

with a number of factors, such as the hardware used for the layered displays, the size of the gaming machine in the layered displays, video device technology type (e.g., LCD type) and other hardware attributes of the game machine such as door geometry.

[0054] This set 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 video display device **18a** and video output on rear video display device **18c**. The output of FIG. 2A shows a silkscreen on video display device **18a** that is physically separated from the reels on rear video display device **18c**, which emulates a real mechanical reel machine. This depth is as realistic and perceivable for a gaming machine of the present invention as it is for a traditional mechanically driven reel slot machine.

[0055] The layered displays add parallax to the processor-based gaming machine. More specifically, video portions **17** (FIG. 2B) permit an observer **21** to vary which portions of video display device **18c** they see behind the portions **17** (FIGS. 1B and 2A)—based on a current position and viewing angle for the person. Video portions **17** include non-transparent video output for proximate video display device **18a**. Non-transparent in this sense generally refers to opaque or translucent video output. Often, as mentioned above, video portions **17** resemble portions of a silkscreen sticker, which may be translucent depending on the amount of light inside the gaming machine and behind the silkscreen. When a person moves relative to video portions **17** and the gaming machine, lines of sight through window portions **15** change, which changes the portions of video display device **18c** (FIG. 1B or 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.

[0056] As with a traditional mechanical reel apparatus, changes in player position will change the visible portions of video data shown on rear video display device **18c** when viewed through a transparent window **15** on front video 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 video display device **18c**. This provides a degree of parallax which is unavailable with only one video display device. For example, the physical separation of video 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.

[0057] Realistic video data provided to the layered displays enhances the parallax and improves the emulation of a real reel gaming machine. FIG. 2C shows the video data output on rear video display device **18c** in greater detail. The video data includes multiple video data adaptations to the video reels that each simulates 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.

[0058] Thus, owing to the parallax resulting from the layered video display devices **18** and the ability for a person to see between and outside of the specific reel strips **150**, video data provided to distal video 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 distal video display device **18c**.

[0059] Lighting is another physical adaptation that may be emulated by a processor-based gaming machine.

[0060] First, the lighting affects perception of information on the outer glass layer. In one embodiment, the video data provided to the proximate video display device illuminates and enhances the simulated silkscreen image to include glare lines and other lighting artifacts for a smooth and shiny emulated surface. For example, glare lines and non-uniform illumination intensity of the artwork silkscreened upon a glass layer, which results from internal reflections and uneven internal lighting, may be deliberately incorporated into video artwork displayed by the proximate video display device.

[0061] Second, when a person stands in front of a mechanical reel gaming machine, light that strikes mechanical reels differentially illuminates the reels based on their outward dimensions.

[0062] In one embodiment, video data provided to the distal video display device illuminates and shades the video reels to simulate lighting of their mechanical counterparts. FIG. 3C shows simulated video preferential lighting of a reel strip in accordance with a specific embodiment. FIG. 2C shows an actual picture of simulated preferential lighting of video reels **152** and video reel strips **150** on a distal video display device **18c** in accordance with a specific embodiment.

[0063] Reels in a mechanical stepper gaming machine may be illuminated by a variety of light sources that produce different lighting effects. In one embodiment, the video data emulates “back-lighting”, which is a traditional mechanical reel lighting technique that uses incandescent, fluorescent, LED, or other light sources disposed within a circumference of the reel behind the reel strip. Back-lighting produces light that passes through translucent and transparent portions of a physical reel strip, including the gaps and white spaces between adjacent symbols. Older mechanical gaming machines often used a light bulb for this effect; newer machines may use one or more LEDs. The light is commonly focused in the direction of a player/observer, which creates a region of maximum brightness near the center of the strip, and tapers to a lesser brightness at the upper and lower edges. Reel angles also contribute to this effect: light passing through the center of the strip transmits through the reel strip material essentially normal to its surface, while light at the upper and lower portions passes through at an angle where the light propagation path length includes more reel strip material. As