogue that we offer in this book, there will be entries whose location has changed from the time we write about them to the time you try to find them according to our instructions.

Although the thought of all those computers joined together is mind boggling, the real power of the Internet is in the people and information that all those computers connect. The Internet is really a people-oriented community that allows millions of people around the world to communicate with one another. Amazingly, people voluntarily share their time, ideas and products, for the most part, without any personal or financial gain. The computers move the information around and execute the programs that allow us to access the information. However, it is the information itself and the people connected to the information that makes the Internet useful and recreational!

Who Owns and Operates the Internet?

The statistics on the massive size and astronomical growth of the Internet would lead us to believe that somewhere there is a superorganization holding it all together. The reality of the Internet organization is very different. The Internet is

not "owned" by anyone, in the usual sense of the word. The organizations and individuals that use the Internet manage and pay for their own pieces through a system that looks a lot like anarchy! There are no CEO's or corporate boards of directors, but rather the Internet is "governed" by a loose confederation of users.

Each organization or individual pays for its own computers and networks and co-operates with its neighbour networks to pay for the communication lines that connect them. Regional networks are an example of this type of organization. In my city, several university departments, four major hospitals, and eight community and private sector organizations, each maintaining their own computer systems, have worked together to develop a network connection between them all. This network is called "Agenet". It is used to send information about ageing among the local network members. The expense of developing and maintaining this local network is the responsibility of the members. Grants, tax money, dues, university and corporate monies are funding sources for these local networks. This example is played out millions of times around the world. Leased lines can then connect local networks to each other. Consortiums of local networks and organizations then pool their purchasing power to obtain leased lines and better support for their members. In this way, you can see that it is the often unstated co-operation of organizations and individuals that allows the Internet to function without specific management. The Internet is owned then by nobody and everybody.

In many countries, the "backbone" of the Internet in that country is funded by government organizations. In the United States, the National Science Foundation (NSF) currently funds the backbone. Supercomputer centres were established around the United States by the National Science Foundation in the mid-1980's. To provide universities and research centres around the country with remote access to these supercomputers, the National Science Foundation funded a backbone network (NSFNET) that connected these supercomputer centres. NSF also provided the funding for connections to the backbone for regional networks. In Canada, CA*net Networking Inc. was formed in 1990 to manage the Internet backbone for Canada, appropriately called CA*net. CA*net is run by a group called CANARIE (Canadian Network for the Advancement of Research, Industry and Education).

Although there is no specific governance of the Internet, voluntary coordinating and overseeing of the workings of the networks is done by the Internet Society. The Internet Society fosters the continued evolution of the Internet through education, support for technical development and provision of a forum for exploring new Internet applications. Membership in this non-profit society is open to any organization or individual. Additionally, any network connected to the Internet agrees to the decisions and standards established by the Internet Architecture Board (IAB). Anyone willing to help can participate in the process of setting standards.