[0033] Player participation on a gaming machine increases with entertainment. Improved visual output provided by the present invention enables more entertaining forms of interaction between a player and gaming machine, and thus improves player participation and patronage for a casino or gaming establishment that includes a gaming machine of the present invention.

[0034] For example, the common line of sight and layered displays improve presentation of three-dimensional (3D) graphics. A gaming machine may use a combination of virtual 3D graphics on any one of the display devices—in addition to 3D graphics obtained using the different depths of the layered display devices. Virtual 3D graphics on a single screen typically involve shading, highlighting and perspective techniques that selectively position graphics in an image to create the perception of depth. These virtual 3D image techniques cause the human eye to perceive depth in an image even though there is no real depth (the images are physically displayed on a single display screen, which is relatively thin). Also, a predetermined distance (between display screens for the layered display devices) facilitates the creation of graphics having real depth between the layered display devices. 3D presentation of graphic components may then use a combination of: a) virtual 3D graphics techniques on one or more of the multiple screens and/or b) the depths between the layered display devices. Further description of 3D graphics presentation is provided below.

[0035] Although the following examples describe display systems that include layered display devices for a primary display located centrally in a gaming machine, those of skill in the art will recognize that display systems described herein are applicable towards other areas of a gaming machine, such as a top glass or a belly glass.

[0036] As the term is used herein, a display device refers to any device configured to adaptively output a visual image to a person in response to a control signal. In one embodiment, the display device includes a screen of a finite thickness, also referred to herein as a display screen. For example, LCD display devices often include a flat panel that includes a series of layers, one of which includes a layer of pixilated light transmission elements for selectively filtering red, green and blue data from a white light source. Numerous exemplary display devices are described below.

[0037] The display device is adapted to receive signals from a processor or controller included in the gaming machine and to generate and display graphics and images to a person near the gaming machine. The format of the signal will depend on the device. In one embodiment, all the display devices in a layered arrangement respond to digital signals. For example, the red, green and blue pixilated light transmission elements for an LCD device typically respond to digital control signals to generate colored light, as desired.

[0038] In one embodiment, the gaming machine includes two display devices, including a first, foremost or exterior display device and a second, underlying or interior display device. For example, the exterior display device may include a transparent LCD panel while the interior display device includes a digital display device with a curved surface.

[0039] In another embodiment, the gaming machine includes three display devices, including a first, foremost or exterior display device, a second or intermediate display device, and a third, underlying or interior display device. The display devices are mounted, oriented and aligned within the gaming machine such that at least one—and potentially numerous—common lines of sight intersect portions of a display surface or screen for each display device. Several exemplary display device systems and arrangements that each include multiple display devices along a common line of sight will now be discussed.

[0040] Layered display devices may be described according to their position along a common line of sight relative to a viewer. As the terms are used herein, 'proximate' refers to a display device that is closer to a person, along a common line of sight (such as **20** in FIG. **1**A), than another display device. Conversely, 'distal' refers to a display device that is farther from a person, along the common line of sight, than another.

[0041] Referring now to FIGS. **1**A and **7**, a gaming machine **10** of one embodiment of the present invention includes a cabinet or housing **12** that houses exterior display device **18***a,* intermediate display device **18***b,* interior display device **18***c,* touchscreen **16**, and a processor **132** (FIG. **7**) that communicates with a memory device **134** and with each of the display devices **18** and touchscreen **16**. The processor **132** controls the operation of components in gaming machine **10** to present one or more games, receive player inputs using the touchscreen **16**, and control other gaming interactions between the gaming machine and a person **21**.

[0042] Under the control of processor **132**, display devices **18** generate visual information for person **21**. As shown in FIG. **1**A, there are three layered display devices **18**: a first, exterior or frontmost display device **18***a,* a second or intermediate display device **18***b,* and a third, interior, or backmost display screen **18***c.* The display devices **18***a,* **18***b* and **18***c* are mounted and oriented within the cabinet **12** in such a manner that a straight and common line of sight **20** intersects the display screens of all three display devices **18***a,* **18***b* and **18***c.* In addition, display devices **18***a,* **18***b* and **18***c* are all relatively flat and aligned about in parallel to provide a plurality of common lines of sight that intersect screens for all three.

[0043] The gaming machine may also include one or more light sources. In one embodiment, display devices **18** include LCD panels and at least one light source that provides light, such as white light, to the pixilated filter elements on each LCD panel. For example, a back lighting source (not shown) may be positioned behind display device **18***c.* The pixilated panel for each parallel display device **18***a,* **18***b* and **18***c* then filters white light from the backmost backlight to controllably output color images on each screen.

[0044] Other light sources may be used to illuminate a reflective or transmissive light filter. For example, each display device **18** may be individually illuminated using a white light source attached near the sides of each pixelating panel; the side light source may include a mini-fluorescence source and light guide that transmits light from the side light source, down the flat panel, and to all the pixilated filter elements in the planar LCD panel for pixilated image production. Other suitable light sources may include cold cathode fluorescent light sources (CCFLs) and/or light emitting diodes, for example.

[0045] In another embodiment, a distal and emissive display device is arranged behind a proximate and non-emis-