Internet And Networking Essay, Research Paper

In the 1960s, time-sharing brought about the first interactive access to computers. This was a mix of data transmission technology and a teletypewriter. The result was an interactive terminal. These terminals were connected to a server with low-speed lines, allowing the users to interact with the computer and take advantage of its resources. Time-sharing gave multiple users the ability to use the computer at the same time, for completely separate tasks, and provided them with interactive feedback about what their programs were doing. Demand for the services of these large computers increased which meant upgrades had to be made frequently to keep the processing power ahead of the user?s needs. These systems, called Mainframes, had been designed to provide computing power, but did not have the flexibility to satisfy the growing set of applications.

Military action, also in the 1960s, used networks to communicate to one another. It worked like the time-sharing network. They needed this network to communicate between cities, bases, and states. There needed to be a network that would be able to work after a nuclear strike. They came up with a ?hot potato network.? Basically the information would be tossed like a hot potato from user to user until it reached its destination. During the 1970s and 1980s, networking was continuously being upgraded. Businesses, schools, and the government needed faster networking capabilities to handle all the people that were using the basic ?time-sharing? network. In 1975 the first personal computer was marketed in kit form. This computer was called the Altair. Bill Gates, with others, wrote a BASIC program for the machine so it could perform small tasks.

The next year Apple began to market its PC?s, also in kit form. In 1976, Queen Elizabeth went on-line with the first royal e-mail message.

The Internet as we know today as the Information Superhighway was introduced in 1989. It was formed through a long chain of networks. It was a lot smaller back then. There was only a handful of people that had a computer, and some of these people were not familiar with a modem. In 1989 the Internet had about 3900 domains and 130,000 hosts. Today there are over 3 million domains and 36 million hosts. In reality the Internet formed through the formation of the ARPANET. The ARPANET was the first stage of networking, and the second stage BITNET. These two early networks were the start of the Internet. It can be said that the Internet is the third step of the network process.

There are several reasons to learn about networks:

♣ Resource sharing

♣ Reliability

♣ Cost savings

♣ Communications

♣ Employees can share information, such as inventory inf., customer records, or accounting data

♣ Employees can swap files without printing them or passing around disks

♣ Employees are able to access files and applications on the network from remote computers

♣ All employees have access to both the Internet and e-mail

♣ Employees can use devices, such as printers and fax machines without leaving their desk

You can see that ever since networking was first introduced people have been constantly trying to improve it and make it faster. This is going to continue for thousands of years. It is important to understand that networking plays an important part in your life.

Many people today are familiar with the Internet and its use. A large number of its users however, are not aware of the security problems they face when using the Internet. Most users feel they are anonymous when on-line, yet in actuality they are not. There are some very easy ways to protect the user from future problems. The Internet has brought many advantages to its users but has also created some major problems. Most people believe that they are anonymous when they are using the Internet. Because of this thinking, they are not careful with what they do and where they go when on the ?net.? Security is a major issue with the Internet because the general public now has access to it. When only the government and higher education had access, there was no worry about credit card numbers and other types of important data being taken.

There are many advantages the Internet brings to its users, but there are also many problems with Internet security, business security, and the government involvement to protect the users. The Internet is a new, barely regulated frontier, and there are many reasons to be concerned with security. The same features that make the Internet so appealing such as interactivity, versatile communication, and customizability also make it an ideal way for someone to keep a careful watch on the user without them being aware of it.

Every action a person does while logged onto the Internet is recorded somewhere. An individual?s personal security is the major issue surrounding the Internet. If a person cannot be secure and have privacy on the Internet, the whole system will fail.

Email is like a postcard. E-mail is not like mailing a letter in an envelope. Every carrier that touches that e-mail can read it if they choose. Not only can the carriers see the message on the e-mail, but it can also be electronically intercepted and read by hackers. This can all be done without the sender or the receiver ever knowing anything had happened. E-mail is the most intriguing thing to hackers because it can be full of important data from secret corporate information to credit card numbers. The only way to secure e-mail is by encryption. This makes an envelope that the hacker cannot penetrate. The downside to using encryption on a huge network like the Internet is that both users must have compatible software. Another way to protect persons e-mail is to use an autoremailer, which gives the sender a ?false? identity, which only the autoremailer knows, and makes it difficult to trace the origin of the e-mail.

There are many ways for businesses to protect themselves. They can use a variety of techniques such as firewall and encryption. Firewall is one of the most commonly used security devices. They are usually placed at the entrance to a network. The firewall keeps unauthorized users out while admitting authorized users only to the areas of the network to which they should have access. There are two major problems with firewall.

The first is that they need to be installed at every point the system comes in contact with other networks such as the Internet. The second problem is that firewall uses passwords to keep intruders out. Because of this, the firewall is only as good as the identification scheme used to log onto a network

In the United States there is no set laws that protect a person?s privacy when on the Internet. The closest rules that come to setting a standard of privacy is an assortment of laws beginning with the Constitution and continuing down to local laws. These laws unfortunately, are not geared for the Internet. These laws are there only to protect a person?s informational privacy. Now because of the booming interest and activity on the Internet in both the personal and the business level, the government has started investigating the Internet and working on ways to protect the users. The Federal Bureau of Investigation (FBI), the Central Intelligence Agency (CIA), and the National Security Agency have all devoted small units to fighting computer security crimes. After Senate hearings, the Justice Department proposed that a full-time task force be set up to study the vulnerability of the nations informational infrastructure. This would create a rapid-response team for investigating computer crimes. Security for the Internet is improving; it is just that the usage of the Internet is growing much faster. Security is a key issue for every user of the Internet and should be addressed before a person ever logs on to the ?net?. At best, all users should have passwords to protect themselves, any businesses need to put up firewall at all

points of entry. These are low cost security measures, which should not be over looked in a possible multi-billion dollar industry.

The Internet is a method of communication and a source of information that is becoming more popular among those who are interested in, and have the time to surf the information superhighway. The problem with this much information being accessible to this many people is that some of it is deemed inappropriate for minors. The government wants censorship, but a segment of the population does not. Legislative regulation of the Internet would be an appropriate function of the government. The Communications Decency Act is an amendment, which prevents the information superhighway from becoming a computer ?red light district.? On June 14, 1995, by a vote of 84-16, the United States Senate passed the amendment. It is now being brought through the House of Representatives.

The Internet is owned and operated by the government, which gives them the obligation to restrict the materials available through it. They have the responsibility to determine who uses it and how it is used. The government must control what information is accessible from its agencies. This material is not lawfully available through the mail or over the telephone.

The industry has commendably advanced some blocking devices, but they are not a substitute for well-reasoned law. Because the Internet has become one of the biggest sources of information in this world, legislative safeguards are imperative. The government gives citizens the privilege of using the Internet, but it has never given them the right to use it.

They seem to rationalize that the framers of the constitution, planned and plotted at great length to make certain that above all else, the profiteering pornographer, the pervert, and the pedophile must be free to practice their pursuits in the presence of children on a taxpayer created and subsidized computer network. People like this are the ones in the wrong. The government must take control to prevent pornographers from using the Internet however they see fit because they are breaking laws that have existed for years.

Cyberpunks, those most popular associated with the Internet, are members of a rebellious society that are polluting these networks with information containing pornography, racism, and other forms of explicit information. When they start rooting around for a crime, new cybercops are entering a pretty unfriendly environment. Cyberspace, especially the Internet, is full of those who embrace a frontier culture that is hostile to authority and fearful that any intrusions of police or government will destroy their self-regulating world. The self-regulating environment desired by the cyberpunks is an opportunity to do whatever they want.

The Communications Decency Act is an attempt on part of the government to control their ?free attitude? displayed in home pages such as ?Sex, Adult Pictures, X-rated Porn?, ?Hot Sleazy Pictures (Cum again + again)? and ?sex, sex, sex. Heck it?s even better than real sex.?

To keep these kinds of pictures off home computers, the government must control information on the Internet, just as it controls obscenity through the mail or on the phone. Legislative regulations must be made to control information on the Internet because the displaying or distribution of obscene material is illegal. The courts have generally held that obscenity is illegal under all circumstances for all ages, while indecency is generally allowable to adults, but that laws protecting children from this ?lesser? form are acceptable. It?s called protecting those among us who are children from the vagrancy?s of adults. The constitution of the United States has set regulations to determine what is categorized as obscenity and what is not.

By laws previously set by the government, obscene pornography should not be accessible on the Internet. The government must police the Internet because people are breaking law. Right now, cyberspace is like a neighborhood without a police department. Currently anyone can put anything he wants on the Internet with no penalties. The Communications Decency Act gives law enforcement new tools to prosecute those who would use a computer to make the equivalent of obscene telephone calls, to prosecute electronic stalkers who terrorize their victims, to clamp down on electronic distributors of obscene materials, and to enhance the chances of prosecution of those who would provide pornography to children via a computer.

The government having the power to regulate the information being put on the Internet is a proper extension of its powers. With an information based system such as the Internet there is bound to be material that is not appropriate for minors to see. In passing of an amendment like the Communications Decency Act, the government would be given the power to regulate that material.

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. Beginning with the early research in packet switching, the government, industry and academia have been partners in evolving and deploying this exciting new technology. The Internet today is the initial prototype of what is often called the National (or Global or Galactic) Information Infrastructure. Its history is complex and involves many aspects- technological, organizational, and community. And its influence reaches not only to the technical fields of computer communications but throughout society as we move toward increasing use of online tools to accomplish electronic commerce, information acquisition, and community operations.