

Internet and World Wide Web

1. Electronic communication

The Internet and electronic communications (also called computer mediated communications, or CMC) doesn't just mean new tools for communication; it means new ways to communicate. Today many organizations interacts with its various constituents differently - employees, board members, customers, partners and others - depending upon the nature of the message, the goals you are trying to achieve and the strengths (and weaknesses) of the available media - telephones, voice mail, fax machines, print, etc.

Electronic communications adds a powerful new channel that not only will change how you use this mix of options, but it will create entirely new ways to interact.

Electronic communications lets you combine numerous media - text, graphics, sound, video, etc. - into a single message. That can result in far more meaningful communications tailored to the nature of your particular audience. In contrast to broadcasting, narrowcasting reflects the ability to develop numerous communications for subsets of your market or constituencies.

Electronic communications is interactive. It engages audiences in active, two-way communications. That requires a new way of thinking about advertising copy and the handling of public relations. The pay-off, however, is a self-selected audience, engaged and actively participating in the communications process.

Two-way communication is nothing new. But electronic communications creates a new form of many-to-many communications that lets geographically distributed groups communicate interactively and simultaneously through text, sound and video. You can hold inexpensive video conferences or press conferences from your desk, or conference with people at several desks located across the world. One of the burgeoning phenomena of the Internet is businesses and organizations sponsoring, supporting and moderating discussion groups about issues, products, strategies - anything of interest to the organization and its constituents. Sponsorships are also solicited for popular resources, such as indexes and other Internet search tools, and these provide a further communications and marketing opportunity.

Many organizations are using electronic communications facilities, such as the World Wide Web, as internal communications tools to enhance team work. Many individuals at different locations can work on the same documents, hold meetings and integrate research findings.

Electronic communications removes the power of communications gatekeepers to both positive and negative effects. Most organizations are used to controlling the messages that go out to its constituents through managers, spokespeople and others. But with the Internet, constituents begin to talk among themselves, requiring new approaches and a new emphasis on listening and reacting, not just talking.

With the Internet you have the ability to transmit and receive large amounts of information quickly to and from individuals and workgroups around the world. This changes the way activists, for example, can galvanize communities, inform legislators and change public opinion. It changes the sources and depth of your constituents' knowledge levels. It also lets those constituents reach you with new kinds of communications they may never have attempted before.

And these are only some of the changes we are seeing now. There will be unanticipated and ripple effects we can't imagine. For example, will electronic mail become a buffer to avoid communications or confrontations that might be better resolved in person? Will managers find themselves traveling more in order to gain the personal touch with members of distributed workgroups? How will organizations prepare themselves for this increased level of participatory constituent interaction?

a) Basic internet concepts

The Internet and World Wide Web

The Internet is a network of networks, is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. There are all kinds of networks in all kinds of sizes. You may have a [computer network](#) at your work, at your school or even one at your house. These networks are often connected to each other in different configurations, which is how you get groupings such as **local area networks (LANs)** **Wide Area Network (WAN)** and **regional networks**. Your [cell phone](#) is also on a network that is considered part of the Internet, as are many of your other electronic devices. **And all these separate networks -- added together -- are what constitute the Internet.** Even satellites are connected to the Internet.

The Internet provides a capability so powerful and general that it can be used for almost any purpose that depends on information, and it is accessible by every individual who connects to one of its constituent networks. It supports human communication via [electronic mail \(e-mail\)](#), "chat rooms," newsgroups, and audio and video transmission and allows people to work collaboratively at many different locations. It supports access to digital information by many applications. The Internet has proved to be a spawning ground for a large and growing number of "e-businesses" (including subsidiaries of traditional "brick-and-mortar" companies) that carry out most of their sales and services over the Internet. Many experts believe that the Internet will dramatically transform business as well as society. Many communicate through social network like Facebook, Google, tweeter, Skype, JamiiForams etc.

The World Wide Web, on the other hand, is the system we use to access the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, only one of the languages spoken over the Internet, to transmit data. Web services, which use HTTP to allow applications to communicate in order to exchange business logic, use the the Web to share information. A hypertext document with its corresponding text and hyperlinks is written in [HyperText Markup Language \(HTML\)](#) and is assigned an online address called a Uniform Resource Locator (URL). The Web utilizes browsers, such as Internet Explorer or Firefox, Google Chrome etc.

to access Web documents called Web pages that are linked to each other via hyperlinks. Web documents also contain graphics, sounds, text and video. The Web isn't the only system out there, but it's the most popular and widely used. (Examples of ways to access the Internet without using HTTP include [e-mail](#) and [instant messaging](#).) As mentioned on the previous page, the World Wide Web makes use of hypertext to access the various forms of information available on the world's different networks. This allows people all over the world to share knowledge and opinions. We typically access the Web through **browsers**, like Internet Explorer and Mozilla [Firefox](#). By using browsers like these, you can visit various Web sites and view other online content.

Internet Innovators

There are several groups of people who work to keep everything standardized and running smoothly across the Internet and the World Wide Web. **World Wide Web Consortium (W3C)**. W3C's aim is to help develop standards and guidelines for the Web. The group is run by Tim Berners-Lee who, if you remember, is the person who invented the World Wide Web. The other group is the **Internet Society**, which was founded in 1992 to provide leadership in many aspects of Internet-related information, initiatives and activities.

What is the difference between internet (net) and world wide web (www)?

It is common in daily conversation to abbreviate them as the "Net" and the "Web", and then swap the words interchangeably. But to be technically precise, the Internet is totally different from World Wide Web. The concept is that Internet is the large container, and the Web is a part within the large container. More specific difference below:-

The Internet is a Big Collection of Computers and Cables.

- The Internet is named for "interconnection of computer networks". It is a massive hardware combination of millions of personal, business, and governmental computers, all connected like roads and highways.

The World Wide Web Is a Big Collection of HTML Pages on the Internet.

- The World Wide Web, or "Web" for short, is that large software subset of the Internet dedicated to broadcasting HTML pages. The Web is viewed by using free software called web browsers. Born in 1989, the Web is based on [hypertext transfer protocol](#), the language which allows you and me use to "jump" (hyperlink) to any other public web page. There are over 40 billion public web pages on the Web today.

How do you connect to the internet?

Before you can connect to the Internet and access the World Wide Web, you need to have certain equipment. In brief, you must have a computer (preferably running an up-to-date operating system); a modem and access to a telephone line or a local area network (LAN) that is in turn connected to the Internet; and connection software that will allow you to establish an account with a service provider and access the Internet.

A modem is not needed when accessing the Internet through a LAN.

2. The use of www and search engines.

Search Engine

A **web search engine** is designed to search for information on the World Wide Web and File Transfer Protocol (FTP) servers. The search results are generally presented in a list of results and are often called *hits*. The information may consist of web pages, images, information and other types of files. Some search engines also mine data available in databases or open directories.

Search engines use crawlers, programs that explore the Web by following [hypertext](#) links from page to page, recording everything on a page (known as caching), or parts of a page, together with some proprietary method of labeling content in order to build weighted indexes. Web sites often include their own labels on pages, which typically are seen only by crawlers, in order to improve the match between searches and their sites. Abuses of this voluntary labeling can distort search results if not taken into account when designing a search engine.

- Ask.com (known as Ask Jeeves in the [UK](#))
- Baidu (Chinese, Japanese)
- Bing (formerly MSN Search and Live Search)
- Blekko
- Duck Duck Go
- Google
- Kosmix
- Sogou (Chinese)
- Yodao (Chinese)
- Yahoo
- Yandex (Russian)
- Yebol

Computer Security

What is Security - something giving assurance: something that provides a sense of protection against loss, attack, or harm

A **computer** is a vital machine that is prone to attacks from people or programs having bad intention over the information in the computer. Just as it is to the places like banks and shops they have a sort of plans assuring that their goods are safe, are secured. They will have strong houses, doors reinforced by grills bars, having watchmen with weapons. What for? To provide security for valuable Money or goods in those particular bank or shop. It works the same in Computers. The computer has useful information which are valuable. And any unauthorized user or program may desire to take the information from the computer. YOU MUST SECURE your computer.

Computer Threats

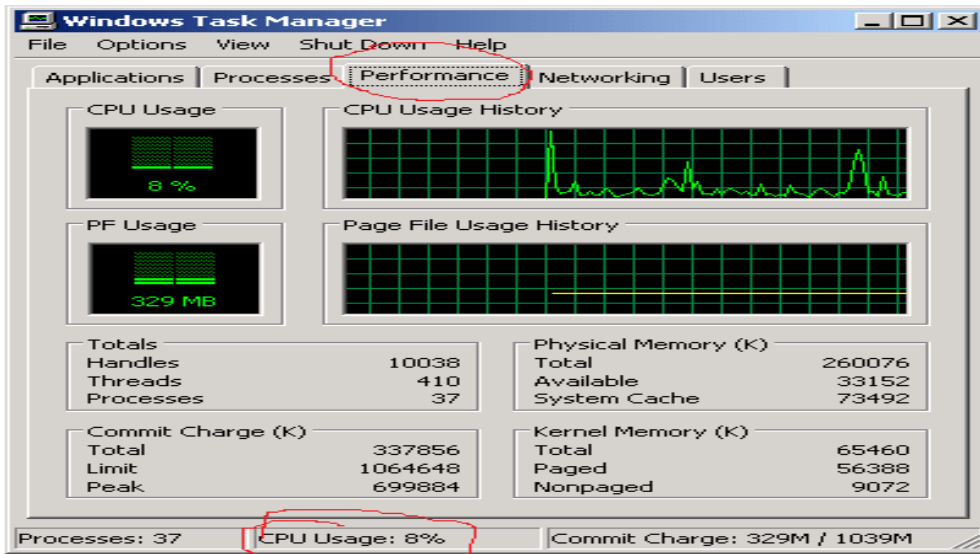
1. **Computer Viruses and spywares**, these are **destructive** self-duplicating computer program that spread from computer to computer, interfering with data and software to the point of destruction. Just as biological viruses infect people, spreading from person to person; these destructive computer viruses can spread from computer to computer through the internet and removable media such as flash disks, CDs/DVDs and external drivers.
 - a. **Solutions** –One has to install Anti – Virus in the computer, these are computer programs created to guard the computer against Viruses and spywares. There is a number of them both commercial and free ones. You can try some of the free good ones which are Avira Antivir, Microsoft Security Essentials, AVG, Kaspesky, Node32, Avast and so many others.
 - i. **Important tips** – These Ant viruses once installed in the computer have to be updated from the internet for new features to defeat new viruses. It is even possible nowadays to download the antivirus updates using the connected computer and take the updates to the computer which is not connected.
 - ii. PLEASE DO NOT INSTAL MORE THAN ONE ANTI VIRUS PROGRAM IN A COMPUTER. Antivirus programs are active programs and once they are more than one in the computer they course conflict among themselves and can make computer real slow
2. **Unauthorized Users** – These are the users who have no permission to use a computer but due to their own reason they find their way to your computer and they might take with them valuable information for their benefits or even against you.

- a. **Solution** – Put password to your computer to log in, in some case you can also set your computer to lock itself when it has been idle for a given period of time. To set a password:
 - i. Go to start then Control panel
 - ii. In the control panel click user accounts and select the account you want to password.
 - iii. Look for a “change pass word” and type in your password
 - b. If a computer you are using is used by more than one person you have to create each user with his own account. Doing this will help each user to have a control of his data in the computer without interfering with other user’s information.
 - i. Important Tip – the owner of the computer should assign his account THE ADMINISTRATOR ACCOUNT to give him privilege over the computer and even over the other users.
 - c. For the thieves you should make sure your computer secured in a better place where a thief cannot get it easily. In schools they make sure the computer lab is well secured with strong doors.
3. **Unstable Electricity** –when the electricity is fluctuating cause danger to the computer. A computer might get burned or software inside get corrupted.
- a. **Solution** – For Desktop computers one have to use Power stabilizers and UPS (Uninterruptable Power Supply) to regulate power. Even UPS does more than that by reserving power that can be used for some time when the main power source goes off. For Laptops, you don’t need the Power stabilizers or UPS. Laptops are having a built in battery and an adapter that regulate power.
4. **Weather (Direct sunshine, rain and dust)** Computer just like other electronic machines are not resistant to the factors mentioned, a computer can get spoiled by water and direct sunshine.
- a. **Solution** –keep them away from direct sunshine and water and even fire.
5. **General Solutions** –the following a general solutions to safe guard the data in your computer.
- a. **Backups** – this is a process of keeping a copy of valuable computer data in another place. Ideally as that process where you keep a copy of information in another drive like flash drive, external hard drives, CDs and DVDs so that whenever might happen to the computer and its data, you are in the safe side by having your data.
 - b. **Encryption** – this is another technique to protect confidential information. Computer users can scramble information to prevent unauthorized users from accessing it. Authorized users can unscramble the information when needed by using a secret code

called a key. Without the key the scrambled information would be impossible or very difficult to unscramble. This scrambling and unscrambling is commonly known as encrypting and decrypting or coding and decoding or even complicated name like cipher and decipher. This is advanced technique of keeping valuable computer information from falling in wrong hands. There are special program to do this.

- c. **Firewall** Computers connected to communication networks, such as the Internet, are particularly vulnerable to electronic attack because so many people have access to them. These computers can be protected by using **firewall** computers or software placed between the networked computers and the network. The firewall **examines, filters, and reports** on all information passing through the network to ensure its appropriateness. This technique is applied in computers like servers and even a standalone computers have that component (see if in yours it is activated)
- d. **Intrusion Detection Systems (IDS)** Security software called intrusion detection systems may be used in computers to detect unusual and suspicious activity and, in some cases, stop a variety of harmful actions by authorized or unauthorized persons. Any abuse and misuse of sensitive system and application programs and data such as password, inventory, financial, engineering, and personnel files can be detected and reported by these systems.

There are many legitimate programs on your computer that are the cause for high CPU usage. However, there are also illegitimate programs such as spyware and viruses that can bog your CPU down by creating multiple processes that requires your computer resources. You can view the process and CPU usage on your computer by using Windows Task Manager. Open up task Manager by pressing **Ctrl-Alt-Delete** at the same time.



The normal CPU usage when a computer is idle (no program opened) should be between 3% and 10%. If a computer has no opened program and the CPU usage is high, there is a problem; there might be a spyware or virus problem. You can do one of the following to get rid of high CPU usage. (ways to speed up your PC – page 4)

Computer Maintenance Ways to speed up your PC

By following a few simple guidelines, you can maintain your computer and keep it running smoothly. This article discusses how to use the tools available in Windows XP Service Pack 2 (SP2) and Windows Vista to more efficiently maintain your computer and safeguard your privacy when you're **online** and **offline**.

❖ Free up disk space

By freeing disk space, you can improve the performance of your computer. The Disk Cleanup tool helps you free up space on your hard disk. The utility identifies files that you can safely delete, and then enables you to choose whether you want to delete some or all of the identified files.

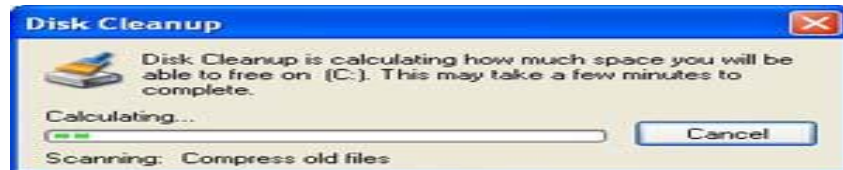
Use Disk Cleanup to:

- Remove temporary Internet files.
- Remove downloaded program files (such as Microsoft ActiveX controls and Java applets).
- Empty the Recycle Bin.
- Remove Windows temporary files.
- Remove optional Windows components that you don't use.
- Remove installed programs that you no longer use.

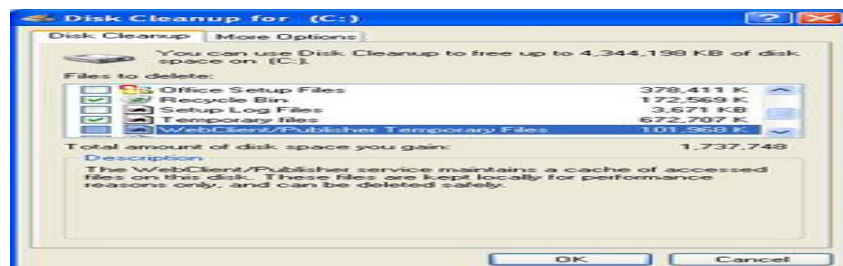
Important Tip: Typically, temporary Internet files take the most amount of space because the browser caches each page you visit for faster access later.

❖ To use Disk Cleanup

1. Click **Start**, point to **All Programs**, point to **Accessories**, point to **System Tools**, and then click **Disk Cleanup**. If several drives are available, you might be prompted to specify which drive you want to clean. Normally you pick the drive C: which is the one having the operating system.



2. In the **Disk Cleanup** for dialog box, scroll through the content of the **Files to delete** list.



Choose the files that you want to delete. Make sure there is no item you need from recycle bin, select

After the defragmentation is complete, Disk Defragmenter displays the results.

4. To display detailed information about the defragmented disk or partition, click **View Report**.
5. To close the **View Report** dialog box, click **Close**.
6. To close the Disk Defragmenter utility, click the **Close** button on the title bar of the window.

❖ **Detect and repair disk errors**

In addition to running Disk Cleanup and Disk Defragmenter to optimize the performance of your computer, you can check the integrity of the files stored on your hard disk by running the Error Checking utility.

As you use your hard drive, it can develop bad sectors. Bad sectors slow down hard disk performance and sometimes make data writing (such as file saving) difficult, or even impossible. The Error Checking utility scans the hard drive for bad sectors, and scans for file system errors to see whether certain files or folders are misplaced.

If you use your computer daily, you should run this utility once a week to help prevent data loss.

To run the Error Checking utility:

1. Close all open files.
2. Click **Start**, and then click **My Computer**.
3. In the My Computer window, right-click the hard disk you want to search for bad sectors, and then click **Properties**.
4. In the **Properties** dialog box, click the **Tools** tab.
5. Click the **Check Now** button.
6. In the **Check Disk** dialog box, select the **Scan for and attempt recovery of bad sectors** check box, and then click **Start**.



7. If bad sectors are found, choose to fix them.

Tip: Only select the "Automatically fix file system errors" check box if you think that your disk contains bad sectors.

❖ **Protect your computer against spyware and Viruses**

Spyware collects personal information without letting you know and without asking for permission.

From the Web sites you visit to usernames and passwords, spyware can put you and your confidential information at risk. In addition to privacy concerns, spyware can hamper your computer's performance. To combat spyware, you might want to consider using Microsoft Windows Defender; alternatively, there are other free anti-spyware software programs available. Refer to page 1.

Computer Viruses (Refer to page 1)