Sun Global Glossary

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Part No: 805–4368
May 2006

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Contents

Preface

The *Sun Global Glossary* includes more than 2,000 English-language terms and definitions for Sun™ software, hardware, and technology or other products and services. The language of this glossary has been optimized for an international audience.

Additionally, the *Glossary* identifies the following:

- Acronyms
- Parts of speech that indicate a term's usage in a sentence, abbreviated as follows:
  - adj. – Adjective
  - n. – Noun
  - v. – Verb
- Numbered usages in different products or technologies
- Cross-references
- Synonyms
- Contrasting terms
- Pronunciation key, if appropriate

  As used on this web site, the terms "Java virtual machine" or "JVM" means a virtual machine for the Java platform.

Acknowledgments

The definitions in this glossary are the work of Sun subject-matter experts, technical writers, and researchers. While the *Sun Editorial Style Guide* and translatability guidelines are observed in most instances, the Java™ look and feel style applies in other instances.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–1 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is `rm` *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*. A *cache* is a copy that is stored locally. Do *not* save the file. **Note:** Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX® system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell	`machine_name%`
C shell for superuser	`machine_name#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell for superuser	`#`

◆ ◆ ◆ CHAPTER 1

Glossary

The *Sun Global Glossary* contains the comprehensive, definitive U.S. English repository for terms used in all publications and products at Sun, and is a dynamic document to which new terms can be added when those terms have been approved.

The *Sun Global Glossary* is intended for the following audiences:

- User interface designers
  - Human Computer Interaction (HCI) engineers, linguists, and others who design and implement user interfaces
  - Engineers who write functional specifications
- Technical communicators
  - Anyone who uses the Sun Global Glossary definitions or `http://g11nportal.east.sun.com/g11nportal/login.jsp` definitions in their documentation, such as white papers, specifications, user and training documentation, marketing collateral, and any other documentation
  - Anyone who submits terms and definitions to the *Sun Global Glossary*
- Localization specialists and globalization engineers
  - Translators who need consistent, stable terms and definitions
  - Engineers who need to implement term-checking features
- Marketing
  - Marketing specialists who write marketing collateral, white papers, glossaries, and any other form of documentation
  - Marketing specialists who determine product and product component names

"8-bit clean" to "64-bit transfer"

8-bit clean (adj.) Characteristic of a platform or operating system that can support a common method of representing characters in the various European languages. The term specifically applies to 8-bit character sets such as ISO Latin 1, as opposed to the 7-bit ASCII character set that is used in the U.S. SunOS™ commands that support 8-bit character data or that do not process text are said to be "8-bit clean." See also internationalization.

8-bit dirty (adj.) Characteristic of system commands that interpret ASCII control characters in an unexpected way. See 8-bit clean.

24-bit color (n.) See true color.

32-bit transfer (n.) The basic SBus cycle in which 32 bits of data can be transferred in each clock cycle.

64-bit transfer (n.) See extended transfer.

"abort" to "AWT"

abort (v.) To terminate, in a controlled manner, a processing activity in a computer system because continuation of the activity is impossible or undesirable.

abortive release (n.) An abrupt termination of a transport connection, which might result in data loss.

absolute address (n.) An address that identifies a storage location or a device without the use of any intermediate reference.

absolute path name (n.) For a file or directory, the list of directories from the root directory through the tree structure to the file name or directory name. Each name in the series is separated by a slash character (/).

abstract A Java™ programming language keyword used in a class definition to specify that a class is not to be instantiated, but rather inherited by other classes. An abstract class can have abstract methods that are not implemented in the abstract class, but in subclasses.

abstract class (n.) A class that contains one or more abstract methods, and therefore can never be instantiated. Abstract classes are defined so that other classes can extend them and make them concrete by implementing the abstract methods.

abstract method (n.) A method that has no implementation.

Abstract Window Toolkit (AWT) (n.) The class library that provides the standard API for building graphical user interfaces for Java programs. The AWT includes imaging tools, data transfer classes, GUI components, and containers for GUI components. The AWT also includes an event system for handling user and

system events among parts of the AWT, and layout managers for managing the size and position of GUI components in platform-independent designs. The GUI components in the AWT were implemented as native-platform versions of the components. These components have largely been supplanted by the Swing components. See also Java Foundation Classes, Swing classes, Swing Set.

access control list (ACL) (1) (n.) An authorization mechanism in the X protocol that maintains lists of hosts which are allowed to access each server that controls a display. By default, only the local host can use the display, plus any hosts that are specified in the access control list for that display.

(2) (n.) A file that contains a list of principals with certain access permissions. Typically, a server consults an access control list to verify that a client has permission to use its services. Note that a principal which is authenticated by GSS-API can still be denied services if an ACL does not permit those services.

accessibility (n.) The degree to which software can be used comfortably by a wide variety of people, including those users who require assistive technologies or those who use the keyboard instead of a pointing device. An accessible JFC application employs the Java Accessibility API and provides keyboard operations for all actions that can be completed by use of the mouse. See also Java Accessibility API, Java Accessibility Utilities, keyboard operations.

account See user account.

ACL See access control list.

ACPI (n.) Advanced Configuration and Power Management Interface.

active (adj.) Characteristic of a window, window element, or icon that is currently affected by keyboard and mouse input. An active window is differentiated from other windows on the workspace by a distinctive title bar color or shade. An active window element is indicated by a highlight or selection pointer.

active grab (n.) In the X protocol, the keyboard keys, keyboard, pointer buttons, pointer, and server can be "grabbed" briefly for exclusive use by a client. An active grab causes the pointer and keyboard events to be sent to the grabbing window despite the current pointer position. Contrast with passive grab.

active window (n.) The window that contains the cursor. The active window can be affected by cursor movements.

address (1) (n.) A number that is used by the system software to identify a storage location.

(2) (n.) In networking, a unique code that identifies a node to the network.

address bus (n.) A dedicated bus that passes address information about computer memory. See also data bus.

administrative console (n.) In a Sun Cluster configuration, the console that runs cluster administrative software to administer and communicate with the cluster nodes.

air restrictor board (n.) A blank board with a special air deflector fin that is used in Sun™ server systems to simulate the airflow pattern of an actual board. If air restrictor boards are not installed in blank slots, a condition that is called a "thermal short" is created. A thermal short severely reduces the cooling capability of the system, which can lead to equipment damage.

alarm (n.) Usually, an audio warning or visual warning to indicate that attention to the computer is required.

alarm clock (n.) A part of the signal C library function. The signal SIGALRM is sent to the invoking process after a specified number of seconds. Unless caught or ignored, the SIGALRM signal kills the process.

alert (n.) A warning that is similar to an alarm, but not of such a critical nature.

alert box (n.) A secondary window that is used by an application to convey a message or warning or which gathers information from the user. Four standard alert boxes (Info, Warning, Error, and Question) are supplied for JFC applications. In the Java look and feel, alert boxes are created by using the `JOptionPane` component. See also dialog box.

alias (1) (n.) In email, a name that is easily remembered as a substitute for a full name and address. Also, a name that is used to identify a distribution list.

(2) (n.) An alternate label. For example, a label and one or more aliases can be used to refer to the same data element or point in a computer program.

(3) (n.) A distortion or artifact in the digital reproduction of an audio waveform that results when the signal frequency is too high, compared to the sampling frequency.

aliasing (1) (n.) The jagged artifact in a line or in the silhouette of a curve that results from drawing on a raster grid. Aliasing is especially noticeable in low-resolution monitors. Also called jaggies. See also antialiasing.

(2) (n.) See command aliasing.

alpha (1) (n.) In computer graphics, a fourth color component. Alpha is typically used to control color blending with a background or underlying object. Typically, an alpha value of 1.0 implies complete opacity, and an alpha value of 0.0 is complete transparency.

(2) (n.) The first letter of the Greek alphabet.

alpha channel (n.) In computer graphics, memory that is associated with each pixel which is used to store the fractional coverage of the pixel. An alpha channel is typically used to assign the opacity of an object.

alpha value (n.) A value that indicates the opacity of a pixel.

amnesia (n.) A condition in which a cluster restarts after a shutdown with obsolete cluster configuration data in its Cluster Configuration Repository (CCR). For example, on a two-node cluster with only node 1 operational, if a cluster configuration change occurs on node 1, the CCR on node 2 is no longer

up-to-date. If the cluster is shut down and then restarted only on node 2, with node 1 remaining down, an amnesia condition results on node 2 because its CCR is obsolete. The Sun Cluster quorum mechanism prevents amnesia from occurring.

ancestor window (n.) In the X protocol, a window that is a parent window or a parent of a parent window, and similar branches. If window W is an inferior of window A, window A is an ancestor of window W. The root window is the ancestor of all windows on a screen.

anti-aliasing (n.) In computer graphics, the process of smoothing stair-step lines and curves. You accomplish antialiasing either by using a higher-resolution device or software routines that shade surrounding pixels and lessen the visual distinction.

applet (n.) A component that typically executes in a web browser, but can execute in a variety of other applications or devices that support the applet programming model. See also application, browser.

appliance (n.) A networked device such as a printer, Java technology-enabled terminal, or client, that is managed with applications which were built by using the Java Management API (JMAPI).

application (n.) A program that combines all the functions necessary for the user to accomplish a particular set of tasks, for instance, word processing or inventory tracking. Unless stated otherwise, "application" refers to both applets and standalone applications. See also applet.

archive (n.) 1. A collection of several files that are concatenated into a single new file by a program, such as `ar`, `tar`, `bar`, or `cpio`, for shipment or storing.

2. A file that contains a collection of files that were copied from a master system. The file also contains identification information about the archive, such as a name and the date that you created the archive. After you install an archive on a system, the system contains the exact configuration of the master system. An archive could be a differential archive which is Solaris Flash archive that contains only the differences between two system images, an unchanged master image and an updated master image. The differential archive contains files to be retained, modified, or deleted from the clone system. A differential update changes only the files specified and is restricted to systems that contain software consistent with the unchanged master image.

archiving (n.) The storage of backup files for later reference or use. See also Source Code Control System.

area sampling (n.) The determination of a pixel's color and intensity that is based on the color and intensity of the surrounding pixels.

argument (n.) A data item that is specified in a method call. An argument can be a literal value, a variable, or an expression.

arrow key (n.) One of the four directional keys on the numeric keypad.

artifact (1) (n.) A visible error or oddity in a displayed image. Aliasing, for instance, is an artifact that results from producing images on a raster grid.

(2) (n.) An audible error or oddity in a reproduced sound that results from the digital sampling or compression of the sound.

ASET See Automated Security Enhancement Tool.

ASP (1) (n.) application service provider.

(2) (n.) authorized service provider.

ASR (1) (n.) automatic system reconfiguration.

(2) (n.) automatic system recovery.

aspect ratio (1) (n.) The ratio of the height of an object to its width.

(2) (n.) In computer graphics, the ratio of a pixel's height to its width. Pixels that have equal height and width are called square pixels.

asppp (n.) A version of Point-to-Point Protocol (PPP) that was included with the Solaris operating environment from Solaris 2.4 to Solaris 8 releases. asppp supported asynchronous PPP communications only.

asserted (adj.) Characteristic of a signal that is used to initiate an action. Contrast with unasserted.

assertion (1) (n.) A conditional statement in the operating system source code that is intended to prevent the kernel from straying and damaging important data.

(2) (n.) A Boolean statement that determines whether a program is operating correctly.

associative array (n.) A collection of data (an array) that enables individual items to be indexed (accessed) by a string, rather than by an integer as is common in most programming languages.

atom (1) (n.) In the X Imaging Library (XIL) collection, a single library function call. With the property XIL™ library's deferred execution feature, groups of atoms can be combined to create a molecule, which avoids redundant operations.

(2) (n.) In the X protocol, a unique numeric identifier that maps to a string name. Atoms identify properties, types, and selections to avoid the overhead of passing arbitrary-length property name strings.

atomic (adj.) Characteristic of an operation that is never interrupted or left in an incomplete state under any circumstance.

atomicity (n.) The condition of an operation that is never interrupted or left in an incomplete state under any circumstances.

atomic transaction (n.) An uninterrupted sequence of instructions.

attachment (n.) An encapsulated data object inside a document.

authentication (1) (n.) The act of verifying the identity that is supplied over the network by a remote user or entity, such as a program. Some authentication protocols enable you to build databases of authentication credentials from potential users. Other authentication protocols use certificate chains of trust that are generated by a certificate authority for authentication purposes. These credentials can authenticate users when they try to communicate with you or use your site's services.

(2) (n.) A security service that verifies the claimed identity of a principal.

authorization (n.) The process of determining whether a principal can use a service, which objects the principal is allowed to access, and the type of access that is allowed for each object.

autoconfiguration (n.) The process by which the host fetches SBus IDs and Forth bytecodes (FCodes), beginning at location 0 of each slave that is used to identify the device.

Automated Security Enhancement Tool (ASET) (n.) A utility that is shipped with the SunOS 5.3 operating system. ASET enables a user to specify a system security level of low, medium, or high. The utility then automatically maintains systems at those levels.

automounter (n.) The software that automatically mounts a directory when the user changes directories, and unmounts the directory when it is no longer in use.

AWT See Abstract Window Toolkit. See also Java Foundation Classes, Swing classes, Swing Set.

"back-face culling" to "byte order"

back-face culling (n.) The process of omitting the drawing of one or more back-facing polygons (which cannot be seen by the viewer), thus increasing drawing speed.

back-facing polygon (n.) A polygon with a normal vector that is pointed away from the viewer. Often the back-facing polygon is occluded, hidden from view by opaque polygons that are closer to the viewer.

background (1) (n.) On a UNIX® system, the process of freeing the terminal for other uses while another task is running. See also background process.

(2) (n.) The main color of a terminal screen on which contrasting characters and graphics are displayed.

background process (n.) A command that a user has directed the system to work on while the user continues to type commands to the command interpreter.

BARB board arbiter.

baseline sequential codec (n.) A sequential coder/decoder that is defined by the JPEG standard. Baseline sequential codec handles images with 8-bit samples and uses Huffman coding for its entropy coding.

BCS (n.) Binary Compatibility Standard.

Bean (n.) In the Java look and feel, a reusable software component. Beans can be combined to create an application.

Benchmark Interchange Format (BIF) (n.) In computer graphics, a standardized file structure for specifying the geometry of a particular data set from a particular application and for specifying user interactions. This standard enables the same data set to run on dissimilar vendor systems. Also, BIF promotes testing efficiency.

Benchmark Report Format (BRF) (n.) In computer graphics, a standard format for reporting benchmark results. This format provides the purchaser with a consistent data-tracking system for comparing hardware platforms.

benchmark timing methodology (BTM) (n.) In computer graphics, a method of measuring the time that is required to run the purchaser's Benchmark Interchange Format (BIF) program. This method ensures that the viewing pipelines of dissimilar graphics libraries are measured in a consistent manner. The BTM provides the conditions and parameters necessary to determine the length of time that is required to run the requested benchmark.

Bezier curve (n.) In computer graphics, a curve that is created from endpoints and two or more control points which serve as positions for the shape of the curve. Often used in mechanical computer-aided design mechanical computer-aided design (MCAD) applications.

Bezier patch (n.) In computer graphics, a portion of a 3-D surface that is generated by using the Bezier curve algorithm. Two 2-D Bezier curves are drawn through selected control points. The 3-D curve is then interpolated between the control points. See also interpolation.

BIF (n.) Benchmark Interchange Format.

bilinear patch (n.) A 2-D surface patch that can be warped into a 3-D surface. Some set of points in 2-D space forms the parameters of the patch. These points are connected by straight lines. The patch shape is warped to the surface, but the lines themselves do not warp, and thus remain linear.

bind (v.) To link variables and instructions that have symbolic addresses toabsolute addresses (after compiling).

BIND (n.) Berkeley Internet Name Domain.

BIOS (n.) basic input/output system.

bit block transfer (n.) A raster operation that moves a block of bits from one location in the frame buffer to another location. The block of bits represents some portion of an image or a scene. See also raster ops (ROP).

bit BLT (pronounced "bit blit") (n.) See bit block transfer.

bit depth (n.) The amount of information (in bits) that is used to represent a pixel. A bit depth of 8 supports a maximum of 256 colors. A bit depth of 24 supports a maximum of 16,777,216 colors.

bit gravity (n.) In the X protocol, the attraction of window contents to some region of a resized window. For example, an application that draws a graph might request that the contents be moved into the lower-left corner if the window is resized. The result is that the origin of the graph always appears in the lower-left corner. See also window gravity.

bitmapped graphics (n.) Those graphics that associate color with bits per pixel. Historically, bitmapping is the process of associating each pixel on a screen with one or more bits in memory.

bitmapped screen (n.) A screen in which a memory location is assigned for every pixel on the screen.

bit plane (n.) The hypothetical two-dimensional plane that contains a bit in memory for each pixel on the raster. For any raster image, at least one bit plane is in frame buffer memory. Each bit plane has a one-to-one mapping of bits to pixels. Additional bit planes exist for some raster systems. For instance, a 24-bit system has 24 bit planes. The storage structure that represents the bit plane in memory is an array.

blending (n.) In computer graphics, combining two color components into one, usually as a linear interpolation between the two components. The alpha value helps determine how the components are combined.

Boolean (adj.) Characteristic of an expression or variable that can have only a true or false value. The Java programming language provides the Boolean type and the literal values true and false.

boot (bootstrap) (v.) To load the system software into memory and start it.

boot environment (n.) A collection of mandatory file systems (disk slices and mount points) that are critical to the operation of the Solaris™ Operating System. These disk slices might be on the same disk or distributed across multiple disks. The active boot environment is the one that is currently booted. Exactly one active boot environment can be booted. An inactive boot environment is not currently booted, but can be in a state of waiting for activation on the next reboot.

`bootlog-cgi` (n.) The CGI program that enables a web server to collect and store remote client booting and installation console messages during a WAN boot installation.

boot PROM (n.) In Sun workstations, memory that contains the PROM monitor program, a command interpreter which is used for booting, a reset operation, low-level configuration, and simple test procedures.

boot server (n.) A server system that provides client systems on the network with the programs and information that they need to start.

bounding box (n.) For a raster object, the smallest rectangle that completely encloses all the pixels that are not fully transparent. Often used in fill algorithms in which tests reveal which pixels are inside and which are outside a polygon. Also called extent.

bpp (bytes per pixel) (n.) The parallel port on the SPARCprinter™ SBus printer card. The term also refers to the device driver that drives the port.

BRF See Benchmark Report Format.

browse (v.) To view the contents of a database or list of files without editing the information.

browser See web browser.

B-spline curve (n.) A curve that is defined by a series of control points. The control points define a series of continuous Bezier curves.

buffer (1) (n.) A storage device that holds data to be transmitted to another device.

(2) (n.) A temporary work area or storage area that is set up within the system memory. Buffers are often used by programs, such as editors, that access and alter text or data frequently.

bus arbitration system (n.) On Sun server systems with at least two SuperSPARC™ modules, a mechanism for deciding which processor has control of the system resources at any moment.

bus cycle (n.) On the SBus, a series of clock cycles that begin, for example, in a DVMA master, with a particular master receiving a grant. In all instances, the clock cycles conclude with the address strobe being unasserted by the SBus controller. For DVMA masters, a bus cycle is divided into two phases: a translation cycle and a slave cycle. However, in a CPU master, the translation cycle does not occur as part of the bus cycle.

bus device (n.) A device that connects to the bus and has an assigned device address and/or priority level.

bus error (n.) A process that has attempted to access an area of memory that is restricted or does not exist. See also segmentation fault.

bus priority (n.) A scheme for allocating preferential access to a bus.

bus request (n.) A request from a device on the bus for control of the bus to become the bus master and to start an interrupt or perform a data transfer.

bus sizing (n.) On the SBus, a transfer mode in which a slave requests the master to turn a word transfer into 2 halfwords, or 4 byte transfers. Each transfer is performed by using a separate bus cycle. The first bus cycle is called the original bus cycle. Remaining bus cycles are called follow-on bus cycles.

bus watcher (BW) (n.) On Sun server systems, a mechanism that converts XDBus signals to XBus signals and passes them to the Module XBus Cache Controller (MXCC) on the processor module. Together, the bus watchers and MXCC control the flow of information between the XDBus and the processors (and their respective cache SRAMs).

button binding (n.) The association of a mouse button operation with a particular behavior.

button grab (n.) In the X protocol, a pointer grab that occurs only when a specified set of keys or buttons is held down. See also mouse grab.

byte (n.) A sequence of 8 bits. The Java programming language provides a corresponding `byte` type. See also character.

byte acknowledgment (n.) On the SBus, an acknowledgment to indicate that the slave has read or written a byte from the most-significant byte of the data lines. If the transfer size is greater than a byte, the master that is initiating the transfer can perform bus sizing.

byte addressing (n.) On the SBus, a determination that the smallest addressable unit of information is a byte.

bytecode (n.) Machine-independent code that is generated by the Java compiler and executed by the Java interpreter.

byte order (n.) The order in which bytes of data are stored in memory. The byte order is hardware dependent.

"cabinet-mounted" to "cut buffer"

cabinet-mounted (adj.) Characteristic of a device that can be mounted in a cabinet, generally appropriate for a data center or machine room. These systems can support more terminals than deskside systems. Cabinet-mounted systems usually have mass storage capacity, which is suitable for an operations environment.

cache (n.) A buffer of high-speed memory that is filled at medium speed from main memory, often with instructions or the most frequently accessed information. A cache increases the transfer rates of effective memory and raises processor speed.

cache controller (n.) See Module Xbus Cache Controller.

caching-only server (n.) A domain name server that is not authoritative for any domain. This server queries servers that have authority for the required information. The server then caches that data. See also communications server.

canonical (adj.) Characteristic of adhering to standard, accepted, or authoritative procedures or principles.

capture (1) (v.) To save an image or data on a screen to a file, or to send an image directly to a printer.

(2) (v.) To record a series of keystrokes or save a special state of a program.

captured image (n.) An image that was acquired originally with a camera and subsequently digitized and stored digitally. Often, a distinction is made between captured images and synthetic images, which are generated with computer-graphics techniques.

CARB See central arbiter.

card cage (n.) In Sun server systems, the boards are installed in a card cage enclosure (not a board cage). The card cage provides card guides to direct the board into the backplane.

card slot (n.) In Sun server systems, one of three slots per system board for an SBus interface card.

caret (n.) In desktop publishing systems, a blinking triangle, gray diamond, static solid, or "shadow" rectangle shape that indicates the insertion point in a text subwindow.

Cartesian coordinates (n.) The coordinates that form a coordinate system by which points, lines, and other primitives can be located. In 2-D, the coordinate system forms a single flat plane, the x-y plane. In 3-D, the coordinate system is defined by three mutually perpendicular planes, usually called x, y, and z.

cascaded list (n.) In a window environment, additional elements that are displayed by a menu item or list box from which you can choose to interact with other screen elements. Also called cascaded menu.

casting (n.) The explicit conversion from one data type to another.

catenet (n.) A network in which hosts are connected to networks with varying characteristics, and the networks are interconnected by gateways (routers). The Internet is an example of a catenet.

CDE See Common Desktop Environment.

cell (n.) In image processing, a four-by-four block of pixels. See cell encoding.

cell encoding (n.) A video compression algorithm, developed by Sun Microsystems, Inc. In cell encoding, a 4-by-4 region of pixels is represented by two colors and a 16-bit mask that indicates which of the two colors to place at each of the 16 pixel positions. The colors and mask are chosen to preserve the mean and variance luminance and the average chrominance for the 4-by-4 block.

central arbiter (CARB) (n.) On Sun servers, a system that includes central arbiters (one CARB on the control board) and a single board arbiter (BARB) on every system board. The central arbiter determines which processor on which system board controls the system bus at any particular time.

central structure store (CSS) (n.) The Programmer's Hierarchical Interactive Graphics System (PHIGS) display list structure. An editable hierarchy of structures that is composed of elements, attributes, and transformations. CSS elements are drawing primitives such as lines and polygons. CSS attributes are qualities such as color and style.

CGA (n.) color graphics adapter.

CGI (1) (n.) Common Gateway Interface.

(2) (n.) Computer Graphics Interface.

Challenge-Handshake Authentication Protocol (CHAP) (n.) An authentication protocol that can be used to verify the identity of a caller on a Point-to-Point Protocol (PPP) link. CHAP authentication uses the notion of the *challenge* and *response*, where the machine that receives a call challenges the caller to prove its identity.

character (n.) A letter, numeral, punctuation mark, control character, blank, or other such symbol. See also byte.

character device (n.) A device that transfers characters, either bit-by-bit or byte-by-byte, but does not move characters in blocks.

character set (n.) A set of numbers, letters, and special characters with some commonality.

character-special device (n.) See character device.

character string (n.) A series of characters.

chat script (n.) Instructions that tell a modem how to establish a communications link between itself and a remote peer. Both the Point-to-Point Protocol and UUCP protocols use chat scripts for establishing dial-up links and dial-back calling.

checkbox (n.) A control, consisting of a graphic and associated text, that the user clicks to select or deselect an option. A check mark in the checkbox graphic indicates that the option is selected. In the Javalook and feel, checkboxes are created by using the `JCheckBox` component. See also radio button.

checkbox menu item (n.) A menu item that is displayed with a checkbox next to it to represent an on or off setting. A check mark in the checkbox graphic indicates that the menu item is selected. In the Java look and feel, checkbox menu items are created by using the `JCheckBoxMenuItem` component. See also menu item.

checkpoint (1) (n.) A place in a computer program at which a check is made, or at which a recording of data is made for restart purposes.

(2) (n.) In a Sun Cluster configuration, the notification sent by a primary node to a secondary node to keep the software state synchronized between the two nodes. See also primary, secondary.

checksum (n.) The result of adding a group of data items that are used for checking the group. The data items can be either numerals or other character strings that are treated as numerals during the checksum calculation. The checksum value verifies that communication between two devices is successful.

CHI (1) (n.) Communication Hardware Interface.

(2) (n.) Computer-Human Interaction.

(3) (n.) computer-human interface.

(4) (n.) Concentration Highway Interface.

child directory (n.) The directory directly below the working directory in the tree-structured file system. See also subdirectory.

child process (n.) A process that is created by another (parent) process. See also parent process.

child status (n.) A child process status.

child structure (n.) A data record in a hierarchical data structure. The child structure is said to be invoked by its parent's attributes. Programmer's Hierarchical Interactive Graphics System (PHIGS) uses this hierarchy.

child widget (1) (n.) In the OLIT class hierarchy, a subclass of a widget.

(2) (n.) In an application, a child widget that is owned and managed by a parent widget. Parent widgets manage the size and location of their children. Parent widgets also control input to their children by controlling the input area.

child window (n.) In the X protocol, a first-level subwindow of a particular window. All child windows are created from the same parent window. See also ancestor window.

choose (v.) In a window system, to use the mouse or keyboard to pick a menu command, button, or icon that begins a command or action. Contrast with select.

chroma (1) (n.) A signal that conveys color independent of luminance.

(2) (n.) An aspect of color that indicates hue and saturation.

chroma key (n.) A process of controlling the overlay of one video image over another video image. The areas of overlay are defined by a specific color or chrominance in one of the images.

chrominance (1) (n.) The color of a scene that is independent of its luminance.

(2) (n.) The portion of a composite signal that carries color information.

CIS See compressed image sequence.

class (1) (n.) A grouping of data having similar characteristics. See widget class.

(2) (n.) In the Java programming language, a type that defines the implementation of a particular kind of object. A class definition defines instance and class variables and methods, as well as specifying the interfaces that the class implements and the immediate superclass of the class. If the superclass is not explicitly specified, the superclass is implicitly Object.

classpath (n.) An environmental variable that indicates to the Java virtual machine and Java technology-based applications (for example, the tools that are located in the JDK1.1.X\bin directory) where to find the class libraries, including user-defined class libraries.

class variable (n.) A data item that is associated with a particular class as a whole, not with particular instances of the class. Class variables are defined in class definitions. Also called static field. See also instance variable.

CLI See command-line interface.

click (v.) In a window system, to select an object by pressing a mouse button and releasing it immediately.

client (1) (n.) In the client-server model for communications, the client is a process that remotely accesses resources of a compute server, such as compute power and large memory capacity. See also dataless client, diskfull client, diskless client.

(2) (n.) Narrowly, a process that uses a network service on behalf of a user. An example is an application that uses the `rlogin` command. At times, a server itself can be a client of some other server or service. Informally, a client is a principal that uses a service.

client-server model (n.) A network architecture that consists of a database server which uses a relational database management system (DBMS) to quickly respond to user queries (directed from the client).

clip list (n.) A list of subrectangles for a window that are not overlapped by another window and are, therefore, visible to the user.

clip mask (n.) In computer graphics, the image that is defined by a bitmap or list of rectangles. A clip mask is used to restrict output to a particular region of a window.

clipping (1) (n.) A 2-D or 3-D operation that reduces the number of drawing calculations that the CPU makes by eliminating any objects, or portions of objects, outside the viewing area.

(2) (n.) The process of setting graphics display boundaries. Primitives that lie outside the boundary and are not required for display are clipped.

clipping plane (n.) In 3-D graphics, a plane inside the view volume (parallel to the x-y plane), beyond which the view volume is not calculated or rendered. The clipping plane constrains the amount of memory that is required by a drawing. Any object, or portion of an object, that occurs beyond the clipping plane is discarded. Often both a front clipping plane and a back clipping plane exist.

clone device (n.) A STREAMS device that returns an unused major/minor device when initially opened, rather than requiring the minor device to be specified by name in the `open(2)` call.

closed surface (n.) A surface with no holes. A closed surface ensures that none of the interior is visible. See also back-facing polygon.

close routine (n.) A STREAMS procedure that is called when a module is popped from a Stream or when a driver is closed.

cluster (1) (n.) A group of computers that is connected by a high-speed network. A cluster work together with the computers as if they were one machine with multiple CPUs.

(2) (n.) A logical collection of packages (software modules).

(3) (n.) A group of software packages. Clusters can contain other clusters. Clusters and their components form a hierarchical tree.

cluster (n.) One or more nodes or domains in which each node benefits from automatic restart capability under the control of the cluster framework. Two or more interconnected cluster nodes can share a cluster file system and can be configured together to run failover, parallel, or scalable resources.

Cluster Configuration Repository (CCR) (n.) A highly available, replicated data store that is used by Sun Cluster software to persistently store cluster configuration information.

cluster file system (n.) A cluster service that provides cluster-wide, highly available access to existing local file systems.

cluster interconnect (n.) The hardware networking infrastructure that includes transport cables, transport junctions, and transport adapters. The Sun Cluster and data service software use this infrastructure for intracluster communication.

cluster member (n.) An active member of the current cluster incarnation. This member is capable of sharing resources with other cluster members and providing services both to other cluster members and to clients of the cluster. See also cluster node.

Cluster Membership Monitor (CMM) (n.) The software that maintains a consistent cluster membership roster. This membership information is used by the rest of the clustering software to decide where to locate highly available services. The CMM ensures that noncluster members cannot corrupt data and transmit corrupt or inconsistent data to clients.

cluster node (n.) A node that is configured to be a cluster member. A cluster node might or might not be a current member. See also cluster member.

cluster-transport adapter See transport adapter.

cluster-transport cable See transport cable.

cluster-transport junction See transport junction.

codebase (n.) In Java programming, a designation that works with the code attribute in the <APPLET> tag to give a complete specification of where to find the main applet class file. Code specifies the name of the file. Codebase specifies the URL of the directory that contains the file.

colocation (n.) In a Sun Cluster configuration, the property of being on the same node. This concept is used during cluster configuration to improve performance.

color chooser (n.) A component that enables the user to select a color. In the Java look and feel, color choosers are created by using the `JColorChooser` component.

color map (n.) The color options in a graphics system, arranged by index number.

combo box (n.) A component with a drop-down arrow that the user clicks to display a list of options. Noneditable combo boxes (sometimes called "list boxes") have a list from which the user can select one item. Editable combo boxes offer a text field as well as a list of options. The user can make a selection by typing a value in the text field or by selecting an item from the list. In the Java look and feel, combo boxes are created using the `JComboBox` component.

command (n.) An instruction to the computer. A command typically is a character string that is typed at a keyboard and is interpreted by the computer as a demand for a particular action.

command aliasing (n.) In the UNIX® shell, the process of renaming or customizing the behavior of commands. For example, you can use the alias h for the UNIX history command. To execute history, you merely type **h**.

command button (n.) A button with a rectangular border that contains text, a graphic, or both. The user clicks a command button to specify a command to initiate an action. In the Java look and feel, command buttons are created by using the `JButton` component. See also toggle button, toolbar button.

command interpreter (n.) A program that accepts commands from the keyboard and causes the commands to be executed. The C shell is an example of a UNIX command interpreter.

command line (n.) A string of characters that begins with a command. The command is often followed by arguments, such as options, file names, and other expressions. The string is terminated by the end-of-line character.

command-line interface (CLI) (n.) An interface that enables you to type executable instructions at a user prompt.

command prompt (n.) The string of characters the system displays to tell you it is ready to accept and interpret the next command line. Often the command prompt includes the name of the system.

command substitution (n.) See command aliasing.

comment (n.) In a program, explanatory text that is ignored by the compiler. In programs that are written in the Java programming language, comments are delimited by using `//` or `/*...*/`.

Common Desktop Environment (CDE) (n.) A graphical user interface that runs on UNIX.

Communication Hardware Interface (CHI) (n.) The hardware that TCP/IP supports.

communications server (n.) A gateway in a local area network (LAN) that provides address translation, name translation, protocol conversion, and interception of unsuccessful user attempts at functions not available. See also caching-only server.

component (1) (n.) A piece of code or, by extension, the interface element that is implemented by that code. See also Swing classes.

(2) (n.) In the context of JPEG, a rectangular array of image samples. Also called color, spectral bands, or channels.

composite drive (n.) A single logical drive that is composed of more than one physical drive. See also logical disk, disk array, redundant array of independent disks (RAID).

composite widget (n.) A widget that is composed of other subwidgets. For example, the MenuButton widget consists of a MenuButton plus MenuShell.

compressed image sequence (CIS) (n.) The XIL library's compressors store (generally related) compressed video frames in structures that are called CIS buffers. The images might represent frames in a movie, pages in a document, and similar objects. The data in the image sequence might have undergone compression. If the data is compressed, it might be in cell or JPEG formats. See also cell encoding.

compression/decompression (n.) An algorithm or computer program for reducing byte consumption in large files and programs.

Computer-Human Interaction (CHI) (n.) An organization that focuses on communication and interaction between people and computers.

compute server (n.) See server.

Concentration Highway Interface (CHI) (n.) A high-speed time-division-multiplexed digital bus that is between a SPARCstation™ system and the SpeakerBox. CHI is capable of simultaneous input and output of 16-bit stereo audio at a maximum rate of 48 KHz, the rate that is used by digital audio tape (DAT).

concurrent (adj.) Characteristic of the sharing of computer resources whereby two or more processes (or programs) can access the computer's processor simultaneously. The sharing results in parallel calculations or data manipulation.

console (1) (n.) A system device or physical device that is used for the display of system messages and for interactive purposes. For example, a console might be a local alphanumeric (ASCII) terminal or local graphics monitor where system messages are displayed or interactive behavior occurs.

(2.) (n.) A logical device that gives privileged access to the operating system to administer hardware, services, operating systems, storage, and more. A logical console is also known as a system console.

console-access device (n.) A device that is used to communicate between the administrative console and the cluster-node consoles. Examples are a terminal concentrator, a System Service Processor (SSP), and a system controller.

constructor (n.) A pseudo-method that creates an object. In the Java programming language, constructors are instance methods with the same name as their class. Constructors are invoked by using the new keyword.

container (n.) A component, such as an applet, window, pane, or internal frame, that holds other components.

contention (n.) A situation that occurs when two or more devices compete to use a single resource simultaneously.

context (n.) A "state of trust" between two applications. When a context has successfully been established between two peers, the context acceptor is aware that the context initiator is who it claims to be. The initiator also can verify and decrypt messages that are sent to it. If the context includes mutual authentication, the initiator knows the acceptor's identity is valid. The initiator also can verify and decrypt messages from the acceptor.

context object (n.) An XGL™ library object that is an abstraction of a renderer. A context object contains graphics that render state information, graphics primitives, and nonprimitive operators that are used for several utility operations. Examples are copying pixels and clearing a device.

context operator (n.) One or more functions that affect the state of a context object.

context-sensitive help (n.) The online help that is connected to a particular part of an application.

context switching (n.) A form of multitasking in which you switch among several applications, resulting in task switching by the operating system.

contextual menu (n.) A menu that is displayed when the user presses mouse button 2 while the pointer is over an object or area which is associated with that menu. A contextual menu offers only menu items that are applicable to the object or region at the location of the pointer. In the Java look and feel, contextual menus are created by using the `JPopupMenu` component. Also called pop-up menu. See also menu.

control point (n.) One of the points (in model coordinates) that controls the shape of a curve or curved surface.

cooperative multitasking (n.) See multitasking.

copy (v.) In a window system, to duplicate selected text, graphics, or other data onto the clipboard.

core class (n.) A public class (or interface) that is a standard member of the Java platform. The intent is that the core classes for the Java platform, at minimum, are available on all operating systems where the Java platform runs. A program that is written entirely in the Java programming language relies only on core classes, meaning it can run anywhere.

core file (n.) A file that is created when a program malfunctions and terminates. The core file holds a snapshot of memory, taken at the time the fault occurred. This file can be used to determine the cause of the malfunction.

core gateway (n.) One of a set of gateways (routers) that is operated by the Internet network operations center. The core gateway system forms a central part of Internet routing. All groups must advertise paths to their networks from a core gateway, using the Exterior Gateway Protocol (EGP).

CPU master (n.) An SBus master that includes a central processing unit with a private means to perform virtual address translation. In contrast, a DVMA master uses the SBus controller to perform virtual address translation. A bus cycle that is initiated by a CPU master consists only of a slave cycle. Typical SBus systems have one CPU master.

crash (n.) The sudden failure of a disk drive or program. A disk crash usually renders the drive unusable and destroys all data on the disk. A program crash usually destroys all unsaved data. This type of crash might require a reboot of the computer.

crash dump (n.) See core file.

credential (n.) An information package that identifies a principal. A principal's "identification badge," specifying who the principal is and, often, what privileges it has. Credentials are produced by security mechanisms.

credential cache (n.) A storage space (usually a file) that contains credentials which are stored by a particular mechanism.

critical section (n.) A segment of code in which a thread uses resources (such as certain instance variables) that can be used by other threads, but that must not be used by them at the same time.

cron (n.) The UNIX clock daemon that executes commands at specified dates and times. See also crontab file.

crontab file (n.) A file that lists commands which are to be executed at specified times on specified dates. See also cron.

cross-device link (n.) An attempt to create a hard link to a file on a different disk or file system.

cross-platform (adj.) Characteristic of heterogeneous computing environments. For example, a cross-platform application is one that has a single code base for multiple operating systems.

C shell (n.) The standard shell that is provided with Berkeley standard versions of UNIX.

C shell remote control file (n.) The `.cshrc` file that runs every time a new C shell is started or invoked. Commands and settings within the `.cshrc` file configure the user environment, invoke programs, and set universal shell variables and aliases. The commands and settings also set the search path for commands and applications.

CSS See central structure store.

current directory (n.) The directory that is searched when a file name is typed without the path specified. Also called the current working directory.

current session (n.) The session that is saved by the operating environment's session manager when the user logs off. At the next login, unless the user specifies otherwise, this session automatically opens, enabling work to continue where the user stopped.

current working directory (n.) See current directory.

curses (n.) A library of routines that enable the developer to write screen management programs on the SunOS system. The routines are C functions and macros. Many curses resemble routines in the standard C library. The name "curses" comes from the cursor optimization that this library of routines provides. Cursor optimization minimizes the amount a cursor has to move around the screen to update it.

cursor (n.) See pointer.

cursor plane (n.) The memory space which is associated with each pixel (typically 2 bits) that is used to store the data for a superimposed cursor. The cursor plane enables large or complex cursor patterns to be drawn without interfering with the memory that holds the underlying image.

cut (v.) In a window system, to remove a selected object and place it into the temporary memory of the clipboard.

cut buffer (n.) A simple but limited method of client communication in the X protocol, sometimes used instead of the selection mechanism. The data that is placed in a single cut buffer is limited to the maximum size of a single property.

"DAC" to "DVMA master"

DAC to DVMA master (1) (n.) digital-to-analog converter.

(2) (n.) dual address cycle.

daemon (n.) A process that runs in the background, handling commands that are delivered for remote command execution. Examples are the mailer daemon and the printer daemon.

database connection pool (n.) A collection of database connections with which database clients obtain access to a database. As database clients release connections to their database, these connections are returned to the database collection pool for further use.

data bus (n.) A group of signal lines (wires) that is used as a common pathway among multiple devices in a computer system.

dataless client (n.) A client system that relies on a server system for its home directory, and on a local disk for its root directory and swap space. See also diskfull client, diskless client.

Data Link Provider Interface (DLPI) (n.) The AT&T System V™ Release 4 operating system STREAMS-based kernel-level interface that supports the services of the data-link layer for both connection-mode and connectionless-mode services.

data service (n.) The combination of software and configuration files that enables an application to run without modification in a Sun Cluster configuration. When running in a Sun Cluster configuration, an application runs as a highly available resource under the control of the Resource Group Manager (RGM).

Data Service Development Library (DSDL) (n.) A set of library functions that encapsulate the low-level Resource Management API and process-management functionality at a higher level. These library functions also add functionality to ease the writing of callback methods. See also Resource Management API.

data transfer bus (DTB) (n.) A part of the VMEbus specification that contains data and address pathways and associated control signals. Functional modules that are called "DTB masters" and "DTB slaves" use the DTB to transfer data between each other.

DDI See device driver interface.

deadlock (n.) A situation that describes two or more processes that are waiting for another process to free a resource which is required to proceed. Also called deadly embrace.

debugger (n.) A program for locating operational errors in another program. The debugger usually enables the developer to proceed stepwise through the malfunctioning portion of the program to examine data and check operational conditions.

decoder (n.) A facility that decompresses data that has been encoded or compressed by an encoder. A decoder can be implemented in hardware, software, or a combination of both.

default master (n.) The default cluster member on which a failover resource is brought online.

definition (1) (n.) In imaging, distinctness or clarity of detail or outline in an image reproduction.

(2) (n.) In programming, a declaration that reserves storage (for data) or provides implementation (for methods).

dejagging (n.) Obsolete term for anti-aliasing.

delegation A principal (generally the context initiator) that, if permitted by the underlying security mechanism, can designate a peer principal (usually the context acceptor) as a proxy. A delegation designates a proxy by *delegating* its credentials to the peer. The delegated credentials can be used by the recipient to make requests on behalf of the original principal. This situation might happen when a principal uses the `rlogin` command from machine to machine to machine.

delimiter (1) (n.) A value that separates and organizes items of data.

(2) (n.) A character that logically separates words or arguments on a command line. Two frequently used delimiters in the UNIX system are the space and the tab.

deprecation (n.) A reference to a class, interface, constructor, method, or field that is no longer recommended, and which might not be included in a future version of a product.

descriptor (n.) A data structure that uniquely identifies a hardware device or software function.

deselect (v.) In a window system, to remove the highlighting or some other visual cue from a previously selected object, such as removing the highlighting from an item in a list. If a widget is deselected, it is turned off.

deskside (n.) A system enclosure that stands next to the user's desk. Contrast with desktop.

desktop (n.) An entire system that fits on the top of the desk. Contrast with deskside. See also workspace.

device (n.) A hardware component, such as a printer or disk drive, acting as a unit to perform a specific function.

device-dependent (adj.) Characteristic of software that has been written for a specific computer device, and runs on that device exclusively. Software that can run only on a specific vendor's computer is called vendor dependent. Contrast with device-independent.

device driver (n.) The software that converts device-independent graphics commands into device-specific (device-dependent) display.

device driver interface (DDI) (n.) An interface that facilitates driver portability across different UNIX system versions on SPARC™ hardware.

device group (n.) In a Sun Cluster configuration, a user-defined group of device resources, such as disks, that can be mastered from different nodes in a cluster HA configuration. This group can include device resources of disks, Solaris Volume Manager disk groups, and VERITAS Volume Manager disk groups.

device ID (n.) In a Sun Cluster configuration, a mechanism of identifying devices that are made available through the Solaris Operating System. Device IDs are described in the `devid_get`(3DEVID) man page.

The Sun Cluster DID driver uses device IDs to determine correlation between the Solaris logical names on different cluster nodes. The DID driver probes each device for its device ID. If that device ID matches another device somewhere else in the cluster, both devices are given the same DID name. If the device ID hasn't been seen in the cluster before, a new DID name is assigned. See also DID driver.

device-independent (adj.) Characteristic of software that has been written expressly for portability across dissimilar computer systems. An industry-standard graphics library, such as Programmer's Hierarchical Interactive Graphics System (PHIGS), is a device-independent interface. Contrast with device-dependent.

device name (n.) The name that the system uses to identify a device. For example, /dev/rst0 (or just rst0) is the device name for 0.25-inch tape.

DGA See direct graphics access.

dialog box (n.) A secondary window that is displayed by an application to gather information from users or to inform them of a condition. A dialog box can contain panes, lists, buttons, and other components. In the Java look and feel, dialog boxes are created by using the `JDialog` component. See also alert box, color chooser, palette window, secondary window, utility window.

diamond key (n.) See meta key.

DID driver (n.) In a Sun Cluster configuration, a driver that is implemented by Sun Cluster software and is used to provide a consistent device namespace across the cluster. See also DID name.

DID name (n.) In a Sun Cluster configuration, a term that is used to identify global devices in a SunPlex™ system. The DID name is a clustering identifier with a one-to-one or a one-to-many relationship with Solaris logical names. The format of the DID name is dXsY, where X is an integer and Y is the slice name.

differential archive (n.) A Solaris Flash archive that contains only the differences between two system images, an unchanged master image and an updated master image. The differential archive contains files to be retained, modified, or deleted from the clone system. A differential update changes only the files specified and is restricted to systems that contain software consistent with the unchanged master image.

digital image (n.) An image that has been converted into an array of pixels. See also digitize.

digitize (1) (v.) To convert an image from hard copy (such as a photo) into digital (binary) data for display on a computer.

(2) (v.) To convert an analog signal (voltage or temperature) into a digital value.

direct graphics access (DGA) (n.) A method of arbitrating access to the display between the XGL library and an X11/NeWS™ system server. This method enables the XGL library to "talk" directly to the frame buffer, which results in maximum performance.

direct memory access (DMA) (n.) The transfer of data directly into memory without supervision of the processor. The data is passed on the bus directly between the memory and another device. Contrast with direct virtual memory access (DVMA).

directory (n.) A file that contains other files and directories.

directory path name (n.) The complete name by which the directory is known. The path name gives the sequence of directories by which the directory is linked to the root directory. Also called the directory name.

directory stack (n.) A stack, implemented in the UNIX C shell, that enables you to save frequently used directories and then jump quickly from one directory to another without typing the entire directory path.

direct virtual memory access (DVMA) (n.) A mechanism to enable a device on the SBus to initiate data transfers between it and other SBus devices, such as system memory. Contrast with direct memory access.

dirty (adj.) See 8-bit clean.

disc (n.) An optical disc, as opposed to a magnetic disk, consistent with the common spelling that is used in the compact disc (CD) market. An example is a compact disc read-only memory (CD-ROM), which is an optical disc. See also disk.

disk (n.) A round platter, or set of platters, of a magnetized medium organized into concentric tracks and sectors for storing data such as files. See also disc.

disk array (n.) One or more physical disk drives that can form a single logical drive. For example, the SPARCstorage™ Array Subsystem for Disk Expansion is a disk array. A disk array can contain several disk drive trays. See also composite drive, redundant array of independent discs (RAID).

disk device group (n.) A disk group that is registered with Sun Cluster software to be available to all cluster members.

disk path In a Sun Cluster configuration, the connection between a cluster node and a physical disk or LUN storage device. The disk path includes the Solaris kernel driver stack, host bus adapter (HBA), and any intervening cables, switches, or network connectivity.

diskfull client (n.) A client on a network that relies on a server for resources, such as files, but has its own local disk storage. Some of a diskfull client's files are local and other files are remote. The remote files can be obtained from any machine that runs as a network file server. Contrast with diskless client, standalone.

diskless client (n.) A client on a network that relies on a server for all of its disk storage. Contrast with diskfull client, standalone.

disk partition (n.) A portion of the disk that is reserved for a specific file system and function.

display (v.) To present a display image on a display surface.

display device (n.) The hardware device that displays windows, text, icons, and graphical images. Examples are a frame buffer and a monitor.

display function (n.) See raster ops (ROP).

distributed (adj.) Characteristic of running in more than one address space.

distributed file system (n.) A file system that exists on more than one computer, enabling each user to access files on other computers.

Distributed Lock Manager (DLM) (n.) The locking software that is used in a shared disk Oracle Parallel Server (OPS) environment. The DLM enables Oracle processes that are running on different nodes to synchronize database access. The DLM is designed for high availability. If a process or node crashes, the remaining nodes do not have to be shut down and restarted. A quick reconfiguration of the DLM is performed to recover from such a failure.

distribution (n.) See software distribution.

DKI See driver-kernel interface.

DMA See direct memory access, direct virtual memory access.

DMP (n.) Dynamic Multipathing.

domain name (n.) The name that is assigned to a group of systems on a local network that share administrative files. A domain name is required for the Network Information Service (NIS) database to work properly.

dot file (n.) See hidden file.

double-click (v.) To click twice on a mouse button, accelerating a specific command's performance.

double-precision (1) (adj.) Characteristic of using two native words of memory to store a numeric datum.

(2) (adj.) In the Java language specification, characteristic of a floating-point number that holds 64 bits of data. See also single-precision.

downstream (n.) In STREAMS, a direction of data that moves from the Stream head toward a driver. Also called output-side, write-side.

DR (n.) dynamic reconfiguration.

drag (v.) To move the mouse while holding down a mouse button. See also drag and drop.

drag and drop (v.) To drag an interface element to a new location in order to move, copy, or link it. See also drag.

dragging (n.) In a graphical user interface, moving all or part of a display group in a display space in such a way that the group continuously follows the pointer as though it were attached.

driver (1) (n.) A software subsystem that controls either a hardware device (device driver) or another software subsystem.

(2) (n.) A STREAMS module that forms the Stream end. A driver can be a device driver or a pseudo-device driver. A driver is a required component in STREAMS (except in a STREAMS-based pipe mechanism), and is physically identical to a module. A driver typically handles data transfer between the kernel and a device and does almost no data processing.

driver kernel interface (DKI) (n.) An interface between the UNIX system kernel and different types of drivers. The DKI consists of a set of driver-defined functions that are called by the kernel. These functions are entry points into a driver.

drop (v.) In a graphical user interface, to release the mouse button after grabbing an object. If the object is dropped in an appropriate area, an action is initiated. See also drag and drop, grab.

drop-down arrow (n.) The triangular indicator that the user clicks to view more options than are visible on screen—such as the list that is attached to a combo box or the options that are provided by some toolbar buttons.

drop-down menu (n.) A menu that is displayed when the user chooses a menu title in the menu bar. In Java look and feel, drop-down menus are created by using the `JMenu` component. See also menu, menu bar.

DTB See data transfer bus.

dual head (n.) A single workstation with two monitors, generally operating so that a single cursor traverses both displays.

dual-partition upgrade In a Sun Cluster configuration, a software upgrade method that uses the Sun Cluster Dual-Partition Software Swap feature to minimize service downtime during a cluster upgrade. In this method, the dual-partition software divides the cluster into two groups of nodes. One group of nodes continues services while the other group of nodes is upgraded. Then services are switched to the upgraded nodes and the remaining nodes are upgraded and rejoined to the cluster.

dump (n.) A duplicate copy of files. See incremental dump.

DVMA See direct virtual memory access.

DVMA cycle An SBus cycle initiated by a direct virtual memory access (DVMA) master. A DVMA cycle consists of a translation cycle and a slave cycle.

DVMA master (n.) An SBus master capable of initiating a bus cycle that uses the SBus controller to perform virtual address translation. In contrast, acentral processing unit (CPU) master has a private means for virtual address translation. A bus cycle initiated by a DVMA master consists of a translation cycle and a slave cycle.

"echo" to "external data representation"

echo (v.) To repeat a stream of characters. For example, the commands the user types are echoed on the screen.

editor (n.) A program that helps you to create and modify textual material which is to be stored in electronic files.

editor pane (n.)A component that supports a variety of plug-in editor kits. In the Java look and feel, editor panes are created by using the `JEditorPane` component. See also plug-in editor kit.

ELF (n.) Executable and Linking Format.

enable (v.) To schedule a queue's service procedure.

encapsulation (n.) The localization of knowledge within a module. Because objects encapsulate data and implementation, the user of an object can view the object as a black box that provides services. Instance variables and methods can be added, deleted, or changed, but if the services that are provided by the object remain the same, code that uses the object can continue to use it without being rewritten. See also instance method, instance variable.

end of file (EOF) (n.) A termination point of a file, which is marked by a particular key character (usually a Control-d). This character signals to the system that it has reached the file's end.

endpoint (1) (n.) In vector graphics, the beginning or end of a line segment.

(2) (n.) A physical port on a cluster transport adapter or cluster transport junction.

entity (1) (n.) In International Organization for Standardization (ISO)/OSI, a layer protocol machine. An entity within a layer accesses the layer entity below and provides services locally to the layer entity above.

(2) (n.) In computer-aided design (CAD), an element such as a line segment.

(3) (n.) In object-oriented programming, a portion of a class of objects.

(4) (n.) In database design, an object about which data can be stored.

environment (1) (n.) In the UNIX system, the conditions under which a user works while using a computer. A user's environment includes those characteristics that personalize the user's login and how the user is allowed to interact in specific ways with UNIX and the computer. For example, the shell environment includes the shell prompt string, specifics for backspace and erase characters, and commands for sending output from the terminal to the computer.

(2) (n.) In personal computing, "environment" includes software, a computer, and peripheral devices.

environment variable (n.) The UNIX C shell environment variables are similar to shell variables, except that environment variables can be passed to every C shell that runs. Many applications use environment variables to set configuration directories, specify base directories for commands or data, and pass other information about the user environment to the program.

error (n.) A deviation of a computed or measured value or condition from the expected result.

error handling (n.) A program feature that analyzes and recovers from error conditions during program execution.

error message (n.) A displayed statement that the system or program has detected an error.

error recovery (n.) The process of correcting or bypassing an error condition to restore a computer system to its former state.

escape (1) (v.) To divest a special character of its special meaning by preceding it with a backslash (\) character. For example, the UNIX shell interprets ? to represent any single character, but a \? (an "escaped" question mark) is interpreted to be just a question-mark character.

(2) (n.) The Esc key on the keyboard.

(3) (n.) The escape character that is generated by pressing the Esc key.

escape character (n.) A control character, which is sometimes used with one or more succeeding characters, that indicates how the code which follows it is interpreted. Also called ESC character.

Escape key (n.) A keyboard key, usually labeled Esc, that, when pressed, cancels a window operation. Alternately, pressing the Escape key in combination with another key performs a specific keyboard function.

escape sequence (n.) The combination of the escape character and other characters or code that follow it to indicate specific actions to be performed by peripheral devices. An example is the clearing of a window.

exception (1.) (n.) In central processing unit (CPU) terminology, a computation error, usually resulting in a trap.

(2.) (n.) An event during program execution that prevents the program from continuing normally; generally, an error. In the Java programming language, exceptions are supported with the try, catch, and throw keywords. See also exception handler.

exception handler (n.) A block of code that reacts to a specific type of exception. If the exception is for an error from which the program can recover, the program can resume executing after the exception handler has executed.

executable file (n.) A file that can be processed or executed by the computer without any further translation. When you type the file name, the commands in the file are executed.

execute (1) (v.) To run a file as a program.

(2) (v.) To act on instructions.

Explicitly Parallel Instruction Computing (EPIC) (n.)

extend (v.) In programming, to add a range of operations. For example, class X "extends" class Y, either by adding fields or methods to class Y, or by overriding methods of class Y. An interface extends another interface by adding methods. Class X is considered a subclass of class Y.

extended transfer (n.) An extended SBus cycle protocol (also called a 64-bit transfer) in which 64 bits of data are transferred per clock cycle during the slave cycle. The upper 32 bits of data are multiplexed onto the Size<2:0>, Read, and PhysAddr<27:0> lines.

external data representation (XDR) (n.) A standard for machine-independent data structures that was developed by Sun.

"failback" to "function key"

failback (n.) The process of returning a resource group or device group to its primary node after the primary node has failed and later is restarted as a cluster member.

failfast (n.) The orderly shutdown and removal from the cluster of a faulty node before its potentially incorrect operation can prove damaging.

failover (n.) The automatic relocation of a resource group or a device group from a current primary node to a new primary node after a failure has occurred.

failover resource (n.) A resource of the type "failover." These are application-instance resources and network resources that can run on only one node at a time. When a failover occurs, these resources participate in the failover. See also single-instance resource, scalable resource.

failover resource group (n.) A container for failover resources.

failure fencing (n.) A method of limiting node access to multihost disks by physically preventing access to the disks.

fallback (n.) A reversion to the environment that ran previously. Use fallback when you are activating an environment and the boot environment that is designated for booting fails or shows some undesirable behavior.

fault monitor (n.) A fault daemon and the programs that are used to probe various parts of data services and take action. See also resource monitor.

FCodes See Forth bytecodes. See also OpenBoot.

FCS (first customer ship) (n.) The day on which a product is released or shipped to the customer.

field (1) (n.) In UNIX a subsection of a line. Programs such as `sort` and `awk` can check individual fields within a line.

(2) (n.) A data member of a class. Unless specified otherwise, a field is not static.

(3) (n.) In computer graphics, the shortest interval of a video signal that contains a set of scan lines that cover the full picture height, along with the associated synchronization elements. In a system with non-interlaced (or progressive) scanning, fields and frames are identical. In a system with 2:1 interlace, two fields exist, odd and even. Each field contains half the picture lines of a frame.

field-replaceable unit (FRU) (n.) An assembly that a manufacturer replaces on failure of an assembly component.

field separator (n.) The character that is used to separate one field from the next. A string of one or more spaces is the usual field separator.

FIFO See first-in, first-out.

FIFO file (first-in-first-out file) (n.) See named pipe.

file (n.) A block of information that is stored on some form of a storage medium, such as a computer, disk, or tape. A file might not be human readable, but a device can still process it.

file name (n.) The name of a file as it is stored in a directory on a disk. See also path name.

file name expansion (n.) The process by which UNIX matches file names that contain metacharacters to actual file names. An example is the match of `?oo?` to `foot` and `loop`.

file permissions (n.) A set of permissions that are assigned to each file and directory that determines which users have access to read, write, and execute its contents.

file system (n.) In the SunOS operating system, a tree-structured network of files and directories that you can access.

first customer ship (FCS) (n.) The day on which a software product is released or shipped to the customer.

first-in, first-out (FIFO) (n.) Usually, a printer queue, which has the convention that the first file in is the first file to be printed.

flag (n.) An argument to a command that indicates a particular option or modification. UNIX flags usually are indicated by a leading hyphen (-).

flow control (n.) A STREAMS mechanism that regulates the rate of message transfer within a Stream and from user space into a Stream.

flush (1) (v.) To dump from memory, as in "to flush a buffer."

(2) (adj.) In authoring systems, characteristic of being aligned, as in "flush left."

focus (n.) The place to which keyboard input is directed.

folder (1) (n.) A directory in a graphical user interface.

(2) (n.) A file for storing mail messages.

follow-on bus cycle (n.) On the SBus, one of up to three bus cycles during a bus sizing operation that follows the original bus cycle.

foreground (1) (n.) On a UNIX system, the process of running under direct control of the terminal; the terminal cannot be used for any other activity until a foreground task finishes or is halted. Contrast with background.

(2) (n.) The color of the characters and graphics that are displayed on a terminal screen.

fork (1) (n.) A system call to create a new process that is called a child process. The original process is called a parent process.

(2) (v.) To guide a user, through navigational links, to web pages other than the current one.

formal parameter list (n.) The parameters that are specified in the definition of a particular method.

format (1) (n.) The structure of data that is to be processed, recorded, or displayed.

(2) (v.) To put data into a structure or to divide a disk into sectors for receiving data.

formatting (1) (n.) The arrangement of text or data into a suitable visual form.

(2) (n.) The preparation of a disk for use.

Forth (n.) Originally, a "fourth-generation programming language" that was created by Charles Moore. Forth is considered an extensible and customizable language.

Forth bytecodes (FCodes) (n.) A small program, usually a bootstrap loader, that is written in the Forth language and stored in a programmable read-only memory (PROM) or erasable programmable read-only memory (EPROM). See also boot, OpenBoot™.

fragmentation (n.) The result of the inefficient allocation and release of memory caused by multiple file deletions and write operations. Some part of unallocated memory becomes too small to meet a request and remains unused.

frame (1) (n.) Obsolete term for window.

(2) (n.) In video, the time interval of a video signal that contains exactly one complete picture, with all its associated sync elements.

(3) (n.) In motion video, a single image (1/25th or 1/30th of a second).

(4) (n.) A unit of transmission (that is, a transmitted data packet). When the Internet protocol (IP) passes the data-link layer a datagram and the data-link layer adds a header and trailer to the data package, the whole package is called a frame.

frame buffer (n.) That part of screen memory holding a single screen image.

function key (n.) One of the 10 or more keyboard keys which are labeled F1, F2, and F3, for example, that are mapped to particular tasks.

"garbage collection" to "GSS-API"

garbage collection (n.) The automatic detection and freeing of memory that is no longer in use. The Java runtime system performs garbage collection so that programmers never explicitly free objects.

gateway (n.) Now called an IP router. "Gateway" and "application gateway" indicate systems that translate from one native format to another; for example, X.400 to or from RFC 822 email gateways.

generic resource (n.) An application daemon and its child processes that are put under control of the Resource Group Manager as part of a generic resource type.

generic resource type (n.) A template for a data service. A generic resource type can be used to make a simple application into a failover data service (stop on one node, start on another). This type does not require programming by the Sun Cluster API.

genlock (n.) The capability of a video device to accept a synchronous signal so that the device input or output pixels are precisely in phase with the input sync.

geographical addressing (n.) A mechanism by which a part of the physical address is presented to each SBus slave as an individual select signal so that only one slave is selected at any given time.

geometric primitive (n.) See primitive.

GID (group identification number) (n.) The number used by the system to control access to accounts owned by other users.

GKS graphical kernel system.

global (adj.) Capable of having extended or general scope. For example, a global substitution of one word for another in a file affects all occurrences of the word. Contrast with local.

global device (n.) A device that is accessible from all cluster members, such as disk, CD-ROM, and tape.

global-device namespace (n.) A namespace that contains the logical, cluster-wide names for global devices. Local devices in the Solaris Operating System are defined in the `/dev/dsk`, `/dev/rdsk`, and `/dev/rmt` directories. The global-device namespace defines global devices in the `/dev/global/dsk`, `/dev/global/rdsk`, and `/dev/global/rmt` directories.

global interface (n.) A global network interface that physically hosts shared addresses. See also shared address.

global interface node (n.) A node that hosts a global interface.

global resource (n.) A highly available resource that is provided at the kernel level of the Sun Cluster software. Global resources can include disks (HA device groups), the cluster file system, and global networking.

global variable (n.) A variable used throughout a program. It has a value that can be set by any program statement.

glyph (n.) A graphical element on the workspace. A glyph can be a button, folder, or other graphical element representing a document or file.

grab (1) (v.) To move the mouse pointer over an object, and then to press and hold down the mouse button in preparation for moving the object. See also drop.

(2) (n.) In the X protocol, the act of the server obtaining exclusive use for a client of keyboard keys, the keyboard, pointer buttons, and the pointer. A grab is usually for a short time period. See active grab, passive grab.

grab handle (n.) One of the small squares displayed at the corners and midpoints of a selected graphic object.

graphics accelerator (n.) A hardware device dedicated to increasing the speed and performance of graphics. Graphics accelerators calculate pixel values, and write them into the frame buffer, freeing the CPU for other operations.

graphics primitive (n.) See primitive.

gray-scale image (n.) A type of file that contains more than one bit of information per pixel to convey shades of gray. For example, an image with 256 shades of gray requires 8 bits per pixel.

group (n.) A collection of users who are referred to by a common name. Determines user access to files. The two types of groups are default user group and standard user group.

group attribute (n.) An attribute attached to a file or directory that determines user access. See also permissions.

GSS-API The Generic Security Service Application Programming Interface. A network layer that provides support for various modular security services. GSS-API provides for security authentication, integrity, and confidentiality services. GSS-API also allows maximum portability of applications from a security standpoint. See also authentication, integrity.

"HA" to "hung"

HA (n.) high availability.

HA data service See data service.

halfword acknowledgment (n.) On the SBus, an acknowledgment to indicate that the slave has read or written a halfword of data from the most-significant halfword of the data lines. If the transfer size is greater than a halfword, the master initiating the transfer can perform bus sizing.

halt (v.) To intentionally stop the system from running; for example, in preparation for turning off the power.

handle (n.) See grab handle.

handler (n.) A routine that directs a simple condition, such as moving data.

hang (v.) To cease operation because either an unexpected condition is not satisfied or an infinite loop is occurring. See also crash.

hard limit (n.) For disk quotas, a maximum limit on file system resources (blocks) and inodes) that users cannot exceed.

hard link (n.) A directory entry that references a file on disk. More than one such directory entry can reference the same physical file.

hashing (n.) In managing databases, the process of changing a key ID value to an index value, with the intent of reducing search time.

HBA See host bus adapter.

header file The file at the top of a program that defines data types and sets variables used in the program.

heartbeat (n.) In a Sun Cluster configuration, a periodic message sent across all available cluster interconnect transport paths. Lack of a heartbeat after a specified interval and number of retries might trigger an internal failover of transport communication to another path. Failure of all paths to a cluster member results in the Cluster Membership Monitor reevaluating the cluster quorum.

hidden file (n.) A special type of file, such as `.login`, that does not display in normal file listings. Hiding protects the file from deletion, modification, or unauthorized access. Special files usually pertain to system configuration.

hierarchy (n.) A classification of relationships in which each item except the top one (called the root) is a specialized form of the item above it. Each item can have one or more items below it in the hierarchy. In the Java class hierarchy, the root is the Object class.

home directory (n.) The directory that the system administrator assigns to you; usually the same as the login directory. Additional directories that you create stem from the home directory.

host A machine that is accessible over a network.

host bus adapter (HBA) (n.) A controller board that connects the I/O expansion bus to the Small Computer System Interface (SCSI) subsystem.

host computer (1) (n.) A computer system that is accessed by computer(s) and/or workstations at remote locations. Usually the host contains the data, but in networks, the remote locations can be "the host" and provide information to the network.

(2) (n.) In a multiple computer setting, the computer that emulates another computer.

host-resident fonts (n.) The fonts stored on one system that are shared by a group of users of a particular printer. Host-resident fonts are usually different from printer-resident fonts, and are used less frequently.

hot-plugging (n.) The process of adding or removing hardware devices while the system is running.

hot spot (n.) In the X protocol, the point in a cursor that corresponds to the coordinates reported for the pointer.

hot-swappable (adj.) Capable of enabling insertion or removal of a device while the computer is powered on and in operation.

HPC (n.) high-performance computing.

HSM (n.) hierarchical storage management.

hung (adj.) Characteristic of a system that is frozen and unresponsive to commands.

"IA" to "ioctl"

IA (Intel architecture) (n.) Any personal computer based on the Intel 80x86 architecture.

icon (n.) An on-screen graphic representing an interface element that the user can select or manipulate—for example, an application, a base window, document, or disk.

iconic interface (n.) An icon-based interface, wherein you click an icon to initiate a task. Contrast with selecting activities from a menu-driven interface or running a command on the command line.

identifier (1) (n.) The text string that is used as a label for indicating program variables or procedures.

(2) (n.) The name that identifies a device, such as a disk drive.

(3) (n.) The name of an item in a program written in the Java programming language.

ID PROM (n.) In Sun workstations, a programmable read-only memory (PROM) that contains machine-specification information, such as serial number, Ethernet address, and system configuration information.

ILP (n.) instruction-level parallelism.

image (n.) A picture or graphic representation of an object.

incremental dump (n.) A duplicate copy of the files that have changed since a certain date. An incremental dump is used for archival purposes..

independent compilation (n.) The compilation of a multi-file program in which the compiler does not check for the consistent use of global names and types across different units.

index (1) (n.) A symbol, number, or word that checks for an item in an array or database.

(2) (n.) In computer graphics, a single value that is interpreted as an absolute value rather than as a normalized value in a specified range. A color index is the name of a color, which is dereferenced by the frame buffer hardware using a color map. See also normalize.

inheritance (n.) The process of a widget being subclassed by another widget. The subclassed widget inherits operating characteristics and the resource set of its superclass.

(2) (n.) The concept of classes automatically containing the variables and methods defined in their supertypes. See also subclass, superclass.

initial installation (n.) An installation that overwrites the currently running software or initializes a blank disk. An initial installation of the Solaris Operating System overwrites the system's disk or disks with the new version of the Solaris operating system. If your system is not running the Solaris operating Ssystem, you must perform an initial installation.

initialization file (n.) In the UNIX operating system, one of several "dot" files (files prefixed with ".") in a user's home directory that set the path, environment variables, windowing environment, and other characteristics that make UNIX function.

init state (n.) In UNIX System V, Version 4-based environments, one of seven initialization states or run levels that a system can run. A system can run only in one init state at a time.

inline template (n.) In the illuminating pass of the SPARCompiler™ family, a fragment of assembly language code that is substituted for the function call it defines. Used, for example, by the math library in inline template files to access hardware implementations of trigonometric functions and other elementary functions from C programs.

inode (n.) In environments based on UNIX, an entry in a designated area of a disk that describes where a file is located on that disk, the file's size, when it was last used, and other identification information.

input method (IM) (n.) The algorithm by which users enter the text of a language. Input methods differ for each language, depending on that language's structure and conventions.

input side (n.) A direction of data flow moving from a driver toward the Stream head. Also called read-side and upstream.

insertion point (n.) The place, usually indicated by a blinking bar, where typed text or a dragged or pasted selection will be displayed. See also pointer.

insert mode (n.) A mode in which text is added to a document or command line at the current cursor position, pushing all characters to the right, rather than overwriting them. For example, the `i` command switches the `vi` program to insert mode.

instance (n.) An object of a particular class. In programs written in the Java programming language, an instance of a class is created using the new operator followed by the class name.

instance method (n.) Any method that is invoked with respect to an instance of a class. Also called method..

instance variable (n.) Any item of data that is associated with a particular object. Each instance of a class has its own copy of the instance variables defined in the class. Also called field. See also class variable.

instantiation (1) (n.) In the XGL library, the allocation of resources that occurs when a variable of an object type is declared.

(2) (n.) The process of creating a particular widget from a particular widget class. See also widget instance.

instruction stream (n.) A set of instructions that must be executed serially, although these instructions can be executed on different processors.

integrity A security service that, in addition to user authentication, provides proof of the validity of transmitted data through cryptographic tagging. See also authentication, Message Integrity Code.

interface (1) (n.) A program that functions as the point of communication between a user and a computer.

(2) (n.) The part of a program that defines constants, variables, and data structures, rather than procedures.

(3) (n.) In the Java programming environment, a group of methods that can be implemented by several classes regardless of where the classes are in the class hierarchy.

(4) (n.) The point at which independent systems or diverse groups interact.

(5) (n.) The equipment that accepts electrical signals from one part of a computer system and renders them into a form that can be used by another part.

(6) (n.) Hardware or software that links the computer to a device.

internal frame (n.) A container used in multiple document interface (MDI) applications to create windows that the user cannot drag outside of the desktop pane. In an MDI application that uses the Java look and feel, internal frames have a window border, title bar, and standard window controls with the Java look and feel. Internal frames are created using the `JInternalFrame` component.

internationalization (n.) The development of source code or a source document so that it is locale neutral and customizable for any language environment. Also called I18N. See also 8-bit clean, localization.

interpolation (1) (n.) In computer graphics, a method of determining intermediate values between those provided, such as shades of pink along a line (or across a polygon) between vertex colors of white and red.

(2) (n.) In mathematics, an approximation method for finding the intermediate value between two values.

interpreter (n.) A module that alternately decodes and executes every statement in some body of code. The Java interpreter decodes and executes bytecode for the Java virtual machine (JVM). See also compiler, runtime system.

interrupt (1) (n.) The signal that breaks off a command or process.

(2) (v.) To break off a command or other process, thus terminating it.

`ioctl` (I/O control) (n.) A UNIX system call that is used for device control.

"JAE" to "JVM"

JAE See Java Application Environment.

JAR file (`.jar`) (Java ARchive file) (n.) A file format used for aggregating many files into one.

JAR file format (Java ARchive file format) (n.) A platform-independent file format that aggregates many files into one file. Multiple applets written in the Java programming language, and their requisite components (`.class` files, images, sounds, and other resource files) can be bundled in a JAR file and subsequently downloaded to a browser in a single HTTP transaction. JAR also supports file compression and digital signatures.

Java 2D API (n.) A programming interface (part of the Java Foundation Classes in the Java 2 SDK) that provides an advanced two-dimensional imaging model for complex shapes, text, and images. Features include enhanced font and color support and a single, comprehensive rendering model.

Java 2 SDK (n.) The software development kit that developers need to build applications for the Java 2 Platform, Standard Edition, v. 1.2. See also Java Development Kit (JDK™).

Java Accessibility API (n.) A programming interface (part of the Java Foundation Classes) that enables assistive technologies to interact and communicate with JFC components. A Java application that fully

supports the Java Accessibility API is compatible with such technologies as screen readers and screen magnifiers. See also accessibility, Java Accessibility Utilities.

Java Accessibility Utilities (n.) A set of utilities (provided in the Java 2 SDK) for use by the vendors that create assistive technologies or automated tool tests. See also accessibility, Java Accessibility API, Java Foundation Classes (JFC).

Java Application Environment (JAE) (n.) The source code release of the Java Development Kit (JDK) software.

JavaBeans™ model (n.) A portable, platform-independent reusable component model.

Java Blend™ tool (n.) A product that enables developers to simplify database application development by mapping database records to objects in the Java programming language (Java objects) and Java objects to databases.

Java Card™ API (n.) An ISO 7816-4 compliant application environment focused on smart cards.

JavaCheck™ tool (n.) A tool for checking compliance of applications and applets to a specification.

JavaChip™ processor (n.) The Sun processor that executes bytecode for the Java virtual machine (JVM) natively. With a JavaChip processor, bytecode bypasses the virtual machine or just-in-time compiler stage to go directly to the processor.

Java Database Connectivity (JDBC) (n.) An industry standard for database-independent connectivity between the Java platform and a wide range of databases. The JDBC provides a call-level API for SQL-based database access.

Java Development Kit (JDK) (n.) A software development environment for writing applets and applications in the Java programming language.

Java Electronic Commerce Framework (n.) A structured architecture for the development of electronic commerce applications in the Java programming language.

Java Enterprise API (n.) An API that enables the creation of large-scale commercial and database applications that can share multimedia data with other applications within an organization or across the Internet. Four APIs have been designed within the Java Enterprise API family.

Java Foundation Classes (JFC) (n.) An extension that adds graphical user interface class libraries to the Abstract Window Toolkit (AWT).

Java IDL (Java Interface Definition Language) (n.) APIs written in the Java programming language that provide a standards-based compatibility and connectivity with Common Object Request Broker Architecture (CORBA).

Java look and feel (n.) The default appearance and behavior for JFC applications, designed for cross-platform use. The Java look and feel works in the same way on any platform that supports the Java Foundation Classes.

Java Media APIs (n.) A set of APIs that support the integration of audio and video clips, 2D fonts, graphics, and images as well as 3D models and telephony.

Java Media Framework (n.) The core framework supports clocks for synchronizing between different media, such as audio and video output. The standard extension framework enables you to do full audio and video streaming.

Java Naming and Directory Interface (JNDI™) (n.) A set of APIs that assist with the interfacing to multiple naming and directory services.

JavaOS™ system (n.) A Java technology-based operating system that is optimized to run on a variety of computing and consumer platforms. The JavaOS system provides a runtime specifically tuned to run applications written in the Java programming language directly on hardware platforms without requiring a host operating system.

JavaPlan™ tool (n.) An object-oriented design and diagramming tool written in the Java programming language.

Java platform (n.) The Java virtual machine (JVM) and the Java core classes. The Java platform provides a uniform programming interface to a program written entirely in the Java programming language regardless of the underlying operating system.

Java programming language (n.) An object-oriented programming language developed by Sun Microsystems. The Write Once, Run Anywhere programming language.

Java runtime environment (JRE) (n.) A subset of the Java Development Kit (JDK) for users and developers who want to redistribute the runtime environment. The Java runtime environment consists of the Java virtual machine (JVM) , the Java core classes, and supporting files.

Java RMI (Java Remote Method Invocation) (n.) A distributed object model for Java program to Java program, in which the methods of remote objects written in the Java programming language can be invoked from other Java virtual machines, possibly on different hosts.

JavaSafe™ tool (n.) A tool for tracking and managing source file changes, written in the Java programming language.

JavaScript™ language (n.) A Web scripting language that is used in both browsers and Web servers. Like all scripting languages, it is used primarily to tie together other components or to accept user input.

JavaSpaces™ technology (n.) A technology that provides distributed persistence and data exchange mechanisms for code in the Java programming language.

Java Studio™ software (n.) The first program that enables you to create Java technology-based applications and applets without having to know the Java programming language.

Java virtual machine (JVM™) (n.) The part of the Java runtime environment (JRE) responsible for interpreting bytecodes.

Java wallet interface (n.) A user interface, built on the Java Electronic Commerce Framework, that enables online purchases, value transfers, and administrative functions.

Java Web Server™ (n.) The easy-to-use, extensible, easy-to-administer, secure, platform-independent solution to speed and simplify the deployment and management of your Internet and intranet web sites. It provides immediate productivity for full-featured, Java technology-based server applications.

Java WorkShop™ software (n.) A complete set of tools integrated into a single environment for managing programming with Java technology. The Java Workshop software uses a modular structure that enables you to plug new tools into the overall structure.

JDBC™ See Java Database Connectivity.

JDK (n.) See Java Development Kit (JDK).

JFC (Java Foundation Classes) (n.) A product that includes the Swing classes, pluggable look and feel designs, and the Java Accessibility API (all implemented without native code and compatible with JDK 1.1). For the Java 2 platform, the JFC also include the Java 2D API, drag and drop, and other enhancements. See also Abstract Window Tookit (AWT).

JFC application (n.) An application built with the Java Foundation Classes (JFC).

JIT compiler See just-in-time compiler.

JMAPI (Java Management API) (n.) A collection of Java programming language classes and interfaces that enable developers to build system, network, and service management applications.

JMS (n.) Java Messaging Services (Java API]).

JNDI (Java Naming and Directory Interface™) (n.) A set of APIs that assist with the interfacing to multiple naming and directory services.

job (n.) A user-defined task to be completed by a computer system.

job control program (n.) The specific instructions for the operating system, stating conditions necessary to run a job; this includes input and output requirements, among other details.

job number (n.) A number that the system assigns to each process running on that machine.

journal (n.) A chronological record of operations performed in a computer system.

JPEG (n.) A graphics format developed by the Joint Photographic Experts Group. The JPEG format is frequently used for photographs and other complex images that benefit from a larger color palette than a GIF image can provide. JPEG compression is "lossy"; decompressed images are not identical to uncompressed images.

JRE (Java runtime environment) (n.) A subset of the Java Development Kit (JDK) for users and developers who want to redistribute the runtime environment. The Java runtime environment consists of the Java virtual machine (JVM), the Java core classes, and supporting files.

jukebox (n.) A storage device for optical disk data. Typically contains one to four disks and loads them as needed.

jumpstart (n.) A type of installation that requires little user interaction.

jump table (n.) A data structure containing addresses of other routines in memory. An algorithm determines where to extract the data, then program control is transferred to that address.

just-in-time compiler (JIT compiler) (n.) A compiler that converts all the bytecode into native machine code just as a Java program is run. This conversion results in runtime speed improvements over code that is interpreted by a Java virtual machine (JVM).

JVM (Java virtual machine) (n.) The part of the Java runtime environment (JRE) responsible for interpreting bytecodes.

"KDC" to "kill"

KDC Key Distribution Center.

kernel (n.) The core of the operating system software. The kernel manages the hardware (for example, processor and memory resources) and supplies fundamental services such as interrupt handling, process scheduling, and memory management.

kernel architecture (n.) The type of kernel on a system, such as sun4c for the SPARCstation system.

key (1) (n.) A button on a keyboard that represents a character.

(2) (n.) A character or characters that identify a record in a data file. A key field, a field that is located in the same place in every record of a file or data set, has content that is the key for the record.

(3) (n.) The code for encrypting or decrypting data.

key binding (n.) The association of a keystroke with a particular behavior.

keyboard accelerator (n.) A key or sequence of keys on the keyboard, or multiple clicks of mouse buttons, through which users can quickly perform specific menu or application functions without using a menu.

keyboard equivalent (n.) A specific default key sequence that provides functionality without requiring the display of a menu.

keyboard focus (n.) The active window or component where the user's next keystrokes will take effect. Also called input area.

keyboard operations (n.) A collective term for keyboard shortcuts, mnemonics, and other forms of navigation and activation that utilize the keyboard instead of the mouse. See also keyboard shortcut, mnemonic.

keyboard shortcut (n.) A keystroke combination (usually a modifier key and a character key, like Control-C) that activates a menu item from the keyboard even if the relevant menu is not currently displayed. See also keyboard operations, mnemonic.

key-encrypting key (n.) A key that is used to encipher and decipher other keys, as part of a key management and distribution system.

kill (v.) To terminate a process before it reaches its natural conclusion.

"label" to "LWP"

label (1) (n.) Information that is written by the format program starting at cylinder 0 of a disk. The disk label describes the size and boundaries of the disk's partitions and its disk type.

(2) (n.) The name of a storage volume for which a mass storage device checks.

(3) (n.) The static text that is displayed in the interface. For example, a label might identify a group of checkboxes. (The text that accompanies each checkbox within the group, however, is specified in the individual checkbox component and is therefore not considered a label.) In the Java look and feel, labels are created using the `JLabel` component.

landscape (adj.) Characteristic of the orientation of a page or screen image that is wider than it is tall. Contrast with portrait. See also aspect ratio.

latency (n.) The time lapse between an SBus master's request of the bus and the completed transfer.

layer (1) (n.) In a graphical user interface, the points where windows and icons overlap one another.

(2) (n.) One of a set of services, functions, and protocols that spans all open systems.

lexical analysis (n.) The process by which a stream of characters (often from a source program) is rearranged into elementary words and symbols, called tokens. The tokens can include the reserved words of a programming language, its identifiers and constants, and special symbols such as =, :=, and ;.

library routines (n.) A series of SunOS functions that can be called by user programs written in C and other compatible programming languages.

lightweight process (n.) (LWP) A class of processes that share resources with each other and therefore use fewer resources than ordinary processes.

line buffering (n.) The buffering of output line-by-line.

line discipline (n.) A STREAMS module that performs `termio`(7) canonical and non-canonical processing. It shares some `termio`(7) processing with a driver in a STREAMS terminal subsystem.

line editor (n.) An editor that works on a line as the basic unit. Generally, you identify the line to change and then indicate the change desired. Contrast with visual editor.

line pattern object (n.) In the XGL library, an object that defines line style patterns; used when rendering vectors, curves, and edges.

link (1) (n.) An entry in a directory file that links a user-assigned name for a file to the system's identification number for that file.

(2) (n.) A file name the user gives to a file. See also hard link, symbolic link.

(3) (n.) In Point-to-Point Protocol (PPP), the communications connection that is negotiated and established between two peers. Solaris PPP 4.0 supports two types of links, dial up and leased line.

(4) (v.) To join data or compiled modules to form an executable program.

link editing (n.) The process in which a symbol referenced in one module of a program is connected with its definition in another. In the C compiler, programs are linked statically, when an executable is created, or dynamically, when it is run.

linker (n.) A module that builds an executable, complete program from component machine code modules. The Java linker creates a runnable program from compiled classes. See also interpreter, runtime system.

list (n.) A set of choices from which the user can select one or more items. Items in a list can be text, graphics, or both. In the Java look and feel, lists are created using the `JList` component. Also called selection list. See also combo box.

literal (1) (n.) A word or symbol in a program expressed as itself rather than as a reference to data.

(2) (n.) The basic representation of any integer, floating point, or character value. For example, 3.0 is a single-precision, floating-point literal, and "a" is a character literal.

loadable kernel module (n.) The software used to enhance the system kernel.

load-balancing policy (n.) Applies only to scalable services. The preferred way in which an application request load is distributed across nodes.

loading (n.) The process of putting the machine-language instructions of a program into memory.

local (adj.) Characteristic of having limited scope. Contrast with global.

local disk (n.) A disk that is physically private to a particular cluster node.

local file (n.) A file that contains information specific to the machine where it resides. When you use network information service (NIS), the local file is checked first before a corresponding global file is checked.

local host (n.) The central processing unit (CPU) or computer on which a software application is running; the workstation. See also mail host, relay host.

locale (n.) A geographic or political region or community that shares the same language, customs, or cultural conventions (English for the U.S. is en_US, and English for the U.K. is en_UK).

localization (n.) The development process that customizes software and documentation for use in a specific country or language environment. See also internationalization.

local variable (n.) A data item known within a block, but inaccessible to code outside the block. For example, any variable defined within a method is a local variable and cannot be used outside the method.

locked file (1) (n.) A file that is in use.

(2) (n.) A file that cannot be changed because of its usage.

locking (n.) In a relational database, the guarantee of read consistency by giving access to data only one process at a time; other processes must wait for access to the database.

LOFS See loopback file system.

logical disk (n.) A section of a formatted disk allocated by the software. Also called a partition.

logical-hostname resource (n.) A resource that contains a collection of logical hostnames that represent network addresses. Logical-hostname resources can only be mastered by one node at a time.

logical network interface (n.) In the Internet architecture, a host can have one or more IP addresses. Sun Cluster software configures additional logical network interfaces to establish a mapping between several logical network interfaces and a single physical network interface. Each logical network interface has a single IP address. This mapping enables a single physical network interface to respond to multiple IP addresses. If a failover or switchover occurs, this mapping enables the IP address to move from one cluster member to the other without requiring additional hardware interfaces.

login (n.) The process of gaining access to a system.

log in (v.) To supply a user name and password to gain access to a system or desktop session.

login directory (n.) The directory that you work in after logging in. Usually, the home directory.

login name (n.) The name the computer system checks against to identify the user.

login prompt (n.) The string of characters that the system displays to let you know that it is ready to accept your user name.

login shell (n.) The name of the default shell that you use when you log in.

logout (n.) The termination of a desktop session.

log out (v.) To terminate or end access to a system or desktop session.

look and feel (n.) The appearance and behavior of a complete set of graphical user interface components. See also Java look and feel.

look-up table (n.) See color map.

loopback file system (LOFS) (n.) A file system type that lets the user create a new virtual file system. The user can access files by using an alternative path name. An example is the creation of a loopback mount of `/` onto `/tmp/newroot`. The entire file system hierarchy looks like it is duplicated under `/tmp/newroot`, including any file systems mounted from NFS servers. All files are accessible either with a path name that starts from `/`, or with a path name that starts from `/tmp/newroot`.

lossless compression (n.) The compression of data that guarantees the original data can be restored exactly. This type of compression typically leads to compression ratios of about three to one. Some compression techniques, such as JPEG, combine lossy compression and lossless compression algorithms.

lossy compression (n.) A type of compression that results in the loss of some of the original data. Lossy compression trades the potential for the loss of some image quality for the opportunity for greater compression. Whereas lossless compression results in a compression ratio of about 2:1, lossy compression of video data can lead to ratios of between 10:1 and 50:1 without visibly degrading image quality. JPEG and MPEG are examples of lossy compression techniques.

lower Stream (n.) A Stream connected below a multiplexer pseudo-device driver by means of an I_LINK or I_PLINK `ioctl`. The far end of a lower Stream terminates at a device driver or another multiplexer driver.

lpvi (1) (n.) The video port on the SPARCprinter SBus printer card.

(2) (n.) The device driver that controls the video port on the SPARCprinter SBus printer card.

LUN (n.) (logical unit number) See major/minor device numbers.

LWP See lightweight process.

"machine address" to "MXCC"

machine address (n.) Obsolete term for absolute address.

machine-collating sequence (n.) An extended alphabetical sequence that encompasses uppercase letters, lowercase letters, numerals, punctuation marks, and various other characters recognized by the system.

machine language (n.) The basic set of instructions for a given computer. A binary code represents these instructions internally.

macro (1) (n.) A user-defined keyboard shortcut that types text or plays back a sequence of commands.

(2) (n.) In a programming language, a compound instruction composed of simpler instructions.

macroblock (n.) In MPEG terminology, a 16-by-16 block of samples from a video frame. This is the unit of data associated with motion information.

macro processor (n.) A program that runs instructions without an assembler.

magic number (1) (n.) A code constant inserted (hard-coded) into source code.

(2) (n.) A number in an algorithm that "invisibly" encodes critical information.

(3) (n.) The special data at the start of a data file that indicates its type.

mailbox (n.) A disk directory designated for receiving email.

mail client (n.) A system that does not provide mail spooling for its users. Mail is spooled on a mail server.

mail gateway (n.) A machine that connects two or more email systems (especially dissimilar email systems on two different networks) and transfers messages between them. Sometimes the mapping and translation can be complex, and generally require a store-and-forward scheme whereby the message is received from one system completely before it is transmitted to the next system and after suitable translations.

mail host (n.) The main email system on a network that receives and distributes email outside of the network or the domain. A mail host can also be a mail server. See also local host, relay host.

mail server (n.) A system that stores mailboxes in a mail directory. A mail server can also serve as a mail host. See also mail client.

mail services (n.) The services provided by a set of programs and daemons that transmit email messages between systems and distribute them to individual mail boxes.

mailer (n.) A protocol that specifies the policy and mechanics used by the Solaris `sendmail` program when it delivers the email.

mailing list (1) (n.) An email address that is an alias for many other email addresses.

(2) (n.) The people who receive your email when you send it to such an address.

major/minor device numbers (n.) A numbering sequence for devices connected to the computer. Also called logical unit number (LUN).

makefile (n.) A file used by the `make` command that describes files which `make` must process and programs that `make` must run.

manager widgets (n.) A class of widgets that contain and manage other widgets.

manifest section (n.) A section of a Solaris Flash archive that is used to validate a clone system. The manifest section lists the files on a system to be retained, added to, or deleted from the clone system. This section is informational only. The sections lists the files in an internal format and cannot be used for scripting.

man pages (n.) UNIX online documentation.

map (1) (n.) A file used by NIS that holds information of a particular type; for example, the password entries of all users on a network or the names of all host machines on a network.

(2) (v.) To assign a new interpretation of a terminal key. For example, in vi, you can map, the @ key to represent the sequence a-Esc-j.

marker object (n.) In the XGL library, an object that defines markers.

marker primitive (n.) In the XGL library, an image that is drawn at a particular point in space.

master driver (n.) A STREAMS-based device supported by the pseudo-terminal subsystem. It is the controlling part of the pseudo-terminal subsystem (also called ptm).

master server (n.) The server that maintains the master copy of the network information service database. It has a disk and a complete copy of the operating system.

maximize (v) To enlarge a window to fill a workspace. Typically, a maximize push button is located in the upper-right corner of a window frame.

MD5 (n.) Message Digest 5.

member (n.) A field or method of a class. Unless specified otherwise, a member is not static.

memory management (n.) The system functions including the hardware's page mapping and protection.

memory management unit (MMU) (n.) In hardware, memory address mapping. Usually, the virtual addresses are mapped to physical addresses, but each system is different. See also physical address space, virtual address.

Memory Queue Handler (MQH) (n.) On Sun server systems, the device on the system board that provides the interface between the system board SIMMs and the backplane XDBus. One MQH is on a system board.

menu (n.) A list of choices (menu items) logically grouped and displayed by an application so that the user need not memorize all available commands or options. Menus in the Java look and feel are

"sticky"—that is, they remain posted on screen after the user clicks the menu title. In the Java look and feel, menus are created using the `JMenu` component. See also contextual menu, drop-down menu, menu bar, menu item, submenu.

menu bar (n.) The horizontal strip at the top of a window that contains the titles of the application's drop-down menus. In the Java look and feel, menu bars are created using the `JMenuBar` component. See also drop-down menu.

menu item (n.) A choice in a menu. Menu items (text or graphics) are typically commands or other options that the user can select. In the Java look and feel, menu items are created using the `JMenuItem` component. See also checkbox menu item, radio button menu item.

message (1) (n.) The information which is generated by an application that indicates a process's status.

(2) (n.) One or more linked message blocks. A message is referenced by its first message block and its type is defined by the message type of that block.

(3) Data in the form of a `gss_buffer_t` object that is sent from one GSS-API-based application to its peer. An example of a message is "`ls`" sent to a remote `ftp` server. A message can contain more than just the user-provided data. For example, `gss_wrap()` takes an unwrapped message and produces a wrapped one to be sent. The wrapped message includes both the original message and an accompanying MIC. GSS-API-generated information that does not include a message is a token. See token for more information. See also wrapper.

message block (n.) In STREAMS programming, a triplet consisting of a data buffer and associated control structures, an `msgb` structure, and a `datab` structure. In a Stream, the message block carries data or information, as identified by its message type.

message catalog (n.) A file of message strings, separated from an application, with an indexed internal structure. The message catalog contains program messages, command prompts, and responses to prompts for a specific application.

Message Integrity Code (MIC) (n.) A cryptographic "tag" that is attached to transmitted data to ensure the data's validity. The recipient of the data generates its own MIC and compares it to the one that was sent. If both MICs are equal, the message is valid. MICs that are generated by `gss_get_mic()`, are visible to the application. Other MICs that are generated by `gss_wrap()` or `gss_init_sec_context()`, for example, are not visible to the application.

message–level token See token.

metacharacter (n.) A character having a special meaning to the UNIX system. For example, the UNIX shell interprets the ? character to represent any single character. See also wildcard.

meta key (n.) On the Sun keyboard, the key labeled with the diamond symbol. On IA systems, the right Control key.

method (n.) A function defined in a class. Unless specified otherwise, a method is not static. See also instance method.

MIB (n.) management information base.

MIC See Message Integrity Code.

minimize (v.) To replace a window with an icon. The push button that minimizes a window is located near the upper-right corner of the window frame.

MMCodec (n.) An audio coder/decoder chip that handles the digital-to-analog and analog-to-digital conversions for the multimedia interface on Sun workstations.

MMU (memory management unit) (n.) In hardware, memory address mapping. Usually, the virtual addresses are mapped to physical addresses, but each system is different. See also physical address space, virtual address.

mnemonic (n.) In theJava look and feel and the IA GUIs, an underlined letter, typically in a menu title, menu item, or the text of a button or component. A mnemonic shows the user which key to press (in conjunction with the Alt key) to activate a command or navigate to a component. See also keyboard accelerator, keyboard operations, keyboard shortcut.

mnemonic key (n.) A key that represents the first letter of a command and is thus memorable. A mnemonic key is generally used in conjunction with a modifier, such as Control or Shift, as a keyboard accelerator. For example, Control-P could mean print.

modifier key (n.) A key (for example, the Control or the Shift key) that does not produce an alphanumeric character but rather modifies the action of other keys.

module (n.) A defined set of kernel-level routines and data structures that process data, status, and control information on a Stream. It is an optional element, but many modules can be in one Stream. A module consists of a pair of queues (read queue and write queue), and it communicates to other components in a Stream by passing messages.

Module XBus Cache Controller (MXCC) (n.) On Sun server systems, a device which is located on the processor module that controls the flow of data between the XBus and the module cache RAM and processor chip.

molecule (n.) A group of XIL library atoms (functions) that are grouped to enhance performance by eliminating redundant operations.

monitor (1) (n.) The video display that is part of a workstation. It is attached to the workstation by a cable.

(2) (n.) The program in the workstation programmable read-only memory (PROM). The PROM program provides a limited set of commands that can be used before the kernel is available.

motherboard (1) (n.) The main circuit board of a computer. The motherboard contains slots for plugging in other boards for functions such as memory, controllers, video, and so on. A motherboard usually contains the central processing unit (CPU), memory, BIOS, ports, controllers, and so on.

(2) (n.) In SBus terminology, a circuit board containing the central processor, SBus controller, and any SBus expansion connectors.

mount (n.) The process of accessing a directory from a disk attached to a machine making the mount request or remote disk on a network. See also unmount.

mounting (n.) The process of providing access to a file system over the network by executing the mount command.

mount point (n.) A workstation directory to which you mount a file system that exists on a remote machine.

mouse grab (n.) In the X protocol, a pointer grab that specifies that all mouse input is sent to a specific window (or client). See also button grab.

mouse-over feedback (n.) A change in the visual appearance of an interface element that occurs when the user moves the pointer over it—for example, the display of a button border when the pointer moves over a toolbar button.

MP See multiprocessor.

MPSS (n.) Multiple Page Size Support.

MQH See Memory Queue Handler.

Multibus (n.) The Intel proprietary bus with specific board dimensions and standards.

multibyte character (n.) A character whose codepoint is stored in 1 or more bytes. It differs from wide-character encoding in that the number of bytes representing a character can vary.

multiclick (v.) To click the mouse button rapidly a specified number of times. Multiclicking is usually an accelerator for functions that can be accessed in other ways.

multihomed host (n.) A host that is on more than one public network.

multihost disk (n.) A disk that is physically connected to multiple nodes.

multiplexed analog component (MAC) (n.) A color standard that transmits three color components in time-compressed serial analog form.

multiplexer (1) (n.) (not "multiplex") A device that is used for merging information from multiple signals to a single channel.

(2) (n.) A STREAMS mechanism that allows messages to be routed among multiple Streams in the kernel. A multiplexing configuration includes at least one multiplexing pseudo-device driver connected to one or more upper Streams and one or more lower Streams.

multiprocessor (MP) (n.) A computer that uses two or more nearly equal processing units under integrated control.

multitasking (1) (n.) Enabling more than one user to access the same program at the same time.

(2) (adj.) Characteristic of the concurrent execution of two or more tasks by a computer.

multithreaded (adj.) Characteristic of a program that is designed to have parts of its code execute concurrently. See also thread.

multithreading (n.) A technique that enables multiprocessing applications to run more efficiently by breaking sequences of instructions (threads) into multiple sequences that can be executed from the kernel simultaneously.

multiuser system (n.) A network system that is used by two or more people within a given time frame (usually in a serial fashion). Contrast with single system.

MUX (n.) See multiplexer.

MXCC See Module XBus Cache Controller.

"named pipe" to "null string"

named pipe (n.) A first-in-first-out (FIFO) file. A UNIX System V process can open the FIFO file, using it for communication just like a pipe but between possibly unrelated processes.

named Stream (n.) A Stream, typically a pipe, with a name associated with it through a call to `fattach3C()` (a mount operation). A named Stream, unlike a named pipe (FIFO), is bidirectional. Also, a named Stream need not refer to a pipe but can be another type of Stream.

NAMEFS (n.) A pseudo-file system used mostly by STREAMS for dynamic mounts of file descriptors on top of files.

namespace (n.) The space from which an object name is derived and understood. Files are named within the file namespace, printers are named within the printer namespace.

native code (n.) The code that refers to the methods of a specific operating system or is compiled for a specific processor.

navigation keys (n.) The keyboard keys used to move the current location of the cursor. These include the arrow keys (with or without the Control key); the Tab key (with or without the Control or Shift keys); the Home and End keys (with or without the Control key); and the PgUp and PgDn keys.

nearest-neighbor interpolation (n.) A method that the XIL library uses to check that the value of an input image at noninteger coordinates is the value of the pixel closest to a targeted point. This type of interpolation is fastest, but can introduce artifacts in the output image; for example, smooth lines in the input image might display as jagged lines in the output. Also called zero-order interpolation.

netgroup (n.) A network-wide group of machines granted identical access to certain network resources for security and organizational reasons.

network (n.) Technically, the hardware connecting various systems, enabling them to communicate. Informally, the systems so connected.

network-address resource See network resource.

networked session (n.) A session managed across multiple systems. Using a networked session enables the same session to be seen regardless of which system was used to log in. It also provides a single home directory across multiple systems.

network interface card (NIC) (n.) An internal circuit board or card that connects a computer to a network. See also PCI bus.

network mask (n.) A number used by software to separate the local subnet address from the rest of a given Internet protocol (IP) address.

newline character (n.) An unseen character that marks the end of a line of text in a document. It signals to a printer or screen to break a line and start a new one.

NeWSprint™ package (n.) The software for printing from Sun workstations.

NeWS™ system (network extensible window system) (n.) A window system based on PostScript™ that Sun developed and licenses.

NFS (n.) A distributed file system that provides transparent access to remote file systems on heterogeneous networks.

NIC (1) (n.) network information center.

(2) (n.) network interface card.

(3) (n.) network interface controller.

niceness value (n.) The priority level of a UNIX process. The niceness value ranges between 0 and 20, with 0 the system default priority and 20 the lowest priority. The higher the number, the slower the process runs. You set the niceness value with the UNIX `nice` command. You also can check the niceness values of processes with the `ps -l` command (the value displays under the NI heading).

NIS (n.) The SunOS 4.0 (minimum) Network Information Service. A distributed network database containing key information about the systems and the users on the network. The NIS database is stored on the master server and all the slave servers. See also NIS+.

NIS+ (n.) The SunOS 5.0 (minimum) Network Information Service. NIS+ replaces NIS, the SunOS 4.0 (minimum) Network Information Service.

NIS domain (n.) A master set of network information service (NIS) maps maintained on the NIS master server and distributed to that server's NIS slave servers.

NIS maps (n.) The database-like entities that maintain information about machines on a local area network. Programs that are part of the NIS service query these maps. See also NIS.

node (1) (n.) An addressable point on a network. Each node in a Sun network has a different name. A node can connect a computing system, a terminal, or various other peripheral devices to the network.

A physical machine or domain that can be part of a SunPlex system. Also called host.

noncluster mode (n.) The resulting state achieved by booting a cluster member with the x boot option. In this state the node is no longer a cluster member, but is still a cluster node. See also cluster member, cluster node.

nonvolatile memory (1) (n.) The memory that does not lose its contents when the power is off; for example, erasable programmable read-only memory (EPROM), flash PROM, nonvolatile random access memory (NVRAM), and read-only memory (ROM).

(2) (n.) Volatile memory that is always connected to a battery.

normalize (v.) To adjust the fixed-point and exponent parts of a floating-point representation so that the fixed-point parts are in a specific range. Also called standardize.

normal vector (n.) A vector perpendicular (or orthogonal) to a surface or plane at a specific point.

NUL (null character) (n.) An invisible character with an internal code of 0 that occupies no space if printed. Not to be confused with a blank, which is invisible but occupies a space.

null pointer (n.) A pointer that indicates the end; the pointer goes to zero (0).

null string (n.) An empty string, one that contains no characters.

"object" to "owner"

object (1) (n.) A principal building block of object-oriented programs. Each object is a programming unit consisting of data (instance variables) and a range of operations (instance methods). A widget is an object. See also class.

(2) (n.) A graphics entity. A single image or model defined in 2-D or 3-D space.

object file (n.) A file containing machine-language code. An executable file.

object-oriented design (n.) A software design method that models the characteristics of abstract or real objects using classes and objects.

OBP (n.) OpenBoot programmable read-only memory (PROM).

octal (adj.) Characteristic of the numbering system using 8 as its base, using the numerals 0–7 as its digits. In programs written in the Java programming language, octal numbers must be preceded with 0.

OLIT See OPEN LOOK Intrinsics Toolkit.

ONC+™ services (n.) The Sun distributed services extracted from the Solaris operating environment including RPC and NIS+.

On Item help (n.) A form of help in which an application provides on-screen information about a particular command, operation, dialog box, or control.

online documentation (n.) A disk-based form of documentation provided by many application programs, consisting of advice or instructions on using program features. You can access online documentation directly without the need to interrupt work or page through a manual.

opaque (adj.) Characteristic of a particular piece of data if its value or format is not normally visible to functions that use it. For example, the *input_token* parameter to `gss_init_sec_context()` is opaque to the application, but significant to the GSS-API. Similarly, the *input_message* parameter to `gss_wrap()` is opaque to the GSS-API but important to the application that does the wrapping.

OpenBoot (n.) In SBus profiles, the facility by which the FCodes program can interrogate the host and determine the state of various parameters it addresses.

OPEN LOOK Intrinsics Toolkit (OLIT) (n.) An X Window system-based widget set and library that is used to create applications which use the OPEN LOOK graphical user interface.

operating system (OS) (n.) A collection of programs that monitor the use of the system and supervise the other programs that are executed by the collection.

option (n.) A variation on or modification to a command, usually requested by use of a flag.

optional argument (n.) An argument accepted but not required by a command.

ordinary file (n.) In UNIX, a file containing text data that is not executable. Contrast with executable file.

orthogonal (adj.) Characteristic of a perpendicular or normal line.

OS See operating system.

output (n.) The information produced by a command, program, or such, and sent elsewhere; for example, to the terminal, to a file, or to a line printer.

output redirection (n.) See redirection.

overlay (1) (n.) A code fragment that is loaded into memory, replacing any previously loaded code fragment.

(2) (n.) A graphics image superimposed over a portion of another image; for example, when one window partially occludes another window.

overloading (n.) The process of using one identifier to refer to multiple items in the same scope. In the Java programming language, you can overload methods but not variables or operators.

overriding (n.) The process of providing a different implementation of a method in a subclass of the class that originally defined the method.

overwrite (v.) To write on an existing file, eliminating any previous text or graphics.

owner (1) The person who created a file or directory.

(2) The attribute of a file or directory that specifies who has owner permissions.

"pack" to "put procedure"

pack (v.) To reduce the size of data so that it takes up less space.

package (1) (n.) A collection of software that is grouped into a single entity for modular installation. See also cluster, software distribution.

(2) (n.) A group of types. Packages are declared with the package keyword.

packet mode (n.) A feature supported by the STREAMS-based pseudo-terminal subsystem. It informs a process on the master side when state changes occur on the slave side of a pseudo-tty. Packet mode is enabled by pushing a module called `pckt` on the master side.

padding (n.) The process of inserting bytes into a data stream to maintain alignment of the protocol requests on natural boundaries. Padding increases ease of portability to some machine architectures.

page (1) (n.) A block of 8192 contiguous byte locations used for memory mapping and protection.

(2) (n.) The data between the beginning of a file and a page marker, or between two markers, or between a marker and the end of the file.

(3) (v.) To advance text displayed in a window by one full screen at a time, usually with a scrollbar.

Page Description Language (PDL) (n.) Usually, a programming language that is used to send output to a printer or visual display.

page fault (n.) An interrupt caused by the failure to find a needed page in virtual memory.

page frame (n.) The page-sized unit into which a physical address space is conceptually divided. See also paging, virtual memory.

paging (n.) The process of replacing the contents of a page frame with different pages. A page is a fixed-sized unit of memory. See also page frame.

palette window (n.) In a multiple document interface (MDI) application with the Java look and feel, a modeless window that displays a collection of tools, colors, or patterns. Palette windows float on top of document windows. User choices made in a palette window affect whichever primary window is active. Palette windows are created using the `JInternalFrame` component. See also utility window.

pane (n.) A collective term for scroll panes, split panes, and tabbed panes.

panel (1) (n.) A container for organizing the contents of a window, dialog box, or applet. The panel might collect and confirm user input. Panels might be used by wizards and follow an ordered sequence to fulfill a designated task.

In the Java look and feel panels are created using the `JPanel` component. See also tabbed pane.

panic message (n.) The message printed on a system's console when it fails.

parallel resource type (n.) A resource type, such as a parallel database, that has been instrumented to run in a cluster environment so that it can be mastered by multiple (two or more) nodes simultaneously.

parallel-service instance (n.) An instance of a parallel resource type that is running on an individual node.

parameter (n.) A special type of variable used within shell programs to access values related to the arguments on the command line or the environment in which the program is executed.

parameter passing (n.) The substitution of actual parametric values for artificial ones.

parent/child (n.) In multitasking, a primary process (the parent) that calls a secondary or child process.

parent directory (n.) A directory containing the working directory or the directory of interest.

parent process (n.) A process from which a child process is started.

parent structure (n.) The first of two or more connected objects in a hierarchical data structure system, such as the Programmer's Hierarchical Interactive Graphics System (PHIGS). A parent structure invokes its child structure, which inherits the parent's attributes.

parent widget (1) (n.) In the OLIT class hierarchy, a widget's superclass.

(2) (n.) In an application, a widget is the child of some parent widget. Parent widgets manage the size and location of their children and control input to their children by controlling the input area. An application organizes widgets into a hierarchy of children and parents. See also child widget.

parent window (n.) In the X protocol, the reference window from which other child windows are created.

partition (n.) The unit into which the disk space is divided by the software.

passive grab (n.) In the X protocol, keyboard keys, the keyboard, pointer buttons, pointer, and server can be "grabbed" for exclusive use by a client, usually for a short time. A passive grab causes an active grab to begin when a certain key or button combination is pressed. The grab is active when the key or button is actually pressed.

password (n.) A predetermined string of characters that you type to obtain permission to use a computer system or certain files.

password aging (n.) A feature of the Solaris operating environment that assigns a limited lifetime to each user password to ensure secrecy.

password field (n.) A special text field in which the user types a password. The field displays a masking character for each typed character. In the Java look and feel, password fields are created using the `JPasswordField` component.

patch (1) (n.) A quick modification to a routine or an object program.

(2) (n.) In computer graphics, a portion of an object surface defined by some number of points. Patches are separately defined and then grouped to form the shell of an object. Surface patches can either be planar (flat) or curved.

path (n.) Usually, a way to travel from directories to the files contained therein.

path name (n.) The location of a file or directory in the UNIX file system.

pattern recognition (1) (n.) In image processing, the analysis, description, identification, and classification of objects or other meaningful regularities.

(2) (n.) A computer's capability of recognizing patterns, especially visual and sound patterns.

pause (v.) To suspend a process temporarily without ending it.

PC (1.) (n.) program counter.

(2.) personal computer.

(3.) printed circuit.

PC and stack profiling data (n.) The performance data that shows how much time is accrued by calls in the application that address other calls. It provides a more detailed analysis than PC profiling data, yet it does include PC profiling data.

PC profiling data (n.) The performance data that shows how much time the application accrues in its execution of functions , modules, or segments. It also reveals what functions, modules, or segments are consuming the most time and the least time.

PCFS (PC file system) (n.) A file system specification that provides the capability to read and write files in disk operating system (DOS) format on the SPARC system internal diskette drive. The PC file system is mounted to the workstation's file system as `/pcfs`.

PCI bus (n.) A 32-bit, Peripheral Component Interconnect (PCI) bus providing a maximum 132–Mbyte/sec data transfer rate. PCI devices have autoconfiguration capabilities and do not have to be configured by users.

peer (1) (n.) In networking, a hardware or software unit that is in the same protocol layer as another unit.

(2) (n.) In Point-to-Point Protocol (PPP), an individual computer at one end of a PPP communications link, which consists of two peers that are connected by communications media. You can configure many types of computing equipment as a peer, such as a workstation, personal computer, router, or mainframe.

permanent file (n.) The data stored permanently in the file system structure. To change a permanent file, you use a text editor, which maintains a temporary work space or buffer apart from the permanent files. After you have made changes to the buffer, you must write the changes to the permanent file.

per-message token See token.

permissions (n.) The attribute of a file or directory that specifies who has read, write, or execution access.

persistence (n.) A quality of light, as in a CRT, that influences the way an image is displayed on the screen. If persistence is too long, the image looks smudged; if it is too short, the image flickers.

persistent link (n.) In STREAMS, a connection below a multiplexer that can exist without having an open controlling Stream.

PersonalJava™ environment (n.) A Java runtime environment (JRE) for network-connectable applications on personal consumer devices for home, office, and mobile use.

perspective projection (n.) The process of projecting an image from the 3-D view volume to the 2-D graphics display with projector lines that converge at the eye point. Objects appear to diminish if they are further from the eye point.

physical address (n.) An actual hardware address that matches a memory location; programs that refer to virtual addresses are subsequently mapped tophysical addresses.

physical address space (n.) The set of possible 22-bit physical addresses that can refer to locations in memory (memory space) or I/O space (device registers).

pick aperture (n.) In computer graphics, the area (2–D) or volume (3–D) used to test primitives for picking.

pick ID (n.) In computer graphics, the value used to identify a primitive that has been picked.

picking (n.) A feature of a graphics library that enables you to select primitives and objects with a pointing device.

PID (1) (n.) process identification number.

(2) (n.) protocol identifier.

ping (1) (n.) (Packet Internet Groper) A small program that a computer sends to a host and times on its return path.

(2) (v.) To test the reach of destinations by sending them an ICMP ECHO: "Ping host X to see if it is up!"

pipe (1) (n.) The software connection between two programs.

(2) (n.) The UNIX operator (|) that makes the output of one command or program into the input of another.

(3) (v.) To make the output of one command or program into the input of another.

pipeline (n.) The program linkage established by performing one or more pipes.

pipelining (n.) A hardware feature enabling operations to reduce to multiple stages, each of which takes (typically) one cycle to complete.

pixmap (1) (n.) The array of values in the frame buffer for a given picture, particularly in the case of multibit displays.

(2) (n.) A 3-D array of bits. A pixmap is usually a 2-D array of pixels but can also be a stack of *n* bitmaps.

Pixrects (n.) A low-level graphics software package for 2-D applications.

Pixwin (n.) A 2-D software subroutine library used to implement the lower levels of the Sun window system.

plain window (n.) An unadorned window with no title bar or window controls, typically used for splash screens. In the Java look and feel, plain windows are created using the `JWindow` component. See also primary window, window control.

platform (n.) The basic hardware or software for a system. A hardware platform might be a PC, Macintosh, or SPARC system. Software platforms include Windows, Java, and UNIX. Because of the variations on UNIX, always refer to the Solaris UNIX platform.

plug-in editor kit (n.) An editor that can be used by the editor pane. The Java Foundation Classes (JFC) supply plug-in editor kits for plain, styled, rich text format (RTF), and HTML data.

point (1) (n.) A unit of measure used in printing. Twelve points are in a pica and 72 points are in an inch.

(2) (v). To move an indicator to an on-screen item with direction keys or a mouse.

pointer (n.) A small graphic that moves around the screen as the user manipulates the mouse (or another pointing device). Depending on its location and the active application, the pointer can assume various shapes, such as an arrowhead, crosshair, or clock. By moving the pointer and pressing mouse buttons, the user can select objects, set the insertion point, and activate windows. Sometimes called a cursor. See also insertion point.

pointer grab (n.) In the X protocol, a client can actively grab control of the pointer, causing button and motion events to be sent to the grabbing client rather than to the client indicated by the pointer.

pointing device (n.) A mechanical or electronic device, such as a mouse, that manipulates the screen pointer.

policy (n.) A rule or set of rules that control behavior in an application, network, or system.

policy group (n.) A collection that groups related policy rules, their conditions, and actions, and policy data. The collection has a unique name. For Sun Java Desktop System Configuration Manager, a policy group contains policies and can be linked to organizations, groups, or users. Policy groups are stored in the policy repository.

policy repository (n.) A collection that stores policy groups. A database or directory is an example of such a collection.

pool (n.) A homogeneous collection of resources from which each resource can be allocated and might later be returned to the collection. See also database connection pool, resource pool, storage pool, thread pool.

port (n.) The location for accepting or sending data on a computer device. Ports can connect peripheral devices or are dedicated locations in memory.

portal (n.) A web-based aggregation of content and services that is customizable and dynamic, based on interests and entitlements.

portmapper (n.) A network system service on which all other remote procedure call-based services rely. The portmapper tracks the correspondence between ports (logical communications channels) and services on a machine, and provides a standard way for a client to look up the port number of any remote procedure call program supported by the server.

port monitor (n.) A program that continuously checks for requests to log in or requests to access printers or files. After the port monitor detects a request, it sets the required parameters to establish communication between the operating system and the device requesting service. The port monitor then transfers control to other processes (for example, the login program) that provide the services needed.

portrait (adj.) Characteristic of the orientation of a page or screen image that is taller than it is wide. Contrast with landscape.

positional parameters (n.) The numbered variables used within a shell procedure to process the strings specified as arguments on the command line invoking the shell procedure.

POST See power-on self-test.

postmaster (n.) In an email system, the person who administers to problems with a mail account.

potential master See potential primary.

potential primary (n.) A cluster member that is able to master a failover resource type if the primary node fails. See also default master.

power-on self-test (POST) (n., adj.) A set of hardware routines that run when a device is powered up.

preference (n.) A setting for an application or tool. Typically set by users. See also property.

PreLimn (n.) Filter manager software for use with the NeWSprint package.

preprocessor (n.) A routine or device that performs operations on input before it is processed.

press (v.) To push down and hold a mouse button.

primary (n.) A node on which a resource group or device group is currently online. Specifically, a primary is a node that is currently hosting or implementing the service that is associated with the resource. See also secondary.

primary hostname (n.) The name of a node on the primary public network. This is always the node name that is specified in /etc/nodename. See also secondary hostname.

primary window (n.) A top-level window of an application, where the principal interaction with the user occurs. Primary windows always retain the look and feel of the user's native platform. In the Java look and feel primary windows are created using the `JFrame` component. See also dialog box, secondary window.

primitive (1) (n.) Basic computer instruction at the machine level.

(2) (n.) In computer graphics, a fundamental shape or object used primarily in the construction of more complex objects. Graphics primitives include point, line segment, polyline, circle, ellipse, triangle, square, and rectangle.

principal A uniquely named client/user or server/service instance that participates in a network communication. GSS–API–based transactions involve interactions between principals. Examples of principal names include the following:

- `joe`
- `joe@machine`
- `nfs@machine`
- `123.45.678.9`
- `ftp://ftp.company.com`

private hostname (n.) The hostname alias that is used to communicate with a node over the cluster interconnect.

process (1) (n.) A particular computer activity or job.

(2) (n.) A virtual address space containing one or more threads.

process code (n.) See wide character.

process file system (PROCFS) (n., adj.) A type of file system that resides in memory. The PROCFS contains a list of active processes, by process number, in the `/proc` directory. Information in the `/proc` directory is used by commands such as `ps`.

process identification number (PID) (n.) A unique, system-wide, identification number that is assigned to a process. Also called process ID, process number.

processor (n.) A hardware device that executes the commands in a stored program in the computer system. In addition to the central processing unit (CPU), many sophisticated graphics systems contain a dedicated processor for the graphics accelerator.

processor bus (n.) A bus on the SuperSPARC module.

process status (n.) The current state of a process: running, stopped, waiting, and so on.

PROCFS See process file system.

progress bar (n.) An interface element that indicates one or more operations are in progress and shows the user what proportion of the operations has been completed. Progress bars are created using the `JProgressBar` component. See also slider.

PROM monitor (n.) A command interpreter, stored in the workstation boot PROM, used for booting, resetting, low-level configuration, and simple test procedures.

prompt (n.) A character or character string sent from the computer system to a terminal to indicate that the system is ready to accept input. Examples include $ and %.

property (1) (n.) A characteristic of an object. Depending on the object, the user or the designer might set its properties. See also preference.

(2) (n.) In the X protocol, window-identifying information, consisting of name, type, data format, and some data. The protocol places no interpretation on properties; they are a general-purpose data storage and intercommunication mechanism for clients. See also atom.

protocol (n.) A way to transmit data between devices. A computer or device must have a correct protocol to be able to communicate successfully with other computers or devices.

protocol data unit (PDU) (n.) The ISO/OSI term for packet. A PDU is a data object that is exchanged by protocol machines (entities) within a particular layer. A protocol data unit consists of both protocol control information (PCI) and user data.

pseudo-device (n.) A software subsystem or driver with no associated hardware.

pseudo-device driver (n.) A STREAMS software driver, not directly associated with a physical device, that performs functions internal to a Stream such as a multiplexer or log driver.

pseudo-terminal subsystem (n.) A STREAMS user interface identical to a terminal subsystem except that a process is in place of a hardware device. It consists of at least a master device, slave device, line discipline module, and hardware emulation module.

pull-down menu (n.) A menu that acts as if you held it and pulled it down. It only appears as long as you don't release it.

pushable module (n.) A STREAMS module interposed between the Stream head and driver. It performs intermediate transformations on messages flowing between the Stream head and a driver. A driver is a non-pushable module.

put procedure (n.) In STREAMS, a routine in a module or driver associated with a queue that receives messages from the preceding queue. It is the single entry point into a queue from a preceding queue. The put procedure can perform processing on the message and then generally either queues the message for subsequent processing by this queue's service procedure, or passes the message to the put procedure of the following queue.

"query" to "quorum device"

query (1) (n.) The process by which a primary station checks that a secondary station identifies itself and gives its status.

(2) (n.) The process of interrogating a database for specific information.

(3) (n.) A set of instructions that can extract data repetitively.

question mark (?) (n.) (adj.) In the UNIX operating system, a wildcard character that is often used to represent any other single character.

queue (1) (n.) A line or list that is formed by items in a system which are waiting for service.

(2) (n.) A temporary data storage area from which elements are removed in a FIFO order.

(3) (v.) To form a queue.

quorum (n.) A mechanism to ensure that only one set of cluster nodes is active at any one time and that the configuration data is the most recent. Sun Cluster assigns a quorum vote to each node and to each associated quorum device. If the cluster becomes partitioned, the set of nodes that has more than half of the total number of these quorum votes constitutes the new cluster. The quorum mechanism prevents the split-brain condition and the amnesia condition from occurring.

quorum device (n.) A device that contributes a quorum vote to a set of cluster nodes with which it is associated.

"race condition" to "runtime system"

race condition (n.) Competition by two or more processes for the same resource (counter variables, files, buffers) without a defined synchronization mechanism. Unlike "deadlock," which causes processes to hang, race conditions result in data corruption because of the unpredictable order in which processes change and access the shared data.

rack-mounted (adj.) Characteristic of components that are installed in a cabinet with a standard panel width of 19 inches or 23 inches. Components can be bolted to the rack or put on shelves. The height of a rack-mounted component is measured in rack units (RUs). An example is 1.75 inches. See also cabinet-mounted.

radio button (n.) A button that the user clicks to set an option. Unlike checkboxes, radio buttons are mutually exclusive—selecting one radio button deselects all other radio buttons in the group. In the Java look and feel, radio buttons are created by using the `JRadioButton` component.

radio button menu item (n.) A menu item that is displayed with a radio button next to it. Separators indicate which radio button menu items are in a group. Selecting one radio button menu item deselects all others in that group. In the Java look and feel, radio button menu items are created by using the `JRadioButtonMenuItem` component.

radio group (n.) A box that contains a set of radio buttons that might have a distinct label. At most, one of the radio buttons can be activated at a time. Also called radio button group.

RAID See redundant array of independent disks.

RAID-0 volume (n.) A class of volume that can be a stripe or a concatenation. These components are also called submirrors. A strip or concatenation is the basic building block for a mirror. See also redundant array of independent disks. Compare to RAID-1 volume.

RAID-1 volume (n.) A class of volume that replicates data by maintaining multiple copies. A RAID-1 volume is sometimes called a mirror. A RAID-1 volume is composed of one or more RAID-0 volumes that are called submirrors. See also redundant array of independent disks.

RAS (n.) reliability, availability, serviceability.

raster file (n.) A bitmap file or a file that contains a gray-scale or color image.

raster ops (ROP) (n.) The logical operations (typically called ANDs, ORs, and NORs) that are performed on portions of the bit planes—called bitmaps or pixmaps—in the frame buffer. These operations perform fundamental movements and transfers of pixel data. See also bit BLT.

read-ahead (adj.) Characteristic of the capability of the UNIX system to read and interpret your input while sending output information to the terminal in response to previous input. The UNIX system separates input from output and processes each correctly.

redirection (1) (n.) The channeling of output to a file or device instead of to the standard output.

(2) (n.) The channeling of input from a file or device instead of from the standard input.

redirect output (n.) The result of sending to a file what the system would normally display on the screen as the result of a command. Basic output redirection requires the use of the > or >> symbols. Also called redirection.

redundant array of independent disks (RAID) (n.) A subsystem for expanding disk storage. Used in the SPARCstorage Array Subsystem for Disk Expansion.

regular expression (n.) A pattern that represents a class of character strings. For example, grep interprets the regular expression `h.t` as any three-character string that begins with "h" and ends with "t."

reinstallation (n.) An installation, automatically initiated by Change Manager, that overwrites the system's disks with the new version of the Solaris operating environment. You can perform a reinstallation if the

system is already running the Solaris operating environment that contains the Change Manager agent. The reinstallation operation requires only one boot environment.

relative path name (n.) A series of directory names that are separated by the slash (/) character, which locates a file or directory that is relative to the working directory. See also absolute path name, simple path name.

relay host (n.) A system that transmits to and receives mail from outside the network or domain by using the same communications protocol. See also local host, mail host.

remark (n.) See comment.

remote (adj.) Characteristic of a system or other device in another location (room or building) that can be accessed through a network.

remote control file (n.) See C shell remote control file.

remote procedure call (RPC) (n.) The process of executing an apparently normal procedure call (or method invocation) by sending network packets to a remote host.

Remote Shared Memory (RSM) (n.) A mechanism for user-level messaging between nodes based on direct access to memory that is resident on remote nodes, using a memory-based hardware connection.

Remote Shared Memory API (RSMAPI) (n.) An application programming interface for the development of applications that use the Remote Shared Memory capability of interconnect devices such as Sun Fire™ Link and SCI-PCI D320.

remote shell (n.) A command interpreter that you initiate on one machine, but that executes on another machine which is specified on the command line.

replaceable unit (n.) A subassembly that trained, qualified service personnel can replace at the customer site.

resize handle (n.) A control that is used to change the size of a window or a pane in a window.

resize pointer (n.) The mouse pointer that is displayed when an object, such as a window, is being resized.

resource (1) (n.) A mechanism of the X Window system for specifying an attribute (appearance or behavior) of a window or application. Resources are usually named after the elements that they control.

(2) (n.) In resource management, an aspect of the computing system that can be manipulated with the intent to change application behavior.

(3) (n.) resource An instance of a resource type. Many resources of the same type might exist. Each resource has its own name and set of property values. Consequently, many instances of the underlying application might run on the cluster. Resources are managed by the RGM in resource groups.

resource bundle (n.) The place where an application stores its locale-specific data (isolated from source code).

resource control (n.) In resource management, a per-process resource limit that is extended to the task and project entities.

resource group (n.) A collection of resources that are managed by the RGM as a unit. Each resource that is to be managed by the RGM must be configured in a resource group. Typically, related and interdependent resources are grouped.

resource-group state (n.) The state of a resource group on any given node.

resource management (n.) A functionality that enables you to control how applications use available system resources.

Resource Management API (RMAPI) (n.) The application programming interface within a Sun Cluster system that makes an application highly available in a cluster environment.

resource monitor (n.) An optional part of a resource type implementation that runs periodic fault probes on resources to determine if they are running correctly and how they are performing.

resource pool (n.) A collection of resources. When bound to a resource pool, any of the resources from which the pool is composed are available to the resource consumers.

resource state (n.) The state of a resource on a particular node.

resource status (n.) The condition of the resources as reported by the fault monitor.

resource type (n.) A defined set of properties that identify the characteristics and behavior of a cluster object to be managed by the Resource Group Manager (RGM). Resource types are predefined for objects such as data services, logical hostnames, and shared addresses. A generic resource type is also available, and additional resource types may be defined. Data service resource types are defined to be either failover type or scalable type. This definition of the resource type determines how RGM will handle the resources. A resource type is identified by its name. See also data service, failover resource, scalable resource.

resource type property (n.) A key-value pair, stored by the RGM as part of the resource type, that is used to describe and manage resources of the particular type.

RFI (n.) radio frequency interference.

right to use (RTU) (n.) The Sun software licensing, usually included in the price of the software.

rolling upgrade (n.) In a Sun Cluster configuration, an upgrade that is performed sequentially on one cluster node at a time. During a rolling upgrade, the cluster remains in production and services continue to run on the other nodes.

root (n.) In a hierarchy of items, the one item from which all other items are descended. The root item has nothing above it in the hierarchy. See also class, package, root directory, root file system, root user name.

root directory (n.) The base directory from which all other directories stem, directly or indirectly.

root disk (n.) On Sun server systems, the disk drive where the operating system resides. The root disk is located in the SCSI tray behind the front panel.

root file system (n.) A file system that resides on the root device, a device which is predefined by the system at initialization. The root file system anchors the overall file system.

root user name (n.) The SunOS user name that grants special privileges to the person who logs in with that ID. The user who can supply the correct password for the root user name is given superuser privileges for the particular machine.

ROP See raster ops.

Routing Information Protocol (RIP) (n.) An Interior Gateway Protocol in Berkeley UNIX.

RPC See remote procedure call.

RTU See right to use.

RU (n.) rack unit.

run code (n.) A way of indicating the number of identical tokens that appear contiguously within a data stream. For example, the SunVideo™ capture- and-compression single SBus card uses 32-bit run codes to indicate that some number of consecutive cells within a frame have a constant intensity.

run level (n.) The system initialization state. In the SunOS 4.0 (minimum) system, the run levels are PROM monitor, single user, and multiuser. In the SunOS 5.0 (minimum) system, the run levels are shutdown, single user, normal multiuser without NFS™ file systems exported, normal multiuser with NFS file systems exported, alternative multiuser (not used), software reboot, reboot, and single-user state with all file systems mounted. See also init states.

runnable process (n.) A program that is ready to run, that is, it is not waiting for resources to become available (for example, data from disk or a user).

runtime library (n.) A file of written routines that do specific tasks, eliminating the need for redundant programming.

runtime system (n.) The software environment in which programs that are compiled for the Java virtual machine (JVM) can run. The runtime system includes all the code that is necessary to load programs which are written in the Java programming language. The runtime system also includes code that dynamically links native methods, manages memory, handles exceptions, and presents an implementation of the Java virtual machine, which might be a Java interpreter.

"SAD" to "Systems Network Architecture"

SAD See STREAMS Administrative Driver.

SAF See Service Access Facility.

sandbox (n.) A collection of several cooperating system components, ranging from security managers that execute as part of the application, to security measures designed into the Java virtual machine and the language itself. The sandbox ensures that an untrusted, and possibly malicious, application cannot gain access to system resources.

SBus (n.) A 32-bit self-identifying bus that is used mainly on SPARC workstations. The SBus provides information to the system so that it can identify the device driver that needs to be used. An SBus device might need to use hardware configuration files to augment the information that is provided by the SBus card. See also PCI bus.

SBus bridge (n.) A device that provides additional SBus slots by connecting two SBuses. Generally, a bus bridge is functionally transparent to devices on the SBus. However, in some instances (for example, bus sizing) bus bridges can change the exact way a series of bus cycles are performed. Also called an SBus coupler.

SBus controller (n.) The hardware that is responsible for performing arbitration, addressing translation and decoding, driving slave selects and address strobe, and generating timeouts.

SBus device (n.) A logical device that is attached to the SBus. This device might be on the motherboard or on an SBus expansion card.

SBus expansion card (n.) A physical printed circuit assembly that conforms to the single-width or double-width mechanical specifications. Also contains one or more SBus devices.

SBus expansion slot (n.) An SBus slot into which you can install an SBus expansion card.

SBus ID (n.) A special series of bytes at address 0 of each SBus slave that identifies the SBus device.

Scalable Coherent Interface (SCI) (n.) In a Sun Cluster configuration, a high-speed interconnect hardware that is used as the cluster interconnect.

scalable resource (n.) A resource of type "scalable." These resources run on multiple nodes (an instance on each node) that use the cluster interconnect to give the appearance of a single service to remote clients of the service.

scalable service (n.) A data service that is implemented to run on multiple nodes simultaneously.

A "pure" scalable service enables any instance of the service to respond to client requests.

After the connection is established between a client and a specific instance of the service, a "sticky" scalable service enables the client to send requests always to that same instance of the service. Effectively, the requests are not redirected to other instances of the service.

An "ordinary sticky" scalable service directs client requests always to the same node, using a specific port.

A "wildcard sticky" scalable service directs client requests always to the same node, but the request can use dynamically assigned port numbers.

SCCS See Source Code Control System.

SCD See SPARC Compliance Definition.

scheduler (1) (n.) A program that manages other shared resources, such as printers.

(2) (n.) An automated calendar program.

scope (1) (n.) The range over which an action or definition applies.

(2) (n.) A characteristic of an identifier that determines where the identifier can be used. Most identifiers in the Java programming environment have either class or local scope. Instance and class variables and class methods have class scope. These variables and methods can be used outside the class and its subclasses only by prefixing them with an instance of the class or (for class variables and methods) with the class name. All other variables are declared within methods and have local scope. These variables can be used only within the enclosing block.

SCP See SunLink™ communications processor.

scratch file (n.) A file that is used as a work area.

screen capture (n.) The act of duplicating text or text and graphics that are displayed on a screen, and saving them in a file. The screen capture results in a graphics file.

screen editor (n.) An editing program in which text is operated on that is relative to the position of the pointer on the screen. Commands for entering, changing, and removing text involve moving the pointer to the area to be altered and performing the necessary operation. You can view changes on the screen as they are made. Examples include the UNIX `vi` program. Contrast with line editor.

screen lock (n.) A function that locks the workstation screen, barring further input till the valid user password is typed.

screen saver (n.) A utility that causes the workstation, after a specified time, to switch off the display or to vary the images that are displayed, thereby prolonging the life of the screen.

script (n.) A program that another program interprets or runs.

scroll (v.) To shift the focus of text up, down, or across the screen.

scroll arrow (n.) In a scrollbar, one of the arrows that the user can click to move through displayed information in the corresponding direction (up or down in a vertical scrollbar, left or right in a horizontal scrollbar). See also scrollbar.

scrollbar (n.) A component that enables the user to control what portion of a document or list (or similar information) is visible on screen. A scrollbar consists of a vertical or horizontal channel, a scroll box that moves through the channel of the scrollbar, and two scroll arrows. In the Java look and feel, scrollbars are created by using the `JScrollBar` component. See also scroll arrow, scroll box, scroll pane.

scroll box (n.) A box that the user can drag in the channel of a scrollbar to cause scrolling in the corresponding direction. The scroll box's position in the scrollbar indicates the user's location in the list, window, or pane. In the Java look and feel, the scroll box's size indicates what proportion of the total information is currently visible on screen. A large scroll box, for example, indicates that the user can peruse the contents with just a few clicks in the scrollbar. See also scrollbar.

scroll pane (n.) A container that provides scrolling with optional vertical and horizontal scrollbars. In the Java look and feel, scroll panes are created by using the `JScrollPane` component. See also scrollbar.

SCSA (n.) Sun Common SCSI Architecture.

SCSI ID (n.) SCSI device identifier.

SCSI tray (n.) On Sun server systems, a tray that holds a maximum of six SCSI-2 devices and the control card. The chassis accommodates one SCSI device tray.

SDS (n.) Solstice DiskSuite.

SEA (adj.) Solstice DiskSuite Enterprise Agent.

secondary (n.) A cluster member that is available to master disk device groups and resource groups if the primary fails. See also primary.

secondary hostname (n.) The name that is used to access a node on a secondary public network. See also primary hostname.

secondary prompt (n.) A cue that is displayed in a Shell Tool window to inform you that the command which is typed in response to the primary prompt is incomplete. The UNIX system default secondary prompt is the greater-than character (>).

secondary window (n.) A modal or modeless window that is created from and dependent on a primary window. Secondary windows set options or supply additional details about actions and objects in the primary

window. Secondary windows are dismissed when their associated primary window is dismissed. In the Java look and feel, secondary windows are created by using either the `JFrame` or the `JDialog` component. See also dialog box.

seek (n.) Usually, a disk seek, that is, positioning the read/write head of the disk so that data can be read or written.

segmentation fault (n.) A condition that occurs when a process has attempted to access an area of memory that is restricted or does not exist. See also bus error.

select (1) (v.) To distinguish an object (or objects) on the screen so that they can be operated on. Contrast with deselect.

(2) (v.) To indicate a span, a contiguous sequence of characters, by pointing at and clicking.

selection (1) (n.) A span of characters, highlighted in inverse video, underlining, or gray shading.

(2) (n.) In the X protocol, a way to communicate between clients by using properties and events. To the user, a *selection* is an item of data that can be highlighted in one instance of an application and pasted into another instance of the same or a different application.

separator (n.) A line graphic that divides menu items into logical groupings. In the Java look and feel, separators are created by using the `JSeparator` component.

server (n.) A network device that manages resources and supplies services to a client. See also caching-only server, communications server, X server.

Service Access Facility (SAF) (n.) A tool which is provided with the SunOS 5.3 operating system that controls access to local and network system services, such as printers, modems, and terminals. SAF lets the user manage access to all services in a similar way, whether those services are on the network or attached only to local systems. SAF uses Service Access Control (SAC) commands to set up and manage services.

service interface (n.) In STREAMS, a set of primitives that define a service at the boundary between a service user and a service provider. Also, the rules (typically represented by a state machine) that determine allowable sequences of the primitives across the boundary. At a Stream/user boundary, the primitives are typically contained in the control part of a message. Within a Stream, primitives are contained in `M_PROTO` or `M_PCPROTO` message blocks.

service procedure (n.) A STREAMS routine in a module or driver that is associated with a queuethat receives messages which are queued for it by the appropriate put procedure. The procedure is called by the STREAMS scheduler. The service procedure can perform processing on the message and generally passes the message to the put procedure of the following queue.

servlet (n.) A server-side program that gives Java technology-enabled servers additional features.

shadow file (n.) The SunOS 5.0 (minimum) file in the `/etc` directory that contains user passwords.

Shapes (n.) A graphics software product for 2-D applications and the platform on which the X11/NeWS system is implemented.

shared-address resource (n.) A network address that can be bound by all scalable services which are running on nodes within the cluster to make them scale on those nodes. A cluster can have multiple shared addresses, and a service can be bound to multiple shared addresses.

shared object (n.) A function that is part of a shared library.

shell (1) (n.) The outer layer of a program, or a user interface.

(2) (n.) The command shell is a programmable command interpreter. The shell provides direct communication between the user and the operating system. UNIX systems use the C shell, Bourne shell, and Korn shell.

shell procedure (n.) An executable file that is not a compiled program. A shell procedure calls a shell to read and execute commands that are contained in a file. This process enables you to store a sequence of commands in a file for repeated use. Also called a *command file* or *shell program*.

shell variable (n.) In the UNIX system, a facility that affects how the shell runs and is displayed. For example, certain variables specify the list of arguments on the current command line. A shell variable also can set the number of command lines that are saved in a command history.

shortcut (n.) A mouse gesture that simplifies the completion of a dialog box. For example, double-click an item in the Filename list box to select it and choose OK in one action.

shortcut key (n.) A keyboard key sequence that activates a menu command. Shortcut keys usually include a key sequence that uses a special accelerator key, or an underlined letter (mnemonic) sequence. For example, press Alt+F4 or Alt+F+P to choose the command FilePrint.

signal (n.) An electrical quantity that transmits a sound or prompt. Also, a C library function, the software signaling facility. A signal is generated by some abnormal event. Most signals cause a process to terminate if no action is taken.

SIMD (n.) Single Instruction, Multiple Data.

simple path name (n.) A file or directory name, without mention of any associated directories, that you use to access a file or directory in the working directory. See also absolute path name, relative path name.

single-instance resource (n.) A resource for which at most one resource can be active across the cluster.

single-precision (adj.) Characteristic of a floating-point number that contains the least amount of precision, compared to two or more options that are given in a programming language. See also double-precision.

single system (n.) A system that is not connected to a network, has its own disk, and does not require support from any other system. Also called standalone system.

single-user mode (n.) A mode that allows a user to log in to a system as superuser and perform administrative tasks without interference from other users.

slave cycle (n.) The portion of a bus cycle that begins with placing an address on the physical address lines and ends with the address strobe signal being asserted.

slave driver (n.) A STREAMS-based device that is supported by the pseudo-terminal subsystem. A slave driver works with a line-discipline module and hardware-emulation module to provide an interface to a user process. Also called *pts*.

slave server (n.) A server system that maintains a copy of the network information service (NIS) database. A slave server has a disk and a complete copy of the operating system.

sleep (v.) To halt an operation without termininating it. A sleep process can remain temporarily suspended in memory till a predetermined event "awakens" it.

slice (1) (n.) See partition.

(2) (n.) A sample 2-D data array that is gathered through one of several methods, such as CAT-scan and magnetic resonance imaging, for 3-D image reconstruction.

slider (n.) A control that enables the user to set a value in a range—for example, the RGB values for a color. In the Java look and feel, sliders are created by using the `JSlider` component. See also progress bar.

slot (SBus expansion slot) (n.) An SBus entity for which there is an independent slave–select wire.

SMP (1) (n.) shared memory multiprocessor.

(2) (n.) See symmetric multiprocessing.

socket (n.) A software endpoint for network communication. Two programs on different machines each open a socket to communicate over the network. A socket is the low-level mechanism that supports most networking programs.

soft limit (n.) For disk quotas, a threshold limit on file system resources (blocks and inodes) that you can temporarily exceed. Exceeding the soft limit starts a timer. When you exceed the soft limit for the specified time (default of one week), no further system resources are allocated till you reduce file system use below the soft limit.

software distribution (n.) A collection of software clusters and packages that is to be installed. An example is an installation CD-ROM.

source (n.) The original data that is contained on a disk or in a file.

source code (n.) The uncompiled version of a program that is written in a language such as C or Pascal. The source code must be translated to machine language by a compiler before the computer can execute the program.

Source Code Control System (SCCS) (n.) A software development utility for tracking file versions during a lengthy software development or documentation project.

SPARC Compliance Definition (SCD) (n.) A formal specification of the system hardware and software to be met by manufacturers of SPARC systems to ensure that those systems run compliant applications. The SCD also specifies the interfaces that an application can safely use. This specification also assures that the application binary runs on all compliant SPARC hardware platforms.

SPARC system (n.) The 32-bit Scalable Processor ARChitecture from Sun Microsystems. SPARC is based on a reduced instruction set computer (RISC) concept. Sun and its suppliers designed the architecture to significantly improve price and performance.

SPARCprinter (n.) A video interface laser printer.

SPARCprinter port (n.) One of two ports on the SPARCprinter SBus printer card. The SPARCprinter port connects the system to the SPARCprinter.

spare (n.) In a Sun Cluster configuration, a cluster node that is available to be converted to secondary if a failover occurs. See also secondary.

spd (n.) The video port on the NeWSprinter™ SBus printer card. Also, the device driver that controls the port.

special character (n.) A character that is not alphabetic or numeric, or a space. An example is a punctuation mark. See metacharacter.

special file system (SPECFS) (n.) A pseudo-file system that provides access to character special devices and block devices.

specific address (n.) See absolute address.

split brain (n.) A condition in which a cluster breaks into multiple subclusters, where the nodes in each subcluster have no knowledge of the other subclusters. Each subcluster then continues functioning as the original cluster, thereby compromising data integrity. The Sun Cluster quorum mechanism ensures that only one set of nodes remains active at any one time, thereby preventing the split-brain condition from occurring.

split pane (n.) A container that enables the user to adjust the relative size of two adjacent panes. In the Java look and feel, split panes are created by using the `JSplitPane` component.

spooler (n.) A software device that holds data.

square bracket (n.) Computer jargon for either of the bracket signs, [and], used for connecting or enclosing words. Contrast with curly bracket ({ and }).

SSL (n.) Secure Socket Layer.

stack (n.) An area of reserved memory that contains important programming data.

stale NFS file handle (n.) A data structure that contains data with a creation date that does not match the file to which it refers.

standalone (1) (n.) A computer that does not require support from any other machine. Also called single system.

(2) (n.) A standalone diagnostic means that the program can load from either local disk or Ethernet and the program runs in an environment other than UNIX.

standard error (n.) An open file that is normally connected directly to a primary output device, such as a terminal, printer, or screen. Error messages and other diagnostic output normally go to this file and then to the output device. You can redirect the standard error output into another file instead of to the printer or the screen.

standard input (standard input device) (n.) The device from which a program or system normally takes its input. A standard input device is usually a terminal or the keyboard.

standard output (standard output device) (n.) The device to which a program or system normally sends its output. A standard output device is usually a terminal or the screen.

Standard Performance Evaluation Corporation (SPEC) (n.) A group of participating computer system manufacturers that develops a series of accepted test programs to measure system computing performance.

statement (n.) In a programming language, each line of code and an individual instruction.

static (n.) A noise on an electronic gadget that is incurred by electrical interference with a signal.

static allocation (n.) The allocation at startup time of certain memory. Static allocation remains in that state till the program is finished.

static field (n.) See class variable.

static linking (n.) The process in which external references in a program are linked with their definitions when an executable is created.

stderr (n.) The UNIX file pointer to standard error output. The file is opened when you start a program.

sticky data service See scalable service.

stopped job (n.) A job that you have halted temporarily and one that you can resume with a command.

storage pool (n.) A collection of storage resources that can be constructed from storage components (such as disks or RAID sets), from other storage pools, or from both.

The components of a storage pool can be automatically determined by the underlying hardware or by conformance to a policy, or an administrator can manually specify the components. A storage pool can have associated qualities such as data redundancy (for example, RAID). The storage pool components can be immediately available to consumers, can require preparation, or be a combination of both.

stream (n.) An open file with its associated buffering.

Stream (n.) A kernel aggregate that is created by connecting STREAMS components, resulting from an application of the STREAMS mechanism. The primary components are the Stream head, the driver, and zero or more pushable modules between the Stream head and the driver.

Stream end (n.) A Stream component that is furthest from the user process and that contains a driver.

Stream head (n.) A Stream component that is closest to the user process. A Stream head provides the interface between the Stream and the user process.

STREAMS (n.) A kernel mechanism that supports development of network services and data communications drivers. STREAMS defines interface standards for character input/output within the kernel, and between the kernel and user level. The STREAMS mechanism includes integral functions, utility routines, kernel facilities, and a set of structures.

STREAMS Administrative Driver (SAD) (n.) A driver that provides an interface to the autopush mechanism.

STREAMS-based pipe (n.) A mechanism for bidirectional data transfer that is implemented by using STREAMS. A STREAMS-based pipe is also a mechanism for sharing properties of STREAMS-based devices.

string (n.) A connected sequence of characters, words, or other elements.

string variable (n.) A sequence of characters that can be the value of a shell variable. See also variable.

striping (n.) The combining of one or more physical disks (or disk partitions) into a single logical disk. The operating system views a logical disk the same as any other disk-based file system.

stroke font object (n.) In the XGL library, an object that defines the stroke font which is used by the context object.

structure (n.) In the Programmer's Hierarchical Interactive Graphics System (PHIGS), a sequence of structure elements that describes graphical objects, and possibly invokes other structures in a hierarchical manner.

subclass (1) (n.) A class that is derived from a particular class, perhaps with one or more classes in between. See also superclass, supertype.

(2) (n.) A widget class that is created from another widget class. A subclassed widget is created by modifying and specializing another widget class which is called the superclass. The subclass inherits some or all of the characteristics of its superclass. See also inheritance.

subdirectory (n.) A directory that resides within another directory.

submenu (n.) A menu that is displayed when the user chooses a certain menu item in a higher-level menu. In the Java programming language, submenus are created by using the `JMenu` component.

Sun Cluster API See Resource Management API (RMAPI).

Sun Cluster software (n.) The software portion of the SunPlex system. See also SunPlex.

SUN-DES-1 (n.) An authentication protocol that the X11/NeWS system uses to authenticate client connections. The SUN-DES-1 authorization protocol was developed by Sun Microsystems, Inc. SUN-DES-1 is based on Secure remote procedure call (RPC) and requires data encryption software (DES) support. The authorization data is the machine-independent netname, or network name, of a user. This data is encrypted and sent to the server as part of the connection packet. The server decrypts the data and, if the netname is known, the connection is allowed.

SunGKS™ library (n.) The Sun software graphics library that is based on the graphical kernel system standard.

SunINGRES system (n.) The Sun version of INGRES, a database system that is produced by RTI.

SunLink communications processor (SCP) (n.) A printed circuit board that enables multivendor connection with either synchronous or asynchronous operation. The SCP works with SNA 3270 and X.25 SunLink software products.

SunLink ISDN (n.) The software that was developed to work with the SunISDN-BRI/SBI™ card.

SunMC Change Manager (n.) A mechanism that supports customizable Solaris Flash archives. The archive can be customizable if the software stack creator makes software-related parameters available to the Change Manager user interfaces. When the deployment user creates a per-host profile, the user can specify parameter values on a per-host basis. When the user creates a shared profile, the user can supply parameter values for a number of managed hosts.

SunPHIGS™ library (n.) The Sun software graphics library that is based on the Programmer's Hierarchical Interactive Graphics System (PHIGS) standard.

SunPlex system (n.) The integrated hardware and Sun Cluster software system that is used to create highly available and scalable services.

superblock (n.) A block on the disk that contains information about a file system, such as name and size in blocks. Each file system has its own superblock.

superclass (1) (n.) A class from which a particular class is derived, perhaps with one or more classes in between. See also subclass.

(2) (n.) A widget class that is modified and specialized to create another widget class (a subclass). The subclass inherits some or all of the characteristics of the superclass.

SuperSPARC Module (n.) A 3-by-5-inch card that contains one SuperSPARC processor, cache memory, and a cache controller. A system board can have two SuperSPARC modules. A SPARCserver™ 1000 system can have a maximum of four such boards that equal eight modules.

supertype (n.) One of the interfaces and classes of a type that are extended or implemented by that type. See also superclass.

superuser (n.) A special user who has privileges to perform all administrative tasks on the system. Also called *root*.

suspend (v.) To put a tprocess emporarily on hold. See also sleep.

swap (v.) To write an active file from RAM to a hard disk space.

swap file (n.) A disk partition or file that temporarily holds the contents of a memory area till it can be loaded back into memory.

SWAPFS (n.) A pseudo-file system that the kernel uses for swapping.

swap space (n.) The memory that is used for the transfer of a currently operating program from system memory to an external storage device. Also called *swapping area*.

Swing classes (n.) A set of graphical user interface components, featuring a pluggable look and feel, that are included in the Java Foundation Classes (JFC). The Swing classes implement the Java Accessibility API and supply code for interface elements such as windows, dialog boxes and choosers, panels and panes, menus, controls, text components, tables, lists, and tree views. See also Abstract Window Toolkit.

Swing Set (n.) The code name for a collection of graphical user interface (GUI) components that runs uniformly on any native platform which supports the Java virtual machine. Because they are written entirely in the Java programming language, these components may provide functionality above and beyond that provided by native-platform equivalents. (Contrast with Abstract Window Toolkit.)

switch (1) (n.) Usually, a command-line argument, such as `-r` or `-d`.

(2) (n.) A circuit element that controls a signal.

switchover (n.) The orderly transfer of a resource group or device group from one master (node) in a cluster to another master (or multiple masters, if resource groups are configured for multiple primaries). A switchover is initiated by an administrator by using the `scswitch`(1M) command. A switchover can also be invoked by a failover.

symbolic link (n.) A special file or directory that points to another file or directory so that both files or directories have the same contents.

symmetric multiprocessing (n.) A form of multiprocessing in which more than one processor can run kernel-level code simultaneously.

sync (1) (n.) The process of synchronizing the scanning of receiving, processing, or display equipment with a video source.

(2) (n.) A signal that consists of just the horizontal and vertical elements that are necessary to accomplish synchronization.

(3) (n.) The component of a video signal that conveys synchronizing information. See also sync level, sync pulse.

synchronized (adj.) In the Java programming language, characteristic of a keyword that, when applied to a method or code block, guarantees that at most one thread at a time executes that code.

synchronous (adj.) Characteristic of being under the control of a clock or timing mechanism.

sync level (n.) The level of a sync signal or component.

sync pulse (n.) A normal line sync pulse, equalization pulse, or broad pulse.

syntax (n.) The order in which you type the parts of an operating system command. The grammar of a programming language.

syntax error (n.) A grammatical error in the programming language syntax.

synthetic image (n.) An image that was generated originally with computer-graphics techniques, contrasted with an image that was originally acquired with a camera. The latter type of image, after electronic digitization and storage, is called a *captured image*.

system (n.) A computer and its peripherals that enable you to run computer programs. A system can also include software that operates the system.

system administration (n.) The tasks of a person who performs system maintenance.

system administrator (n.) The person who performs system maintenance.

system board (n.) On Sun server systems, a printed circuit board that can contain two or moreSuperSPARC modules and associated SIMMs. The board also accommodates three optional SBus cards.

system call (n.) A program's request that an action be performed by the UNIX system kernel.

system controller (n.) In Sun Fire™ configurations, a device that is used specifically to communicate with cluster members.

system ID (n.) A sequence of numbers, and sometimes letters, that is unique to each system and is used to identify that system.

system kernel (n.) See kernel.

system message (n.) A message that the system generates automatically to provide you important information, such as new mail or login information.

system name (n.) A unique name that is assigned to the network system.

system number (n.) A unique number that is assigned to the network system.

System Service Processor (SSP) (n.) In Enterprise 10000 configurations, a device, external to the cluster, that is used specifically to communicate with cluster members.

system state object (n.) An object that maintains state information about all operations which occur during a single XGL library session.

system type (n.) The name that identifies a specific kind of system, such as a Sun-4™ system or a Sun386i™ system.

system unit (n.) The part of a workstation that contains the central processing unit (CPU), the disk, and other devices that are essential to operate the system.

System V (n.) A version of the UNIX operating system that was produced by AT&T.

Systems Network Architecture (SNA) (n.) The proprietary network architecture of IBM.

"T1" to "type"

T1 (n.) A communications service that provides leased-line support for 1,554,000 bps on twisted copper wire.

TA See terminal adapter. See also terminal equipment.

tabbed pane (n.) A container that enables the user to switch between several components (usually `JPanel` components) that appear to share the same space on screen. The user can view a particular panel by clicking its tab. In the Java look and feel, tabbed panes are created by using the `JTabbedPane` component.

table (n.) A two-dimensional arrangement of data in rows and columns. In the Java look and feel, tables are created by using the `JTable` component.

tablet (n.) A hardware device that is used with a pen-like stylus or mouse-like puck to digitize an image for graphical display.

tar file (n.) A file, usually saved on a tape, that contains archived data which was created by the UNIX tar program.

task (n.) In resource management, a process collective that represents a set of work over time. Each task is associated with one project.

task management (n.) In a multitasking environment, the operating system's checking and handling of the processes and programs that are running on a computer.

Tbyte (terabyte) (n.) A unit of measure that is roughly equal to a trillion bytes (exactly 1,099,511,627,776 bytes).

TC (1) (n.) temperature coefficient.

(2) (n.) terminal concentrator.

TCO (n.) total cost of ownership.

TCP See Transmission Control Protocol. See also Transmission Control Protocol/Internet Protocol, TP4.

TCP/IP See Transmission Control Protocol/Internet Protocol.

TE See terminal equipment.

TE1 (n.) The devices that support the standard ISDN interface, including digital phones, digital facsimile, and integrated voice and data terminal devices.

TE2 (n.) The equipment that does not support the standard ISDN interface, including serial (RS-232-C standard) communications devices, such as computers and terminals.

telex (n.) teletypewriter exchange.

Telnet (n.) The virtual terminal protocol that enables users of one host to log in to a remote host.

temporal redundancy (n.) In movies, the similarities, or shared elements, in consecutive frames. This redundancy enables groups of individually compressed frames to be compressed further. That is, if five frames in a group look the same in the upper left corner, that area needs to be encoded only once. Then the encoder can note that the same data is displayed in the next four frames. This type of encoding is called interframe compression.

temporary file system (TMPFS) (n.) A file system type that uses local memory for disk reads and writes.

terabyte (Tbyte) (n.) A unit of measure that is roughly equal to a trillion bytes (exactly 1,099,511,627,776 bytes).

terminal (adj.) Characteristic of a process which runs on a machine that originates with the physical device which is called a terminal. The process also can run as the software representation of such a physical device. An example is a window.

terminal adapter (TA) (n.) An ISDN-compatible device that converts non-ISDN transmission to ISDN transmission. See also terminal equipment.

terminal concentrator (n.) A device, external to the cluster, that is used specifically to communicate with cluster members.

terminal emulator (n.) A window that emulates a particular type of terminal for running nonwindowing programs. A terminal emulator is most commonly used for typing commands to interact with the computer's operating system.

terminal equipment (TE) (n.) An ISDN-compatible terminal device that is attached to the ISDN at the user interface. An example is an ISDN-compatible telephone system that runs SunLink ISDN. See also terminal adapter.

terminal port name (n.) The name of the serial port to which a terminal is connected.

terminal session (n.) The time that you dedicate to working at a terminal, from login to logout.

terminal type (n.) The name that identifies a specific kind of terminal, such as a Wyse 50 or a VT-100.

tessellate (v.) To divide a curve or surface into geometric forms to calculate their shapes and dimensions for simplified processing and rendering. Many systems tessellate quads, which are not always planar, into triangles, which are definitively planar.

texel (n.) In computer graphics, a texture element. Obtained from texture memory, a texel represents the color of the object to be applied to a corresponding fragment.

text area (n.) A multiline region for displaying (and sometimes editing) text. Text in such areas is restricted to a single font, size, and style. In the Java look and feel, text areas are created by using the `JTextArea` component. See also editor pane.

text, data, and stack segment (n.) In the UNIX system, a part of a process that is represented by three memory segments. The other part is a set of data structures that are collectively called the "process environment." A text segment contains code and constant data, a data segment contains variables, and a stack segment holds a process's stack.

text editor (n.) The software for creating, changing, or removing text with the aid of a computer. Most text editors have two modes: an input mode for typing text and a command mode for moving or modifying text. Two UNIX system examples are the editors `ed` and `vi`. See line editor, screen editor.

text field (n.) An area that displays a single line of text. In a noneditable text field, the user can copy, but not change, the text. In an editable text field, the user can type new text or edit the existing text. In the Java look and feel, text fields are created by using the `JTextField` component. See also password field.

text formatter (n.) A program that prepares a file of text for printed output. To use a text formatter, your file must also contain some special commands for structuring the final copy. These special commands notify the formatter to justify margins, start new paragraphs, set up lists and tables, and place figures, for example. Two UNIX text formatters are `nroff` and `troff`.

text input mode (n.) A text editing mode in which the characters that you type are entered as text into the text editor's buffer. To execute a command, you must leave text input mode.

texture (n.) In computer graphics, a 1-D or 2-D image that is used to modify the color of fragments which are produced by rasterization.

texture mapping (n.) The process of superimposing a 2-D texture or pattern over the surface of a 3-D graphical object . Texture mapping is an efficient method of producing the appearance of texture, such as that of wood or stone, on a large surface area.

TFS (n.) See Translucent File Service.

TFTP (n.) Trivial File Transfer Protocols.

theme mechanism (n.) A feature that enables a designer to specify alternative colors and fonts across an entire Java look and feel application. See also Java look and feel.

The NeWS Toolkit (TNT) (n.) See NeWS system.

thin client (n.) A system that runs a light operating system with no local system administration. A thin client also executes applications that are delivered over the network.

thread (n.) The basic unit of program execution. A process can have several threads that run concurrently. Each thread can perform a different job, such as waiting for events or performing a time-consuming job that the program need not complete before proceeding. When a thread has finished its job, the thread is suspended or destroyed. See also process.

thread pool (n.) A collection of preallocated threads that are available to components of an application for reuse, thereby eliminating the need to create new threads at the point of use.

three-way-handshake (n.) The synchronization of two protocol entities as they establish a connection.

threshold (n.) In image processing, a specified gray level that is used for producing a binary image. See also thresholding.

thresholding (n.) The process of producing greater contrast in a gray-scale image. Each pixel is assigned a value. The value 1 is assigned if the image portion of the pixel represents is at or above a specified gray level (the threshold). The value 0 is assigned if the image portion is below that threshold. The result is a high-contrast, black-and-white image that highlights certain features.

throughput (n.) A measure of the work of a computer system in a set period. An example is floating-point instructions per second.

TIC (n.) track index cache.

TIFF (n.) Tagged Image File Format.

tile (1) (n.) A rectangular area that is used to cover a surface with a pattern or visual texture. For example, Workspace Manager supports tiling, enabling users with limited color availability to create new color tiles that are blended from existing colors.

(2) (v.) To cover a surface with non-overlapping polygons or other geometric objects.

tiled window (n.) A type of window that does not overlap, forming a pattern like pieces of a mosaic.

time-of-day clock (TODC) (n.) In Sun systems, a clock module that contains the system date and time (year-month-day-hour-minutes).

timeout (n.) A situation in which the SBus controller terminates a bus cycle that a slave device has failed to acknowledge. In a correctly designed and functioning system, timeouts should happen only during system configuration.

time-slice multitasking (n.) See multitasking.

timesharing system (n.) A Sun workstation with terminal s that are attached to its serial ports. The terminals rely on the workstation for processing power as well as file service and disk storage.

title bar (1) (n.) In the Java look and feel, the strip at the top of a window that contains its title and window controls.

(2) (n.) In UNIX, the obsolete term for header.

TLI (1) (n.) See Transport Layer Interface.

(2) (n.) Transport Level Interface.

TMPFS See temporary file system.

TNT (The NeWS Toolkit) (n.) See NeWS system.

TOD (adj.) time-of-day.

TODC (n.) See time-of-day clock.

toggle (v.) To change the state of a two-state control, such as a radio button or checkbox, using either the mouse or keyboard.

toggle button (n.) A button that alternates between two states. For example, the user might click one toggle button in a toolbar to turn italics on and off. A single toggle button has checkbox behavior. A programmatically grouped set of toggle buttons can be given the mutually exclusive behavior of radio buttons. In the Java look and feel, toggle buttons are created by using the `JToggleButton` component. See also toolbar button.

token (1) (n.) A piece of data that is passed around within the software.

(2) (n.) A data packet that is in the form of a GSS-API `gss_buffer_t` structure. Tokens are produced by GSS-API functions for transfer to peer applications.

Tokens are of two types. *Context-level tokens* contain information that is used to establish or manage a security context. For example, `gss_init_sec_context()` bundles a context initiator's credential handle, the target machine's name, and flags for various requested services into a token to be sent to the context acceptor.

Message tokens (also called *per-message tokens* or *message-level tokens*) contain information that is generated by a GSS-API function from messages to be sent to a peer application. For example, `gss_get_mic()` produces an identifying cryptographic tag for a particular message and stores the tag in a token to be sent to a peer with the message. Technically, a token is considered separate from a message, which is why `gss_wrap()` is said to produce an *output_message* and not an *output_token*.

toolbar (n.) A graphical collection of frequently used commands or options. Toolbars typically contain buttons, but other components (such as text fields and combo boxes) can be placed in toolbars as well. In the Java look and feel, toolbars are created by using the `JToolBar` component. See also toolbar button.

toolbar button (n.) A button that is displayed in a toolbar, typically a command or toggle button. In the Java look and feel, toolbar buttons are created by using the `JButton` or `JToggleButton` component. See also command button, toggle button.

ToolTalk™ service (n.) A service for communications between applications on the desktop.

tool tip (n.) A short text string that is displayed on screen to describe the interface element beneath the pointer.

top-level container (n.) The highest-level container for a Java application or applet. The top-level containers are `JWindow`, `JFrame`, and `JDialog`.

top-level window (n.) In the X protocol, a child window of the root window.

TP0 See transport protocol class 0.

TP4 (n.) The ISO/OSI transport protocol class 4 (error detection and recovery class). The most powerful OSI transport protocol, it can be paired with any type of network. TP4 is the OSI equivalent of Transmission Control Protocol.

TPE (n.) twisted-pair Ethernet.

TPI See Transport Provider Interface.

trace/breakpoint trap (n.) A trap for tracing and debugging programs.

track (n.) A concentric ring on a disk that passes under a single stationary disk head as the disk rotates.

transceiver (transmitter-receiver) (n.) A device that transmits and receives signals.

transcoding (n.) The conversion of data in one compressed format to another compressed format. An example is converting a JPEG-compressed image to its cell-encoded counterpart.

transform object (n.) An XGL object that specifies geometric transformations on output primitives. The default for all transforms is the identity transform, which uses the identity matrix.

transformation (n.) A change that is made in an object's size, location, or orientation. An example is scaling, translation, and rotation. Also called *transform*.

transformation matrix (n.) In computer graphics, a matrix that specifies a linear mapping of one coordinate space to another coordinate space.

transformation pipeline (n.) In computer graphics, the series of transformations that are used in mapping geometric data and their attributes from model coordinate space to device coordinates space.

transient (adj.) In the Java look and feel, characteristic of a keyword that indicates that a field is not part of the serialized form of an object. When an object is serialized, the values of its transient fields are not included in the serial representation, while the values of its nontransient fields are included.

translation cycle (n.) On the SBus, that portion of a bus cycle between the assertion of grant and the placing of an address on the physical address lines by the SBus controller. After receiving the grant, the designated master places a virtual address on the SBus data lines.

translation filter (n.) A filter that converts a file from one format to another format, while retaining the actual contents of the file. An example is ASCII to PostScript.

Translucent File Service (TFS) (n.) A copy-on-write file system that enables users to share file system hierarchies while providing each user with a private hierarchy for saving files as they are modified.

Transmission Control Protocol (TCP) (n.) A communications protocol which ensures that data is sent between computers on the Internet. See TP4, Transmission Control Protocol/Internet Protocol.

Transmission Control Protocol/Internet Protocol (TCP/IP) (n.) An Internet protocol that provides for the reliable delivery of data streams from one host to another host. SunOS networks run on TCP/IP by default. Also called *Internet Protocol suite*.

transparent (1) (adj.) Characteristic of a device, function, or program that works without user interference.

(2) (adj.) Characteristic of a transmission that includes but does not restrict the use of transmission control characters.

transparent access (n.) The process of using files, data, and programs that are part of another file system on a network.

transport (n.) The means by which an object is passed from one process to another.

transport adapter (n.) The network adapter that resides on a node and connects the node to the cluster interconnect. See also cluster interconnect.

transport cable (n.) The network connection that connects to the endpoints. A connection between cluster transport adapters and cluster transport junctions or between two cluster transport adapters. See also cluster interconnect.

transport endpoint (n.) The destination of a network connection.

transport interface (n.) The library routines and state transition rules that support the services of a transport protocol.

transport junction (n.) A hardware switch that is used as part of the cluster interconnect. See also cluster interconnect.

transport layer (n.) In the ISO/OSI model of network standards, the fourth layer, which controls the transfer of data between session layer entities.

Transport Layer Interface (TLI) (n.) An interface that is to supersede the socket-based interprocess communications mechanisms as the way to access transport services. Modeled after the industry standard ISO Transport Service Definition (ISO 8072). Also called *Transport Level Interface*.

transport protocol class 0 (TP0) (n.) The ISO/OSI simple class. TP0 is the OSI transporttransport protocol which is best paired with an X.25 network or similar network that does not often lose or damage data.

transport provider (n.) The transport protocol that provides the services of the transport interface.

Transport Provider Interface (TPI) (n.) The kernel components of the Transport Layer Interface (TLI). In STREAMS messages, TPI specifies the transport interface.

transport service data unit (TSDU) (n.) The amount of user data that has its identity preserved from one end of a transport connection to the other end.

transport user (n.) The user-level application or protocol that accesses the services of the transport interface.

trap (n.) A software mechanism that causes control of the machine to be instantly transferred to the kernel, even if a user process is currently running.

Trash Can (n.) A window that contains files that have been deleted but not yet removed.

traversal (n.) The process of reading a display list and passing on the graphics information to the viewing pipeline.

tree view (n.) A representation of hierarchical data (for example, directory and file names) as a graphical outline. Clicking expands or collapses elements of the outline. In the Java look and feel, tree views are created by using the `JTree` component.

tristate (n.) An output that is capable of removing its drive from a wire.

true color (n.) A graphics system that is usually equipped with at least 24 bits per pixel. In the 24-bit system, for example, three primary colors in the color graphics system—red, green, and blue—are allotted 8 bits each. The intensities are 2^8, or 256 intensities each for red, green, and blue. This figure translates to a total palette range of 16.7 million colors (256 x 256 x 256). Because the human eye cannot detect the subtlety available in a palette of 16.7 million colors, this range makes possible the computation of what appears to be gradual shading. Also called 24-bit color, RGB color.

TSDU See transport service data unit.

TSIG (n.) Transaction Signatures.

TTY (n.) Historically, teletypewriter equipment. Today, a TTY is any dumb terminal that can access a computer or workstation.

tty driver (n.) A STREAMS-based device in a terminal subsystem.

TTY subwindow (n.) A subwindow that includes a command interpreter but does not support all the text facility operations. An example is a Shell Tool window.

turner (n.) A graphic that is used in the tree view component. The user clicks a turner to expand or collapse a container in the hierarchy.

twenty-four-bit color (n.) See true color.

two-dimensional graphics (n.) Those graphics that are displayed in two dimensions: height and width. The two-dimensional display is represented by two axes, x (horizontal) and y (vertical). The surface that spans the parameters of the horizontal axes and vertical axes is called the x-y plane. Also expressed as 2-D.

type (n.) A class or interface.

"UA" to "UUNET"

UA See user agent.

UART (n.) universal asynchronous receiver-transmitter.

UDF (n.) Universal Disk Format.

UDP (n.) User Datagram Protocol.

UFS See UNIX file system.

UHF (n.) ultra-high frequency.

UI See UNIX International.

UID number See user identification number.

ulp See unit in last place.

ULSI See ultra-large-scale integration.

ultra-large-scale integration (ULSI) (n.) The process of placing more than 100,000 components on a chip.

unary operator (n.) An operator having only one operand. You can use the + (plus) and - (minus) unary operators in absolute, relocatable, and arithmetic expressions.

unasserted (adj.) Characteristic of a signal that terminates an action. Contrast with asserted.

unavailable (adj.) Characteristic of a window element that cannot be selected in the current context. For example, the OK button is unavailable till you select an item in the list.

undo (v.) To reverse the effect of the most recently performed operation on an object.

Unicode (n.) A 16-bit character set that was defined by ISO 10646. All source code in the Java programming environment is written in Unicode.

uniform resource locator (URL) (n.) A standard for writing a text reference to an arbitrary piece of data in the World Wide Web (WWW). A URL looks like "protocol://host/localinfo." The data "protocol" specifies a protocol for fetching the object (such as HTTP or FTP). The data "host" specifies the Internet name of the targeted host. The data "localinfo" is a string (often a file name) that is passed to the protocol handler on the remote host.

UniForum (n.) The Uniforum Technical Committee, formerly the /usr/group, is an association of individuals, corporations, and institutions with an interest in the UNIX system. This organization provides input

to the Portable Operating System Interface for UNIX (POSIX) and other standards committees and consortia to aid in the development of independent industry-driven standards.

unit in last place (ulp) (n.) In binary formats, the least-significant bit of the significand bit 0 is the unit in the last place.

universal address (n.) A hexadecimal address of a type of network, such as TCP/IP, that configures the port monitor to check for print requests from print clients on a network.

UNIX file system (UFS) (n.) The default disk-based file system under the SunOS 5.0 (minimum) operating system.

UNIX International (UI) (n.) A consortium which consists of Sun, AT & T, and other groups that formed to advance a UNIX System V-based environment, including the Open Look graphical user interface.

UNIX-to-UNIX Copy Program (UUCP) (n.) A program that uses the UNIX-to-UNIX Copy Protocol.

UNIX-to-UNIX Copy Protocol (UUCP) (n.) A protocol for communication between consenting UNIX systems.

unmount (n.) The process of removing access to a directory on a disk that is attached to a machine or a remote disk on a network. See also mount.

UPA (n.) UltraSPARC port architecture.

update (1) (n.) An installation on a system that changes software that is of the same type. Unlike an upgrade, an update might downgrade the system. Unlike an initial installation, software of the same type that is being installed must be present before an update can occur.

(2) (v.) To perform an installation on a system that changes software that is of the same type.

upgrade (n.) An installation that merges files with existing files and saves modifications where possible.

An upgrade of the Solaris Operating System merges the new version of the Solaris operating system with the existing files on the system's disk or disks. An upgrade saves as many modifications as possible that you have made to the previous version of the Solaris operating system.

upper Stream (n.) A Stream that terminates above a multiplexer. The beginning of an upper Stream originates at the Stream head or another multiplexer driver.

UPS (n.) uninterruptible power supply.

upstream (n.) In STREAMS, a direction of data that flows from a driver toward the Stream head. Also called *input side*, *read-side*.

URL See uniform resource locator.

USB (n.) Universal Serial Bus.

USD (n.) U.S. dollars.

user account (n.) A record of essential user information that is stored on the system. Each user who accesses a system has a user account.

user agent (UA) (n.) An ISO/OSI application process that acts on behalf of a user or an organization in the X.400 Message Handling System. The UA creates, submits, and receives messages for you.

user-defined (adj.) Characteristic of a setting or some other customization that you determine.

user ID (n.) A number that identifies a user to the system.

user identification number (UID) (n.) The number that is assigned to each login name. The system uses UID numbers to identify, by number, the owners of files and .

user name (n.) A combination of letters, and possibly numbers, that identifies a user to the system.

UTC (n.) Universal Coordinate Time (accepted acronym from the French).

UTF-8 (n.) File System Safe Universal Transformation Format.

utility (n.) A standard program, usually furnished at no charge with the purchase of a computer, that does the computer's housekeeping.

utility window (n.) In a non-multiple document interface (MDI) with the Java look and feel, a modeless dialog box that typically displays a collection of tools, colors, fonts, or patterns. Unlike palette windows, utility windows do not float. User choices that are made in a utility window affect whichever primary window is active. A utility window is not dismissed when a primary window is dismissed. Utility windows are created by using the `JDialog` component. See also secondary window.

UTP (n.) unshielded twisted pair.

UUCP See UNIX-to-UNIX Copy Program, UNIX-to-UNIX Copy Protocol.

UUNET (n.) A network that carries electronic newsgroups, aggregates of many electronic messages that are sorted by topic, to thousands of users on hundreds of workstations worldwide.

"VAC" to "VV"

VAC (n.) volts alternating current.

validate (v.) To have an application verify that the contents of a text field are appropriate to the function.

value-added reseller (VAR) (n.) A company that buys hardware and software, adds more features or services, then resells the upgraded products.

VAR See value-added reseller.

variable (1) (n.) A symbol with a value that might change. In the shell, the variable is a symbol that represents some string of characters. You can use a variable in an interactive shell as well as within a shell procedure. Within a shell procedure, examples include positional parameters and keyword parameters.

(2) (n.) An item of data that is named by an identifier. Each variable has a type, such as `int` or `Object`, and a `scope`. See also class variable, instance variable, local variable.

VDC (1) (n.) virtual device coordinates.

(2) (n.) volts direct current.

VDC transform (n.) In computer graphics, the final transform in the transformation pipeline that provides the mapping between virtual device coordinates (VDC) and device coordinates.

VDC transformation matrix (n.) In computer graphics, the transformation matrix that maps the clip-space window onto a rectangular region of the raster, which is called the raster viewport.

vector (1) (n.) A line segment on a display surface with beginning points and endpoints that are identified by x, y coordinates on a grid.

(2) (n.) A conceptual direction (perhaps with length) that denotes, for example, a light-ray direction or an object's boundary.

vertex (n.) The location at which vectors and polygon faces or edges intersect. In transformation algorithms, an object's vertexes describe the object's location and its location in relation to other objects.

vertical blanking (n.) The number of scan lines in a field that are mandated to contain nothing except field sync and blanking. Only a small number of vertical interval lines are blanked.

vertical drive (n.) A pulse that contains vertical synchronization information that lasts the duration of vertical blanking.

vertical interval (n.) The raster lines that are precluded by a video signal standard from containing a picture. You can convey those vertical interval lines that are not required to be blanked as test signals (VITS), a reference signal (VIRS), timecode (VITC), closed captioning data (CC), teletext, or other information.

vertical refresh rate (n.) A monitor specification that describes the rate at which one horizontal refresh cycle is completed. The higher the vertical refresh rate, the less flickering on the screen.

very-large-scale integration (VLSI) (n.) The process of placing more than 100,000 transistors on one chip.

VESA local bus (Video Electronics Standards Association local bus) (n.) The first standardized local bus. Common on IA systems, the VESA local bus is an extension of the ISA bus, which is directly connected to the central processing unit (CPU) data bus. Also called *VL bus (VLB)*.

VEU (n.) volume end user.

VF (n.) voice frequency.

VGA (n.) video graphics array.

VHF (n.) very high frequency.

video interface (n.) A high-speed interface that is used with the SPARCprinter and the SPARCprinter SBus printer card.

video random access memory (VRAM) (n.) A type of dynamic RAM (DRAM) that is used in high-speed graphics frame buffers. With conventional DRAM, both the processor and the frame buffer logic must access RAM by sharing the same signal lines or buses on the RAM chips. VRAM provides separate buses for the processor and the frame buffer logic.

video (random access memory) single inline memory module (VSIMM) (n.) A small printed circuit card that contains dynamic random access memory (DRAM) chips for storing video images.

viewing pipeline (n.) The process by which picture data are translated from user input to the screen display. In the 3-D viewing pipeline, for example, an object is defined by the application developer in model coordinates. The model coordinates are mapped to world coordinates. The world coordinates are mapped to normalized device coordinates (NDCs). The NDCs are mapped into device coordinates. The final picture is then displayed.

view model (n.) In computer graphics, a model that specifies the geometric aspects of image formation, determining the orientation of images and the spatial relationships between objects.

viewport (n.) A specified window on a display surface that usually shows only part of a document or graphic.

view transform (n.) In computer graphics, the transform that maps graphic objects that are defined in world coordinates to normalized device coordinates (NDCs) where viewing operations occur.

view transformation matrix (n.) In computer graphics, the transformation matrix that maps graphic objects from world coordinates (WCs) to normalized device coordinates (NDCs). The view transformation matrix can be specified directly or derived from the matrix product of the view orientation matrix and the view mapping matrix.

view volume (n.) In 3-D, the conceptual 3-D space between the user's eye point and infinity. The depth of the view volume becomes finite if front and back clipping planes limit the drawing space that is available to the application. The width of the view volume, though theoretically infinite, is limited by the display surface's edges.

virtual address (1) (n.) A 16-bit integer that identifies a byte "location" in virtual address space. The memory management unit translates the virtual address into a physical address.

(2) (n.) The address that identifies a virtual block on a mass-storage device.

virtual circuit (n.) An apparent connection between processes that is facilitated by the Transmission Control Protocol (TCP). A virtual circuit enables applications to "talk" to each other as if they had a physical circuit.

virtual device coordinates (n.) In computer graphics, a device-independent coordinate system that isolates the specification of view boundaries from device coordinates.

virtual machine (n.) An abstract specification for a computing device that can be implemented in different ways, in software or hardware. You compile to the instruction set of a virtual machine, much as you would compile to the instruction set of a microprocessor. The Java virtual machine consists of a bytecode instruction set, a set of registers, a stack, a garbage-collected heap, and an area for storing methods.

virtual memory (n.) A condition in which a user program can be larger than physical memory. Virtual memory is possible through a storage hierarchy in which a program's virtual image is stored in secondary storage while main memory stores only active program segments.

VIS (n.) Visual Instruction Set.

visual (n.) In the X protocol, the specifications for color handling for a drawable image, including visual class, depth, and type. The visual accounts for the differences between various types of hardware in determining the way pixel values are translated into visible colors within a window. A particular screen can support only one visual type.

visual editor (n.) An editor that shows a screenful of text at a time and enables you to move the pointer to any part of the screen and make changes. An example is the UNIX system `vi` program. See also screen editor. Contrast with line editor.

visualization (n.) A method for creating graphical models to represent complex (typically scientific) data. See also volume rendering.

VLAN (n.) virtual local area network.

VLB, VL bus See VESA local bus.

VLF (n.) very low frequency.

VLSI See very-large-scale integration.

VLSM (n.) Variable-Length Subnet Mask.

VM (n.) Volume Manager.

VMEbus (n.) An interfacing system that connects data processing, data storage, and peripheral control devices in a closely coupled configuration.

volatile memory (n.) Compare with nonvolatile memory.

volume rendering (n.) A method of computing solid volume data for graphical display in volumetric models that are composed of 3-D elements which are called voxels. Direct volume-rendering techniques enable you to manipulate the volume data as a solid structure that you can slice to expose internal views.

VOLSER (n.) volume serial number.

voxel (volume element) (n.) A 3-D element that describes the data in a volumetric structure. See also volume rendering.

VP (n.) virtual partition.

VPN (n.) virtual private network.

VRAM See video random access memory.

VSIMM See video (random access memory) single inline memory module.

VTOC (n.) volume table of contents.

VV (n.) virtual volume.

"W3C" to "WWW"

W3C (n.) World Wide Web Consortium. (Use sparingly.)

WAIS (n.) Wide Area Information Server.

wait (n.) A UNIX® command that waits for all background processes to complete, and reports their termination status.

wait state (n.) A condition whereby a microprocessor awaits the arrival of data.

WAN Seewide area network.

watermark (n.) In STREAMS, a limit value that is used in flow control. Each queue has a high watermark and a low watermark. The high watermark value indicates the upper limit that is related to the number of bytes which are contained on the queue. When the queued character reaches its high watermark,

STREAMS causes blocking of another queue that attempts to send a message to this queue. When the characters in this queue are reduced to the low watermark value, the other queue is unblocked by STREAMS.

WBEM (n.) Web-Based Enterprise Management.

WC See world coordinates.

web browser (n.) An application that enables the user to view, navigate through, and interact with HTML documents and applets. Also called browser.

WebTone (n.) The Sun term for the 21st-century Internet equivalent to the dialtone. WebTone facilitates information flow across devices, from smart cards to supercomputers.

WID (n.) Window ID.

wide area network (WAN) (n.) A network which consists of many systems that provide file transfer services. This network can cover a large physical area, sometimes worldwide.

wide character (n.) A data type with a fixed number of bytes in which a character from any supported character set is stored. Interpretation of a wide character is usually locale dependent. ANSI-C uses a data type that is called `wchar_t` as the name of the data type.

widget (n.) In a window system, a reusable user interface component such as a button, scrollbar, control area, or text edit area. When an X Toolkit Intrinsics function creates a widget, it is returned as an opaque data handle and is assigned to a which is called a widget identifier. See also OLIT.

widget class (n.) The widget's type. Class defines the resource set for instances of that class of widgets.

widget class hierarchy (n.) The hierarchy of widget superclasses and subclasses.

widget instance (n.) A value for the resource set that is defined by the corresponding widget class.

widget set (n.) A family of widgets that are used together to produce a unified user interface.

wildcard (n.) A metacharacter that represents a range of ordinary characters. An example is the shell's use of * and ?.

window (n.) See dialog box, palette window, plain window, primary window, secondary window, utility window.

window control (n.) A control that affects the state of a window. An example is the Maximize button in a title bar.

window frame (n.) The visible part of a window that surrounds a software application. A window frame can contain a maximum of five controls: title bar, resize borders, minimize button, maximize button, and the Window menu button.

window gravity (n.) In the X protocol, a capability that automatically repositions resized windows to an edge, corner, or center of the window. See also bit gravity.

window icon (n.) A minimized window.

window list (n.) A window element that presents a list of all the open windows that are associated with the window from which the action was selected.

window management (n.) A set of functions with which you can control the layout and state of windows on the screen. The agent that implements these functions is called the "window manager." The functions include moving, resizing, opening, closing, raising, lowering, and quitting windows.

Window menu (n.) The menu that is displayed when you choose the Window menu button. The menu choices enable you to manipulate the location or size of the window, such as Move, Size, Minimize, and Maximize.

Window menu button (n.) The control at the upper left corner of a window, next to the title bar. Choosing the Window menu button displays the Window menu.

window raster (n.) In computer graphics, a raster object that designates a rectangular area on the display device screen.

window system (n.) A system that provides you with a multiuse environment on the display device. Separate windows are similar to separate displays on the monitor screen. Each window can run its own application. You open some number of windows for various applications, and the window system handles the communications between each of the applications and the hardware.

wireframe model (n.) A graphical object with edges that are created by line segments. Because it is wholly transparent, the object's hidden lines are visible (unless you use an algorithm to remove them). Such an object can be drawn quickly because no surfaces need to be rendered or highlighted. However, in a complex 3-D drawing (a car engine, for example), it might be difficult for the viewer to make visual sense of the drawing.

word (n.) A character string of 8 bits, 16 bits, 32 bits, or 64 bits. The SPARCstation system uses a 32-bit word. An UltraSPARC™ workstation uses a 64-bit word.

wordwrap (n.) The automatic continuation of text from the end of one line to the beginning of the next line.

work area (n.) The part of a window where controls and text are displayed.

working directory (n.) The directory in which the user's commands occur if no other directory is specified.

Workshop for Implementors of OSI (OIW) (n.) The North American regional forum at which Open Systems Interconnection (OSI) implementation agreements are decided. OIW is equivalent to EWOS in Europe and AOW in the Pacific. Also called *NIST OIW* or the *NIST Workshop*.

workspace (1) (n.) The current screen display, the icons and windows it contains, and the unoccupied screen area where you can place objects.

(2) (n.) A specially designated (but standard) directory and its subdirectory hierarchy. Usually, each developer on a project works in his or her own isolated workspace concurrently with other developers who are programming in other workspaces.

workspace background (n.) The portion of the display with no windows, icons, or objects.

Workspace Manager (n.) The software application that controls the size, placement, and operation of windows within multiple workspaces. The Workspace Manager includes the front panel, the window frames that surround each application, and the Window and Workspace menus.

Workspace menu (n.) The menu that is displayed by pointing at an unoccupied area of the workspace and clicking a mouse button.

workspace object (n.) An object that has been copied from the file manager to the workspace.

workspace switch (n.) A control that enables you to select one workspace from among several workspaces.

world coordinates (WC) (n.) The coordinate system which is scaled so that user-defined objects can be represented in units appropriate to the application, such as inches, meters, and miles. Each object in a picture is first described in its own model coordinates, and all model coordinates are then mapped into world coordinates.

world-readable files (n.) The files on a file system that can be viewed (read) by any user. For example: files that reside on Web servers can only be viewed by Internet users if their permissions have been set to world readable.

World Wide Web (WWW) (n.) The web of systems and the data in them that is the Internet. See also uniform resource locator.

wrapper (n.) An object that encapsulates and delegates to another object to alter its interface or behavior in some way.

wrapping (n.) On the SBus, the process—during burst transfers—by which the burst can begin at an arbitrary word boundary within the block, with the address incremented by 4, modulo the size of the burst in bytes.

write (1) (v.) To place text in a file.

(2) (v.) To use the write command to communicate with other users.

write-protect (v.) To restrict writing in a file to authorized users or programs.

write queue (n.) A message queue in a module or driver that contains messages which are moving downstream. A write queue is associated with the `write(2)` system call and output from a user process.

write side (n.) See downstream. Also called *output side*.

WSDL (n.) Web Services Description Language.

WTT (n.) "Thai input/output methods for computer" standard.

WWW See World Wide Web. See also uniform resource locator.

"X11" to "x-y plane"

X11 See X Window System, Version 11.

X11/NeWS system (n.) A Sun window system that is based on both X and NeWS systems.

X11R5 (n.) The X Window System, Version 11 revision 5. See X Window System, Version 11.

x-axis (n.) The horizontal axis in the Cartesian coordinates system. Although coordinate systems can be moved and their orientations can be altered, the x-axis is always perpendicular to the y-axis. See also z-axis.

XBus (n.) A packet-switched bus that supports multiple buses by using a cache controller in large multiprocessing configurations. See also multiprocessor.

XDBus (n.) On Sun server systems, the backplane bus for the main card cage.

X Display Manager (XDM) (n.) A program which is supplied with the OpenWindows™ interface that manages X displays.

XDM (X Display Manager) (n.) A program which is supplied with the OpenWindows interface that manages X displays.

XDR See external data representation.

XEvIE (n.) X Event Integration Extension.

XGL library (n.) The Sun graphics library.

XIL library See X imaging library.

X imaging library (XIL) (n.) A platform programming interface for imaging and video support. The X imaging library provides a common implementation of imaging functionality to multiple higher-level interfaces. XIL

also provides imaging capabilities that are not currently available, and a way for independent software vendors (ISVs) to access low-level and hardware capabilities.

Xlib (n.) The C language interface to the X protocol.

XML (n.) Extensible Markup Language.

XPCOM (n.) cross-platform component object model.

XPG (n.) X/Open Portability Guide.

X server (n.) In the X protocol, a basic windowing mechnanism that handles interprocess communication (IPC) connections from clients. An X server also demultiplexes graphics requests onto the screens and multiplexes input back to the appropriate clients. An X server controls a single keyboard and pointer and one or more screens that constitute a single display.

XView toolkit (n.) An X11 toolkit for building applications. The XView™ API is derived from the SunView™ API and is based on Xlib, the lowest level of programming available to the X window system developer.

X Window System Protocol (X Protocol) (n.) The computer protocol by which clients communicate with the X server and the X server communicates with clients.

X Window System Toolkit (n.) An X consortium standard that provides the structure and library functions for creating and assembling widgets into a user interface. Also called the X Toolkit, Xt Intrinsics, Intrinsics, and Xt.

X Window System, Version 11 (X11) (n.) The system that was developed by the Massachusetts Institute of Technology (MIT) Consortium. X11 is a network-based protocol.

x-y plane (n.) The plane that is created by the x and y axes in a coordinate system.

"y-axis" to "YUV"

y-axis (n.) The vertical axis in the Cartesian coordinates system. Although coordinate systems can be moved and their orientations can be altered, the y-axis is always perpendicular to the x-axis. See also z-axis.

YUV (n.) A color model that is used in the PAL (European) television format. Each color is represented by a combination of three components: Y, U, and V. The Y component represents the luminance, or brightness, of the color. The U and V components carry 1.3-MHz chrominance information.

"z-axis" to "zone"

z-axis (n.) The axis in 3-D graphics that represents depth. The z-axis is perpendicular to the x-y plane. When the z-axis is added to the x-axis (width information) and the y-axis (height information), it forms a virtual 3-D space.

z-buffer (n.) The depth buffer in 3-D graphics. The z-buffer memory locations, like those in the frame buffer, correspond to the pixels on the screen. The z-buffer, however, contains information that is related only to the z-axis (or depth axis)—useful in hidden-surface removal algorithms.

z clipping (n.) The clipping of a 3-D object in the depth dimension in 3-D graphics.

zero-order interpolation (n.) See nearest-neighbor interpretation.

zombie (n.) A process that has terminated but remains in the process table because its parent process has not sent the proper exit code. When a user reboots a system, zombie processes are removed from the process table. Zombie processes consume no system resources.

zone (n.) The administrative boundary within a network domain, often composed of one or more subdomains.