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Acquisitions Editor: Alex Blanton

Project Editor: Sandra Haynes

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virtual LAN *n.* Short for **virtual local area network**. A local area network consisting of groups of hosts that are on physically different segments but that communicate as though they were on the same wire. *See also* LAN.

virtual machine *n.* Software that mimics the performance of a hardware device, such as a program that allows applications written for an Intel processor to be run on a Motorola chip. *Acronym:* VM.

virtual memory *n.* Memory that appears to an application to be larger and more uniform than it is. Virtual memory may be partially simulated by secondary storage such as a hard disk. Applications access memory through virtual addresses, which are translated (mapped) by special hardware and software onto physical addresses. *Acronym:* VM. *Also called:* disk memory. *See also* paging, segmentation.

virtual monitor *n.* An enhanced monitor viewing system for visually impaired users that uses a virtual-reality headset to move enlarged text across the screen in a direction opposite to head motion. *See also* virtual reality.

virtual name space *n.* The set of all hierarchical sequences of names that can be used by an application to locate objects. One such sequence of names defines a path through the virtual name space, regardless of whether the hierarchy of names reflects the actual arrangement of objects around the system. For example, the virtual name space of a Web server consists of all possible URLs on the network on which it runs. *See also* URL.

virtual network *n.* A part of a network that appears to a user to be a network of its own. For example, an Internet service provider can set up multiple domains on a single HTTP server so that each one can be addressed with its company's registered domain name. *See also* domain name, HTTP server (definition 1), ISP.

virtual path *n.* **1.** A sequence of names that is used to locate a file and that has the same form as a pathname in the file system but is not necessarily the actual sequence of directory names under which the file is located. The part of a URL that follows the server name is a virtual path. For example, if the directory *c:\bar\sinister\forces\distance* on the server *miles* is shared on the local area network at *foo.com* under the name *\miles\baz* and contains the file *elena.html*, that file may be returned by a Web request for *http://miles.foo.com/baz/elena.html*. **2.** In Asynchronous Transfer Mode (ATM), a set of virtual channels that are switched together as a unit through the network. *See also* ATM (definition 1), virtual channel.

virtual peripheral *n.* A peripheral that can be referenced but does not physically exist. For example, an application might treat a serial port through which data is being transmitted as a printer, but the device receiving the data might be another computer instead.

virtual printer *n.* A feature in many operating systems that allows printer output to be saved to a file until a printer becomes available.

virtual printer device driver *n.* *See* virtual device driver.

virtual private network *n.* **1.** Nodes on a public network such as the Internet that communicate among themselves using encryption technology so that their messages are as safe from being intercepted and understood by unauthorized users as if the nodes were connected by private lines. **2.** A WAN (wide area network) formed of permanent virtual circuits (PVCs) on another network, especially a network using technologies such as ATM or frame relay. *Acronym:* VPN. *See also* ATM (definition 1), frame relay, PVC.

virtual reality *n.* A simulated 3-D environment that a user can experience and manipulate as if it were physical. The user sees the environment on display screens, possibly mounted in a special pair of goggles. Special input devices, such as gloves or suits fitted with motion sensors, detect the user's actions. *Acronym:* VR.

Virtual Reality Modeling Language *n.* *See* VRML.

virtual real mode *n.* A feature of the Intel 80386 (SX and DX) and later microprocessors that allows them to emulate several 8086 (real-mode) environments at the same time. The microprocessor provides a set of virtual registers and virtual memory space to each virtual 8086 environment. A program running in a virtual 8086 environment is completely protected from other virtual 8086 environments in the system and behaves as if it had control of the entire system. *Also called:* V86 mode, virtual 8086 mode, virtual 86 mode. *See also* real mode.

virtual root *n.* The root directory that a user sees when connected to an Internet server, such as an HTTP or FTP server. The virtual root is actually a pointer to the physical root directory, which may be in a different location, such as on another server. The advantages of using a virtual root include being able to create a simple URL for the Internet site and to move the root directory without affecting the URL. *Also called:* v-root. *See also* pointer (definition 1), root directory, server (definition 2), URL.

virtual route *n.* *See* virtual circuit.