

126 of gaming machine 100. This reel blur generator 145 can be a dedicated processor located separately from master gaming controller 140, as shown in FIG. 4, so as to alleviate some of the burdens that are typically placed on the master gaming controller. Such a separate processor could be, for example, the Pentium III processor chip made by Intel Corporation of Santa Clara, although other suitable processors can also be used. Alternatively, this blurred reel symbol generator can be contained within or even be a part of the master gaming controller itself (not shown). Blurred reel symbol generator 145 may be in communication with master gaming controller 140, video controller 144 and/or display(s) 126.

[0067] One or more reel blur generator storage units or memory devices 146 can be associated with reel blur generator 145, and such generator memory devices can be dedicated to the reel blur generator or shared with other machine components. Such generator memory devices 146 could be specific memory chips and/or also an internal hard disk drive, such as, for example, a 40 gigabyte model 6K040L0 hard drive made by Maxtor Corporation of Milpitas, Calif., although other suitable memory components can also be used. Such generator memory devices 146 can be used to store files containing, for example, original and modified versions of static reel symbols, original and modified versions of substitute blurred reel symbols, original and modified versions of entire virtual reel strips, and data regarding virtual reel rotational speeds, among other items, as may be desired.

[0068] In various embodiments, blurred reel symbol generator 145 facilitates the display of simulated rotating reels upon display device 126, such as by configuring at least one simulated rotating reel such that one or more of the static reel symbols thereupon are replaced by corresponding substitute blurred reel symbol or symbols. Such a configuring can be a reconfiguration of the simulated rotating reel or reels. That is, for each simulated rotating reel, there can be a “static” version that displays static reel symbols when the reel is at rest, and also a “dynamic” version that displays substitute blurred reel symbols when the reel is in motion, such as, for example, the typical rotational motion that is depicted during an actual game play involving the reel or reels. The “reconfiguration” of the simulated or virtual reel or reels then can involve transitioning the reel or reels from static reel symbols to blurred reel symbols, such as to depict non-moving reels becoming moving, or vice versa, such as when the reels are moving and then come to rest to display a game outcome.

[0069] The visual results of switching out static reel symbols for substitute blurry or blurred reel symbols when their respective reels are in rotational motion can be advantageous on several levels. From an overall appearance perspective to the human eye, the use of substitute reel symbols when reels are in motion can result in a more realistic and natural simulation of real mechanical rotating reels. Furthermore, the eye strain and/or fatigue that can accompany a more realistic simulation of rotating reels can be reduced or eliminated by various uses of such blurred reel symbols, such as by blending blurred reel symbols together and/or reducing or eliminating white or bright spaces between reel symbols, as set forth in greater detail below. The results of such specific features in the use of substitute blurred reel symbols can reduce the straining effects of the natural tendency of the human eye to try to follow a discretely detectable object (such as a clear static reel symbol) in motion, and can also reduce the fatiguing effects of any rapid “flickering” between colored images and white or bright spaces.

[0070] Examples of rotating reels having static reel symbols that are changed to corresponding substitute blurred reel symbols according to various embodiments of the present invention are provided in perspective view in FIGS. 5A through 5C. In FIGS. 5A and 5B, existing virtual rotatable or “rotating” reel 91 is illustrated with a particular existing static reel symbol 94, a barrel and a bar respectively. As a result of a corresponding blurred reel symbol substitution reconfiguration or process, the resultant reel 191 contains a substitute blurred reel symbol 194 that corresponds to old static reel symbol 94. As will be readily appreciated, original reels 91 can be used for display when the virtual reels are to be shown at rest, and reconfigured reels 191 can be displayed when the virtual reels are to be shown in motion, particularly rotational motion. In these particular illustrations, the substitute blurred reel symbols 194 have been stretched to the top and bottom ends or boundaries of their respective reel stops, although it will be appreciated that such stretching might extend these blurred reel symbols short of or beyond one or both reel stop ends.

[0071] In FIG. 5C, existing virtual reel 91 is illustrated with a plurality of existing or original static reel symbols 94, in particular a coin, cherry, barrel, bar and coin from top to bottom. As a result of a corresponding blurred reel symbol substitution reconfiguration or process, the resultant reconfigured reel 191 contains a substitute blurred reel symbol 194 for each corresponding static reel symbol 94. As in the foregoing examples of FIGS. 5A and 5B, each substitute blurred reel symbol has been stretched such that it extends from the top to bottom end of its respective reel stop. Such a process can be made with respect to every static reel symbol across the entire circumference of the reel. One result of such a reconfiguration process is that one continuous “blur” of reel symbols can be created. In some embodiments, there can be small amounts of light or bright spaces between blurred reel symbols (i.e., stretching of the blurred reel symbols is not done to the ends of their respective reel stops), while in other embodiments, stretching can be done past the ends of respective reel stops, such that there is some amount of interlacing or blending of blurred reel symbols at the tops and bottoms of some or all of the blurred reel symbols.

[0072] Moving next to FIGS. 6A and 6B, one particular example of a static reel symbol and its corresponding substitute blurred reel symbol is set forth in screenshot format. In both figures, a given reel stop 93 on an associated virtual reel is shown. It will be readily appreciated that reel stop 93 typically does not change in size upon the replacement of a static reel symbol with a corresponding substitute blurred reel symbol thereupon, although variations that involve reel stop size changes may be used, as may be desired. In FIG. 6A, static reel symbol 94 is a “Double Diamond” reel symbol that is adapted to be shown on a virtual gaming reel at rest. Conversely, FIG. 6B illustrates a deliberately blurred reel symbol 194 that corresponds to such a “Double Diamond” static reel symbol, with such a blurred reel symbol being adapted to be shown on a virtual gaming reel in motion.

[0073] In general, the human eye, when blinking, rotating or otherwise changing its vision, can typically perceive the last symbol that appeared in focus on a rotating reel before the change in vision. Thus, while the eye may be focused on what appears to be a blur of rapidly moving reel symbols for a set period of time, a change in vision from this focus on a given reel can result in a split-second clearer perception of the last reel symbol that was being viewed. Accordingly, the blurred