

[0088] C. Display Employing Rapidly Moving Structure

[0089] Another type of POV display is a display employing a rapidly moving structure such as a wand, a hoop, a fan, a disc, and so forth having lighting elements, such as LEDs, disposed about a periphery of the rapidly moving structure. The movement of the moving structure may be cyclical, orbital, horizontal, vertical, arced, circular, or rotational, for example.

[0090] A first type of rapidly moving structure is a wand, which is cylindrical or polygonal in shape and is capable of quick cyclical or orbital movement, horizontal movement, movement in an arc, or circular rotation on a plane, for example. The wand has a series of lighting elements such as LEDs or LCDs disposed about its periphery in columns. These lighting elements are controlled by the CPU **104**, and are capable of illuminating in any pattern in quick succession. The lighting elements may have 32 to 1024 pixels or more, and may be arranged in one to three or more columns.

[0091] When the wand is set in motion, the selective illumination of the lighting elements combined with the movement of the wand creates a translucent image. By manipulating the illumination pattern of the lighting elements, all manner of images can be made to appear such as, for example, still and motion pictures, stationary and moving text. Indeed, the wand can display any image which a standard 2D video display is capable of displaying, yet uses far fewer lighting elements and therefore less power. In addition, when set in motion, a rapidly moving structure becomes translucent, enabling imagery to be viewed through the rapidly moving structure.

[0092] Because a rapidly moving structure can display any image a traditional 2D display is capable of displaying, the rapidly moving structure may be used to display any display aspect of a gaming machine, including a video reel, a basic game, a bonus game, messages during game play, help or game information, and so forth, or it may be incorporated into the top box art found on gaming machines, such as a wand in the hand of a sculpted wizard.

[0093] In an embodiment, a rapidly moving structure such as a wand may be disposed in front of a set of mechanical reels. Because the rapidly moving structure is translucent, the mechanical reels will be visible through the rapidly moving structure while it is in motion. In this embodiment, animated overlays can be displayed by the rapidly moving structure while the reels spin, or animations can be displayed when certain winning symbol combinations are present.

[0094] Displays employing rapidly moving structures are commercially available from at least GCDC Marketing, Inc. in sizes ranging from 6 inches to 24 feet.

[0095] FIG. 10 is a front view illustration of a gaming machine **1000** including a top display assembly **1002** and a secondary display **1004**. The top display assembly **1002** includes an enclosure inside of which a rapidly moving structure displays a series of numbers **1006** underneath the spaceship **1008** shown in FIG. 10. The buildings **1010** and the spaceship **1008** may be printed art, and the translucency of the rapidly moving structure as it cycles back and forth permits the buildings **1010** behind it to be at least partially visible. Thus, to the player, it appears as if elements **1006** (shown as numbers in FIG. 10) are being projected in front

of the buildings **1010**. On the secondary display **1004**, a basic game is shown with symbol-bearing reels and pay lines.

[0096] A scrolling indicia feature is triggered on the gaming machine **1000** when a start-bonus symbol is displayed across a pay line or when a predetermined combination of symbols are displayed across a pay line. During "basic" game play, the elements **1006** do not appear. Upon triggering of the scrolling indicia feature, the spaceship **1008** will "light up" his laser to display a series of numbers **1006** below his spaceship. The CPU of the gaming machine **1000** selectively illuminates display elements on a rapidly moving structure in the top display assembly **1002** to display the elements **1006**. The scrolling may begin automatically or in response to an action by the player (e.g., pressing a "start" button). During scrolling, the elements **1006** appear to scroll from right to left (or left to right). The elements that appear in the box shown in FIG. 10 when the scrolling stops are associated with a possible award.

[0097] The elements **1006** may be digits ranging from 0 to 9 as illustrated, but in alternate embodiments, may take forms other than the illustrated digits, including but not limited to symbols including arithmetic symbols, playing cards, shapes, puzzle pieces, colors, or other indicia. If the elements **1006** are symbols, for example, the award may be based on the middle three symbols and the numbers which match each other. The symbols may be thematic symbols or such traditional reel symbols as 7, 1bar, 2bar, 3bar, bell, cherry, and/or various fruits. If the elements **1006** are playing cards, the award may be based on the middle three playing cards and the rank of the poker hand created with the three cards.

[0098] The elements **1006** are preferably arranged in a repeating fixed sequence such that the first element in the sequence re-appears after the last element in the sequence. The CPU, such as the CPU **104**, may randomly select the fixed sequence of the elements **1006** and the outcome of the scrolling indicia feature at the start of the scrolling indicia feature.

[0099] The number of elements **1006** in the sequence is preferably far greater than the number visible on the display **1002** at any given moment. For example, the number of elements **1006** in the sequence may be twenty-seven, while the number visible on the display **1002** at any given moment is thirteen. Therefore, only a part of the sequence of elements **1006** is visible on the display **1002** at any given moment. Alternatively, the entire sequence of elements **1006** may be visible on the display **1002** at any given moment.

[0100] A middle portion of the visible part of the sequence of the elements **1006** is associated with a possible award. This middle portion is displayed differently, e.g., larger, a different color, or highlighted in some manner, from a remainder of the sequence. The number of elements **1006** in the middle portion may, for example, be three such that, at any given moment, the display **1002** generally depicts a total of thirteen elements consisting of the three middle elements and a set of five elements on each side of the three middle elements.

[0101] In the illustrated embodiment, the middle portion is shown as a box with a set of three elements on each side of the three middle elements inside the box (shown as numbers