

Information Technology Definition List – Forty Terms Version Two.

Hardware

Port: A connection point for external or internal devices such as a keyboard or even a hard drive and card readers.

SSD: A solid state drive is a form of secondary storage which is superior to its predecessor a hard disk drive (HDD) in terms of speed, efficiency and security. It has no moving parts and does not need to defragmentation. It is, however, a more expensive per Mb of storage.

UPS: A type of backup battery that is used to protect computers from power surges or power cuts. The UPS can power the computer for a few minutes, enough for the user to power down the computer.

System Software

File extension: A string of characters attached to a filename, usually preceded by a full stop and indicating the format of the file. By reading the file extension the OS can determine which program to use to open the said file. Your OS often hides the extension from view and you may have to turn this service on manually.

Wildcard: Refers to a character that can be substituted for characters in a string. Wildcards are commonly used in computer programming, database and SQL search queries etc. Example: SELECT * means to select all the field in a SQL query.

Software

Shareware: Software that is free and often distributed informally for evaluation, after which it can be charged for if you would like to continue to use it.

Freeware: Software that is free.

Open Source: Software where the original source code is made available and can be modified.

Networking

Server: A service that manages access to a centralized service or resource in a network; can be hardware or software (a virtual server)

Switch or a hub is a central hub that connects multiple computers to one central platform via LAN cables that connect the computer to the server. Generally used in a star topology.

Client: A requesting program that requested data to be sent from a server.

Domain on a network: A group of computers on a network that are administered as a unit with rules and procedures. A large network may have many domains linked by bridges and gateways eg the accounting department would be separated from the marketing department.

Domain on the Internet: Defined by a single IP address. The domain “elementaldesigns.co.za” is hosted on IP address 196.22.132.246. It is the DNS (domain name service) service that provides the linking between the name and the IP address.

Firewall: A program that protects the resources of a private network from users on other networks. It has a number of rules that can be programmed into the firewall to allow or disallow access. These rules can be changed per department, per domain, per IP address or per user to suit the needs of the company.

Gateway: A device used to connect two different networks, especially a connection to the Internet. “Different” in that the technology of one is different to another and therefore a “translation” service is required for communication to happen.

Internet

ISP (internet service provider): A company that allows others access to the internet. An access provider sells a certain amount of data at a certain speed per month. A mailbox provider provides email sending and receiving capabilities. A Hosting ISP allows you to host your own domain and website coupled with email.

Difference between Icon and Avatar: An icon is a small graphical representation of a program or file. When you double click an icon, the associated file or program will open. An avatar is a personalized graphical illustration that represents a computer user or a character or alter ego that represents a user.

Cloud Storage is a model of data storage in which the data is stored in virtual pools - the physical storage spans multiple servers and physical environments and is typically owned and managed by a hosting company.

Secure internet sites: In order to check if a website is secure: check the SSL Certificate and the URL of the website. If it begins with “https” instead of “http” it means the site is secured and is using an SSL Certificate (the s stands for secure). SSL Certificates encrypts the data as it is passed from your browser to the website's server. Important when buying online.

Cyber bullying: The use of technology to harass, threaten, embarrass or target another person.

Hub: A hub, also called a network hub, is a common connection point for devices in a network.

Router: A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the Internet. It is a highly intelligent device as it can route packets of data by an infinite number of routes – a router determines the “best one” for that exact moment in time. A router also has a very large DNS table that tells where in the world a particular domain can be found

Private Profiles: When you open a social media account, you have the option to make your profile public (most of your information is disclosed to the public) or you can make it private whereas little to no information is disclosed to the public (usually just your name and surname) and is more private.

Bandwidth: Generally referred to the volume of information, per unit of time, that a transmission medium (like an internet connection) can handle.

RSS: RSS is a type of web feed which allows users to access updates to online content in a standardized, computer-readable format. If you subscribe to a RSS feed you automatically receive updates from the chosen service or person. An RSS feed is a good way to stay informed in your chosen field.

VoIP: Voice over Internet Protocol is a group of technologies for the delivery of voice communications over connections designed for data.

Data transfer: Data transfer is the process of using computing technologies to transmit data from one computer node to another. The format can vary from voice, to data, to movies, pictures, websites, email as well as the moving of whole files.

Trends, Social, Security and Privacy

Biometric security: A mechanism used to provide access to a facility or system based on the verification of an individual’s physical characteristics e.g. eye, finger print, voice.

Data Protection Legislation: The protection of personal data stored on a computer or electronic device. Companies like banks store your personal information – information is both an asset and is privileged information. Therefore there are laws governing the storage and usage of the information. Companies not storing data in a responsible way are liable for large fines.

Online Safety: Protecting yourself, your property and information online. This is necessary to protect yourself from phishing, trojans, worms, viruses, scams and all other forms of malware.

A computer **virus** is a type of malicious software program ("malware") that, when executed, replicates itself by modifying other computer programs and inserting its own code.

Phishing is the attempt to obtain sensitive information such as usernames, passwords, and credit card details by disguising itself as a trustworthy entity in an electronic communication like email.

Spyware is software that aims to gather information about a person or organization without their knowledge. This information is then sent/sold to another entity without the consumer's consent.

Password is a string of characters used to verify the identity of a user during the authentication process. A **secure password** is considered to be 10 characters long and must contain lower case, upper case, digits and special characters. A secure password does not have any readable English words contained within it.

General

File Compression: A data compression method used to save disk space by reducing the size of a file. This enables easier and faster transmission over a network.

Smart phone: A hand held device that has comprises of hardware and software with its own operating system - essentially a hand-held computer. The smartphone can run applications and store the associated data from each.

eCommerce: Commercial transactions conducted electronically on the Internet. Involves a website with a catalogue of products and a **payment gateway** that safely facilitates the movement of funds from one bank account to another. The gateway is not part of the website but is a special online banking service that you open on behalf of your company.

Ergonomics: Is the science of refining the design of products to optimize them for human use. Computers and other related products, such as desks and chairs, are commonly the focus of ergonomic design. Poor ergonomics results in ailments and injuries to the user over a long period of time e.g. lower back, shoulder and wrists mainly.

E-waste: When electrical or electronic devices are discarded. Used electronics which are destined for reuse, resale, salvage, recycling, or disposal are also considered e-waste.

The Digital Divide. A digital divide is any uneven distribution in the access to information and communication technologies between groups of people, societies or countries. These groups may be defined based on social, geographical, or economic means.