

[0059] Referring to FIGS. 4A, 4B and 6, MLDs and their operation will be further described. Processor 332 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. Under the control of processor 332, display devices 18 generate visual information for game play by a person 21. As shown in FIG. 4A, there are two layered display devices 18: a first, exterior or front most display device 18a, and a backmost display screen 18c. As shown in FIG. 4B, there are three layered display devices 18: front most display device 18a, a second or intermediate display device 18b, and a backmost display screen 18c. The display devices 18a, 18b and 18c 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 18a, 18b and 18c. In addition, display devices 18a, 18b and 18c are all relatively flat and aligned about in parallel to provide a plurality of common lines of sight that intersect screens for all three.

[0060] 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 provide light, such as white light, to the pixilated filter elements on each LCD panel. For example, the back lighting source or optical module illustrated in FIGS. 1B and 1C, may be positioned behind display device 18c. The pixilated panel for each parallel display device 18a, 18b and 18c then filters white light from the backmost backlight to controllably output color images on each screen.

[0061] The proximate display devices 18a and 18b each have the capacity to be partially or completely transparent or translucent. In a specific embodiment, the relatively flat and thin display devices 18a and 18b are liquid crystal display devices (LCDs). Other display technologies are also suitable for use. Various companies have developed relatively flat display devices that have the capacity to be transparent or translucent. One such company is Uni-Pixel Displays, Inc., Inc. of Houston Tex., which sells display screens that employ time multiplex optical shutter (TMOS) technology. This TMOS display technology includes: (a) selectively controlled pixels that shutter light out of a light guidance substrate by violating the light guidance conditions of the substrate and (b) a system for repeatedly causing such violation in a time multiplex fashion. The display screens that embody TMOS technology are inherently transparent and they can be switched to display colors in any pixel area. A transparent OLED may also be used. An electroluminescent display is also suitable for use with proximate display devices 18a and 18b. Also, Planar Systems Inc. of Beaverton Oreg. and Samsung of Korea, both produce several display devices that are suitable for use herein and that can be translucent or transparent. Kent Displays Inc. of Kent Ohio also produces Cholesteric LCD display devices that operate as a light valve and/or a monochrome LCD panel.

[0062] FIG. 4C shows another layered display device arrangement in accordance with a specific embodiment. In this arrangement, a touchscreen 16 is arranged in front of an exterior LCD panel 18a, an intermediate light valve 18e and a curved display device 18d.

[0063] A common line of sight 20 passes through all four layered devices. As the term is used herein, a common line of sight refers to a straight line that intersects a portion of each display device. The line of sight is a geometric construct used

herein for describing a spatial arrangement of display devices. If all the proximate display devices are transparent along the line of sight, then a person should be able to see through all the display devices along the line of sight. Multiple lines of sight may also be present in many instances.

[0064] Light valve 18e selectively permits light to pass therethrough in response to a control signal. Various devices may be utilized for the light valve 18e, including, but not limited to, suspended particle devices (SPD), Cholesteric LCD devices, electrochromic devices, polymer dispersed liquid crystal (PDLC) devices, etc. Light valve 18e switches between being transparent, and being opaque (or translucent), depending on a received control signal. For example, SPDs and PDLC devices become transparent when a current is applied and become opaque or translucent when little or no current is applied. On the other hand, electrochromic devices become opaque when a current is applied and transparent when little or no current is applied. Additionally, light valve 18e may attain varying levels of translucency and opacity. For example, while a PDLC device is generally either transparent or opaque, suspended particle devices and electrochromic devices allow for varying degrees of transparency, opacity or translucency, depending on the applied current level.

[0065] In one embodiment, the gaming machine includes a touchscreen 16 disposed outside the exterior display device 18a. Touchscreen 16 detects and senses pressure, and in some cases varying degrees of pressure, applied by a person to the touchscreen 16. Touchscreen 16 may include a capacitive, resistive, acoustic or other pressure sensitive technology. Electrical communication between touchscreen 16 and the gaming machine processor enable the processor to detect a player pressing on an area of the display screen (and, for some touchscreens, how hard a player is pushing on a particular area of the display screen). Using one or more programs stored within memory of the gaming machine, the processor enables a player to activate game elements or functions by applying pressure to certain portions of touchscreen 16. Several vendors known to those of skill in the art produce a touchscreen suitable for use with a gaming machine. Additionally, touchscreen technology which uses infrared or other optical sensing methods to detect screen contact in lieu of pressure sensing may be employed, such as the proprietary technology developed by NextWindow Ltd. of Auckland, New Zealand.

[0066] Rear display device 18d includes a digital display device with a curved surface. A digital display device refers to a display device that is configured to receive and respond to a digital communication, e.g., from a processor or video card. Thus, OLED, LCD and projection type (LCD or DMD) devices are all examples of suitable digital display devices. E Ink Corporation of Cambridge Mass. produces electronic ink displays that are suitable for use in rear display device 18d. Microscale container display devices, such as those produced SiPix of Fremont Calif., are also suitable for use in rear display device 18d. Several other suitable digital display devices are provided below.

[0067] In one example, some portions of proximate display device 18a may be significantly transparent or translucent. Pixilated element panels on many non-emissive displays such as LCD panels are largely invisible to a viewer. More specifically, many display technologies, such as electroluminescent displays and LCD panels, include portions that are transparent when no images are displayed thereon. For example, an