Color Usage Categories

When the user activates a window, the **Palette Manager** examines the window's palette, if it has one, to determine whether colors need to be loaded into the current device's color look-up tables. If your window requires 180 shades of green, for example, chances are the current CLUTs lack the necessary colors. Whether the **Palette Manager** must change a color table depends on what colors are in it already, what colors you ask for, and the categories into which your colors fall.

The **Palette Manager** tracks colors in six usage categories, which you specify to control the way the **Palette Manager** allocates colors. You assign usage categories to colors when you create your palette, and you can change the categories using **Palette Manager** routines.

- A **courteous color** accepts whatever value the **Color Manager** determines to be the closest match currently available in the color table. On indexed devices, the **Palette Manager** lets the **Color Manager** select appropriate pixel values from those already in the CLUT. On direct devices, courteous colors always display as specified. Courteous colors have no special properties, but their use offers you a convenient holding place for collecting colors.

- A **tolerant color** also accepts the **Color Manager** choices on an indexed device, but, unlike a courteous color, a tolerant color specifies an acceptable range for color matching. If no color in the device's color table falls within that range, the **Palette Manager** loads the color required. On direct devices, the **Palette Manager** matches tolerant colors as closely as the hardware allows.

- An **animated color** is used for special color animation effects, as described in **Animated Colors**. Animated colors are reserved by a palette until its window is closed, and until then their spaces are unavailable to (and cannot be used to match) any other request for color. The effects of color animation depend on the existence of a device color table, and, since a direct device does not have one, color animation has no effect on a direct device's display. If your window spans two devices, one indexed and one direct, the **Palette Manager** is dexterous enough to animate the portion on the indexed device's screen.

- An **explicit color** specifies an index value, and always generates the corresponding entry from the device's color table. Explicit colors are useful if you wish to display the contents of a color table-for example, to display to a user some or all of the colors actually available.

- An **inhibited color** is prevented from appearing on color and gray-scale devices of specified pixel depths. Inhibited colors are always combined with other usage categories. You can create a large palette-for example, with two different sets of color ranges, one optimized for a 4-bit device, the other optimized for an 8-bit device-and then inhibit colors on the devices for which they are not intended.

- **PmWhite and pmBlack colors** are assigned to white or black on 1-bit devices. If your application is working with red and dark blue, for example, both might get mapped to black on a 1-bit device. By assigning pmWhite to one and pmBlack to the other, you assure that they will be distinct. These categories may be combined with other usage categories, but combining them with each other is undefined.

Several color usage categories can be combined. You can specify that a color is both tolerant and explicit, for example, which means that your RGB color, or a tolerably close match, is placed in the color table at the index corresponding to that palette entry (as opposed to merely being available somewhere in the table), on all devices that touch the window.

When you specify colors for a palette within a 'pltt' resource, you usually assign the same usage value to each color in the palette. However, if you must use a particular color differently than the others, you can assign it a different usage value, either when creating the resource file, or within the application by means of the **SetEntryUsage** procedure.