

## Appendix C: Glossary

**AARNet links.** AARNet stands for the Australian Academic Research Network. The original Australian academic tertiary institution internet (note lower case ‘i’) which interconnected the networks of the principal Australian tertiary institutions. AARNet ceased to exist as an independent entity when it was sold to Telstra in 1995 to become the backbone of the Australian segment of the Internet (capital ‘I’).

**asynchronous threaded discussions.** Communication characterised by time-independence. This means that the sender and receiver do not communicate at the same time. Messages are organised into threads so that all replies on the same topic can be seen together.

**audiographic techniques.** A form of teleconferencing in real time using both an audio and a data connection. The computer screen is shared by more than one site, and used as an electronic blackboard, overhead projector or still video projector. Some systems allow for sharing software also.

**desktop videoconferencing.** Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data. For example, a point-to-point (two-person) videoconferencing system works much like a video telephone. Each participant has a video camera, microphone, and speakers mounted on her or his computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other’s speakers; whatever images appear in front of the video camera appear in a window on the other participant’s monitor.

**Dublin Core metadata standard.** The Dublin Core is a metadata element set intended to facilitate discovery of electronic resources. Originally conceived for author-generated description of web resources, it has attracted the attention of formal resource description communities such as museums, libraries, government agencies, and commercial organizations.

**EDUCAUSE.** EDUCAUSE is an international, nonprofit association whose mission is to help shape and enable transformational change in higher education through the introduction, use, and management of information resources and technologies in teaching, learning, scholarship, research, and institutional management. Current membership includes more than 1,600 colleges, universities, and education organizations and more than 150 corporations <<http://www.educause.edu/>>.

**FTP.** File Transfer Protocol. A communication protocol which permits transferring files or programs between two computers. FTP is used for transferring large files which cannot be handled as email attachments. Examples of FTP applications are Fetch (used on Macintosh computers) and WS\_FTP (used on PC computers).

**HTML.** HyperText Markup Language. HTML is the computer language in which World Wide Web (often referred to as the Web or web) pages are written. HTML features the ability to attach hypertext 'links' to particular text or graphics within the web pages, so that when they are clicked on, the user is automatically presented with another web page or graphic dealing with the selected topic.

**IMS metadata standard.** Instructional Management System. IMS is a global coalition of academic, commercial and government organisations, working together to define the Internet architecture for learning. IMS is an initiative of EDUCAUSE (see EDUCAUSE). IMS metadata is currently more complex in conception than Dublin Core (see Dublin core metadata standard) and is focussed on the flexible management of online courseware.

**Internet.** There are two usages of the term 'internet'. The first is that an internet is the result of linking together several independent and geographically remote computer networks to form one single very large network. This is a lower case 'i' internet. For example, the networks of a number of university campuses may be linked together to form a single university internet. When the same linkage occurs between faculties on the one campus, it is called an intranet. The capital 'I' Internet is the master internet which now encircles the globe and links together most of the lower case 'i' internets. The Internet carries services like the World Wide Web, email, FTP, IRC (Internet Relay Chat—see IRC) and more.

**IRC.** Internet Relay Chat. A live chat area of the Internet in which real-time conversations among two or more people take place via IRC software, ASCII commands, and channels. Each channel begins with a # and is dedicated to a different area of interest. IRC is considered another part of the technology of the Internet the same way FTP, Telnet, Gopher, and the Web are.

**ISDN links.** Abbreviation of Integrated Services Digital Network, an international communications standard for sending voice, video, and data over digital telephone lines. ISDN requires special metal wires and supports data transfer rates of 64 kbps (64,000 bits per second). Most ISDN lines offered by telephone companies give you two lines at once, called B channels. You can use one line for voice and the other for data, or you can use both lines for data to give you data rates of 128 kbps, three times the data rate provided by today's fastest modems. The original version of ISDN employs baseband transmission. Another version, called B-ISDN, uses broadband transmission

and is able to support transmission rates of 1.5 Mbps. B-ISDN requires fibre optic cables and is not widely available.

**ISP.** Internet Service Provider. ISPs are companies which sell access to the Internet to the general public. Once you have signed on with an ISP, you can connect to their computers to yours via a modem. Once connected, you can then use software on your computer to navigate the World Wide Web, send e-mail, download software, etc. Usually, ISPs operate their own web and FTP services, so that their customers can (for a fee) have their own personal web pages and FTP sites.

**metadata.** Data about data. Metadata describes how and when and by whom a particular set of data was collected, and how the data is formatted. Metadata is essential for understanding information stored in data warehouses.

**microwave links.** The term microwave refers to electromagnetic energy having a frequency higher than 1 GHz (billions of cycles per second), corresponding to wavelengths shorter than 30 centimetres. Microwave signals propagate in straight lines and are affected very little by the troposphere. They are not refracted or reflected by ionised regions in the upper atmosphere. Microwave beams do not readily diffract around barriers such as hills, mountains, and large human-made structures. Some attenuation occurs when microwave energy passes through trees and frame houses. Radio-frequency (RF) energy at longer wavelengths is affected to a lesser degree by such obstacles.

**modem dial-up access.** Modem stands for MODulator-DEModulator and is used to convert digital computer signals to analogue telephone signals and vice versa. A modem is the device that connects your computer into the telephone lines, so that you can transfer files back and forth between your computer and some remote computer or network which is also fitted with a modem. One dials a telephone line to access the system; hence the term 'dial-up access'.

**online distributed learning systems.** A set of software tools which allows online courses to be established. Students who log into an online distributed learning system can access information on local pages, look at links to other external pages, and engage in activities like quizzes and threaded discussions. These discussions can be facilitated by a content expert. The results from assessment tasks can be stored and transferred to a student management system (see below).

**resource site.** A web site that contains content that people can engage with.

**search site.** A web site that allows users to enter keywords and queries and retrieve information stored in resource sites.

**smart card.** A small electronic device about the size of a credit card that contains electronic memory, and possibly an embedded integrated circuit (IC). Smart cards containing an IC are sometimes called Integrated Circuit Cards (ICCs). Smart cards are used for a variety of purposes, including:

- storing a person's medical or educational records;
- storing digital cash; and
- generating network identification (similar to a token).

To use a smart card, either to pull information from it or add data to it, you need a smart card reader, a small device into which you insert the smart card.

**streaming audio.** Streaming audio is audio that is played as it arrives. The alternative is a sound recording (such as a WAV file) that doesn't start playing until the entire file has arrived. Support for streaming audio may require a plug-in player or come with the browser. Leading providers of streaming audio include Progressive Networks' RealAudio and Macromedia's Shockwave for Director (which includes an animation player as well).

**streaming video.** Streaming video is a sequence of 'moving images' that are sent in compressed form over the Internet and displayed by the viewer as they arrive. Streaming media is streaming video with sound. With streaming video or streaming media, a web user does not have to wait to download a large file before seeing the video or hearing the sound. Instead, the media is sent in a continuous stream and is played as it arrives. The user needs a player, which is a special program that uncompresses and sends video data to the display and audio data to speakers. A player can be either an integral part of a browser or downloaded from the software maker's Web site.

**student management system.** One advantage of online courses is that students' enrolment records and their assessment results can be stored efficiently in a database system. Students can enrol, change details and access their results online. Both the university administration and the student can 'manage' learning details more efficiently.

**studio videoconferencing.** A videoconference is a group or a person-to-person discussion in which participants are at different locations but can see and hear each other as though they were together in one place. Most off-the-Internet videoconferences today involve the use of a room at each geographic location with special video camera and document presentation facilities. In some newer approaches, the appearance that all participants are in the same room around a table is simulated. In general, traditional videoconferencing requires special telephone interconnections with wide bandwidth.

**synchronous chat.** Communication occurring between parties that are temporally synchronised. This means communication that occurs between

people at the same time, although not necessarily in the same place. Users interact and have real time online conversations.

**teleconferencing.** To hold a conference via a telephone or network connection. Computers have given new meaning to the term because they allow groups to do much more than just talk. Once a teleconference is established, the group can share applications and mark up a common whiteboard. There are many teleconferencing applications that work over private networks. One of the first to operate over the Internet was Microsoft's NetMeeting.

**telnet.** A terminal emulation program for TCP/IP networks such as the Internet. The telnet program runs on your computer and connects a desktop computer to a server on the network. The user can then enter commands through the telnet program and they will be executed as if they were being entered directly on the server console. This enables the user to control the server and communicate with other servers on the network. To start a telnet session, the user must log in to a server by entering a valid username and password. Telnet is a common way to remotely control web servers.

**Type 1 data.** Are resources in which users are interested. CFL resources are Type 1 data stored on Resource Sites.

**Type 2 data.** Are derived directly from Type 1 data. They are locations and descriptions of Type 1 resources returned by search sites. There are two main subtypes of Type 2 data: indexes and metadata.

**Type 3 data.** Type 3 data cannot be derived from a single piece of Type 1 or Type 2 data. Instead, it is meta-meta information, like the Dewey Decimal classification scheme in libraries. Type 3 data includes the data that describes hyperlinks between documents; various metadata standards, such as the Dublin core and IMS standards; the usage logs in proxy servers about web pages; and the popularity rating of a web page among similar pages. Type 3 data are typically associated with a group of resources, identifying the relationships between resources