Glossary

Access Control Mechanism

An access control mechanism is a means of deciding which clients or applications have access to the OpenWindows server. There are two different types of access control mechanisms: user-based and host-based.

Bitmap

A bitmap is a rectangular array of elements, where each element holds either an *inside* value or an *outside* value.

Bitmap Font

A bitmap font is a collection of bitmaps with additional information (for example, character spacing) that defines how the bitmaps are to be used.

Bus

The bus is the system input/output (I/O) link. The display device is both physically and logically connected to the system by the bus. The SBus, VME, and P4 buses are used in SPARC systems. A third-party system may use a bus other than one of these three buses.

Client

A client is an application program that connects to the window server by some interprocess communication. It is referred to as a client of the window server. A client can run on the same machine as the window server or it can connect to a server running on another machine on the network. A client of the OpenWindows server must communicate via the X11 protocol.

Client-Server Model

The most commonly used paradigm when writing distributed applications is the client-server model. In this scheme, clients request services from a window server process. The client and server require a protocol that must be implemented at both ends of a connection. The OpenWindows server implements the X11 protocol.

Color Look-Up Table

A color look-up table is a hardware device that provides a mapping between pixel values and RGB color values. Also called a look-up table (LUT).

Colormap Flashing

Only one client colormap is installed at a given time. The windows that are associated with the installed colormap will show their correct colors. Windows that are associated with some other colormap may show false colors. This display of false colors is referred to as colormap flashing.

Composite Font

A composite font is a collection of base fonts organized hierarchically.

Connection

The communication path between a client and the server.

Default Visual

The default visual is one of the visuals available on the display device. When you start a client program, the program will usually run in the default visual unless a different visual is specified.

Display Device

Your monitor is connected to a display device that controls what is shown on the monitor. The display device includes memory (called a frame buffer) dedicated to storing display information. A display device is also referred to as a graphics adapter.

Device Driver

The device driver is the name of a device in the UNIX file system, where *X* is the number of that particular device on your system. For example, if a system had two CG3s, the first would be named `/dev/fbs/cgthree0`, and the second would be `/dev/fbs/cgthree1`. If a system had one CG3 and one GX, the CG3 would be `/dev/fbs/cgthree0` and the GX `/dev/fbs/cgsix0`.

Event

Clients are informed of information asynchronously by means of events. Events are grouped into types. A client must express interest in an event in order to receive that event from the server.

Extension

An extension to the core protocol can be defined to extend the functionality of the system.

Frame Buffer

Pixel data is typically stored in dedicated computer memory known as a frame buffer or video memory.

Graphics Accelerator

A display device that includes circuitry to increase the rate at which images are drawn into the frame buffer is called an accelerator, or graphics accelerator. A graphics accelerator often includes memory and circuitry that permits enhanced functionality, such as display of additional colors, 3D images, and animation.

Graphics Adapter

See Display Device.

Hardware Colormap

A hardware colormap is a color LUT. (*See also* Color Look-Up Table).

Look-Up Table

See Color Look-Up Table.

Multi-Depth Device

The TC display device provides visuals of different depths; it is referred to as a multiple plane group (MPG) or multi-depth device.

Multiple Plane Group

A display device that can simultaneously support more than one visual category is known as a multiple plane group (MPG) device.

Outline Font

An outline font is a collection of *ideal* shapes of characters. Each shape is defined numerically by continuous curve segments that separate the *inside* from the *outside* of the shape. This method is in use on high-resolution devices such as photo-typesetters.

Pixmap

A pixmap is a block of off-screen memory in the server; it is an array of pixel values.

Plane Group

The physical memory on a display device in which the pixel data is stored is commonly called a plane group.

Product Name

The product name identifies the type of display card.

Request

A request is a command to the server sent over a connection.

RGB

R, G, and B are the voltage levels to drive the red, green, and blue monitor guns, respectively.

Screen

A screen is a physical monitor and hardware, which is either color or black-and-white. A typical configuration could be a single keyboard and mouse shared among the screens.

Software Colormap

A software colormap is a software abstraction of the color mapping process that a color LUT provides. The software colormap can be loaded, or installed, into a hardware color LUT. Also called a colormap.

Virtual Colormap

A software colormap that is not visible until it is installed into a hardware color LUT.

Visual

A visual describes a way of interpreting a pixel value. The visual class and the pixel size attribute collectively describe a visual.

Visual Category

A visual category is a grouping of all visual classes of a given pixel size. The following visual categories are supported by OpenWindows: 1-bit, 4-bit, 8-bit, and 24-bit.

Visual Class

A visual class is how the pixel will be displayed as a color.

Window

A window provides a drawing surface to clients for text and graphics. A single client application can use multiple windows.

Window ID Table Descriptor

A window ID (WID) table contains descriptors for visual aspects of a pixel, such as whether it is an 8-bit pixel or a 24-bit pixel, which LUT should be used when displaying the pixel, and whether the pixel is double-buffered.

Window Manager

Manipulation of windows on the screen and much of the user interface (policy) is typically provided by a window manager client. The window manager communicates only with the window server.

Window Server

A window server, or display server such as the Solaris X server, is a program that handles the display capabilities of a machine and collects input from user devices and other clients, and sends events to clients. The server handles all communication with the window manager.