

from 21a to 21b also changes obstruction based on the relative position between person 21, the opaque sections 75, and reels 74, thus hiding formerly visible portions of the mechanical apparatus—and revealing other portions (e.g., blind spot 77) blocked from view in the previous position.

[0047] In one embodiment, a gaming machine includes multiple layers of video display devices that permit parallax. FIGS. 4A-4C show layered display devices suitable for use herein. Hardware suitable for use in the layered displays will be discussed in further detail below with respect to FIGS. 4A-4C.

[0048] Layered display devices are well suited to provide visual output that simulates a mechanical reel game. FIG. 2A shows video output on layered displays and configured to realistically simulate mechanical reels in accordance with one embodiment. FIG. 2B shows the video output of FIG. 2A separated into front and back video output, and for provision to front and back layered displays, in accordance with one embodiment. While the present invention will now be shown as graphics for display on a video device, those of skill in the art will appreciate that the following discussion and Figures also refer to methods and systems for providing a game of chance and providing video data on a gaming machine.

[0049] As shown in FIGS. 2A and 2B, the layered displays are configured to resemble a traditional mechanical slot machine—both a) spatially and b) using video provided to front display device 18a and video provided to rear display device 18c. In this case, as shown in FIG. 2B, front display device 18a outputs silkscreen video data that resembles a silk-screened glass, while rear display device 18c displays five video reels 125 that simulate and resemble traditional mechanical reels. Reels 125 “spin” during game play using changing video data provided to rear display device 18c.

[0050] Exterior display device 18a includes transparent video window portions 15 that permit viewing of the virtual slot reels that are shown on the distal display device 18c. Video data provided to displays 18a and 18c is configured such that a common line of sight passes through each video window portion 15 of front display device 18a to a video reel 125 of rear display device 18c. Other peripheral portions of the exterior display device 18a show a pay table, credit information, and other game relevant information, such as whether a bonus game or progressive game is available. Unlike a traditional mechanical machine where the silkscreen information is relatively permanent, this game relevant information may be changed by simply changing the video data provided to display device 18c.

[0051] Briefly referring to FIGS. 4A and 4B, a predetermined spatial distance “D” separates display screens for the layered display devices 18a and 18c. As shown in FIG. 4A or 4B, the predetermined distance, D, represents the distance from the display surface of display device 18a to display surface of display device 18b (FIG. 4B) or display device 18c (FIG. 4A). This distance may be adapted as desired by a gaming machine manufacturer. In one embodiment, the display screens are positioned adjacent to each other such that only a thickness of the display screens separates the display surfaces. In this case, the distance D depends on the thickness of the exterior display screen. In a specific embodiment, distance “D” is selected to minimize spatial perception of interference patterns between the screens.

[0052] This distance improves perception of a three-dimensional device. First, spatially separating the devices 18a and 18c allows a person to perceive actual depth between video

output on display device 18a and video output on rear display device 18c. The output of FIG. 2A shows a silkscreen that is physically separated from the reels, which emulates a real mechanical reel machine. This depth perception is as real for video devices 18 as it is for a traditional mechanically driven reel slot machine.

[0053] The layered displays also add parallax to the processor-based machine. More specifically, the bars 17 (FIG. 2B) permit a person 21 to vary what portions of display device 18c that they see behind the bars (FIGS. 1A and 2A)—based on a current position and viewing angle for the person. Thus, when a person moves relative to bars 17 and the gaming machine, lines of sight through window portions 15 change, which changes the portions of display device 18c (FIG. 2B) that are visible. This grants true parallax and three-dimensional depth perception. Again, this helps the processor-based gaming machine emulate a traditional mechanically driven reel slot machine.

[0054] As with a traditional mechanical reel apparatus, changes in player position will change the visible portions of video data shown on rear display device 18c when viewed through a transparent window 15 on front display device 18a. FIG. 1B shows a simple depiction of changing position in front of a video reel gaming machine with transparent video windows 15 on a front panel 18a and the effect of changing position on visibility of rear display device 18c. This provides a degree of parallax which is unavailable with only one display device. For example, the physical separation of display devices 18a and 18c provides a degree of parallax which, among other things, allows an observer to peek underneath the edges of the windows 15 and bars 17, as one might do in a traditional mechanical machine.

[0055] FIG. 2C shows the video data output on rear display device 18c in greater detail in accordance with a specific embodiment. The video data includes multiple video data adaptations to the video reels that each simulate a realistic visual attribute of a real mechanical reel in a gaming machine. Depending on the current position of a person standing in front of gaming machine 10, a person may see video data that simulates: a hardware reel 152 that each reel strip 150 appears to attach to, a rotary axis 154 that each hardware reel 152 appears to rotate about, a latching mechanism 156 that appears to stop each hardware reel 152 from rotating, along with other simulated internal mechanical components often found in a real mechanical reel gaming machine.

[0056] Thus, owing to the parallax resulting from the multiple display devices 18 and the ability for a person to see between and outside of the specific reel strips 150, video data provided to rear display device 18c may include additional video data other than reel strips 150 and symbols on the reel strips to further promote the realistic depiction of an actual stepper machine. The video data adaptations may include, but are not limited to, edges of the reel 152 assemblies not covered by reel strips 150, portions of the mechanical apparatus supporting the rotating reels 152, background components (including, but not limited to, plates, covers, switches, levers, solenoids, latches, handles, and other similar items), stickers, labels, wires, and anything else that may normally be found inside a traditional reel gaming machine and that may be incidentally viewed by an observer peering through a transparent window on a fixed glass plate. Other mechanical components may be simulated in the video data adaptations provided to rear display device 18c.