U

U   A chrominance component in a video signal that comprises colour information.

UART (Universal Asynchronous Receive Transmit)   An electronic device used for serial communications.

UDP (User Datagram Protocol.)   A protocol which is used widely in streaming audio and video. Macromedia Shockwave Director 6.0 is among a number of leading streaming server technologies which use UDP. It does not feature the reliability of TCP, and is therefore appropriate for streaming media where intensive error detection and correction is less important. Dropped packets, which are those that do not reach their destination, are acceptable in streaming media. UDP therefore optimises performance and makes better use of available bandwidth because it does not insist on the retransmission of erroneous packets.
(See Streaming* and ASF)

UI (user interface)   A software module or program through which users interact with one or more applications.
(See GUI, OOUI and Windows.)

UI builder   A development tool used to build user interfaces. Most modern UIs are OO. The resulting UIs may be text-based or graphical, as is common today. The latter naturally require the use of GUI builders, which provide a means of implementing the presentation element, together with its interaction with objects, applications and application logic. GUIs can be built using all modern multimedia authoring tools, which include Authorware, IconAuthor and ToolBook. Programming tools such as Microsoft Visual Basic, and others included with Microsoft Visual Studio, also have the capability to construct GUIs using visual techniques. Such development

tools, including GUI builders, feature standard UI components or widgets, which include buttons, sliders, drop-down list boxes, scroll bars and dialog windows. Static GUI components might include fonts, colours, textures and patterns. The GUI will also contain containers which act as receptacles for objects or components, which might be ActiveX or OLE objects. For example, using Visual Basic a container can be used to integrate OLE objects such as the Media Player or any compatible OLE object.

(See GUI, OOUI, Visual Basic and Windows.)

ULSI (Ultra Large-Scale Integration)   A packaged semiconductor chip which integrates over 10 000 electronic devices. All processors are ULSI. The packaged component may contain more than one semiconductor chip, as is the case with the Intel Pentium Pro, which has two.

(See VLSI.)

UltraJava   A chipset from Sun Microsystems which is optimised for the Java programming language. Like Intel MMX Technology, it is application-specific, thus optimised for 3-D graphics and multimedia-related computing, including MPEG video playback. UltraJava is licensed to NEC, Samsung Electronics, LG Semicon and Mitsubishi.

(See Java*, MMX Technology and Sun Microelectronics.)

Undo   A feature provided by almost all fully specified programs. It simply cancels the last editing operation.

Uniform resource locator   (*See URL.*)

Uniprocessor system   A system design based on a single processor. Such serial systems might be referred to as von Neumann implementations.

(See MPP, NUMA and SMP.)

Unix   A multi-tasking, multi-user operating system originally developed at Bell Laboratories for the creation of interdepartmental reports. It has since evolved into numerous commercial variants, including XENIX. Typically Unix OS variants feature the X Window system GUI.

(See X Window System.)

Uploading   The process of transferring files from a client system to a server. Usually the transfer takes place using the FTP protocol.

UPS (Uninterruptible Power Supply)   A device which prevents data loss following power supply failure or deviation by providing an instantly available alternative power supply.

URL (Uniform Resource Locator)   The address of a service or Web site or Web page, which can be used by the Web browser to open specific sites and pages. For, example, the Web page www.altavista.digital.com is a URL which can be opened to show the Altavista search engine home page. Additionally, the browser permits such URLs to be stored in a directory, which might be called Favorites or something similar. The user may then open frequently visited sites and pages through one or two mouse clicks, depending on the browser used. The underlying HTTP protocol implements a client/server connection for each URL which is opened by the client browser. It transmits and receives data and carries the subsequent contents of an opened URL. Typically, when a URL is opened the first procedure involves finding the requested site or page on the Web. Having made an appropriate connection, the browser waits for a reply and then downloads the ensuing page data. Eventually, the HTTP breaks the connection with the remote server where the requested site or page resides. This break may be carried out manually by selecting the Stop button or a similarly named button.

(See HTTP and IP address.)

USB (Universal Serial Bus)   A serial interface for connecting peripheral devices.

User authentication   A process of identifying the user of a system or program.
- The most common user authentication technique is based on tokens, such as ID names, passwords and PINs.
- User authentication can also be implemented using biometric data, which may be a fingerprint, thumbprint or retina image.

(See Encryption, Firewall and Security.)

User block data   A CD-ROM Mode 1 block contains 2048 bytes of user data.

(See CD-ROM.)

User communication   A rarely used term which describes the user's interaction with a system or application.

User communication device   A rarely used term which describes an input device such as mouse, touchpad, trackball or touch screen.