

CASINO DISPLAY METHODS AND DEVICES

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation-in-part of U.S. patent application Ser. No. 10/756,225, entitled "VIRTUAL GLASS FOR A GAMING MACHINE" and filed on Jan. 12, 2004, which is hereby incorporated by reference for all purposes.

FIELD OF THE INVENTION

[0002] The present disclosure relates to displays for gaming machines and gaming establishments.

BACKGROUND OF THE INVENTION

[0003] Casinos and other forms of gaming establishments comprise a growing, multi-billion dollar industry wherein floor space is at a premium. Newer, more popular and increasingly sophisticated games and machines are preferred over older and less popular ones. For example, the casino and gaming industries have experienced a marked shift over the past few decades not only from the prevalence of table games to gaming machines, but also from the use of fully mechanical gaming machines to electronic and microprocessor based gaming machines.

[0004] In a typical gaming machine, such as a video poker or slot machine, a game play is first initiated through a player wager of money or credit, whereupon the gaming machine determines a game outcome, presents the game outcome to the player and then potentially dispenses an award of some type, including a monetary award, depending on the game outcome. Although this process is generally true for both mechanical and electronic gaming machines, the electronic machines tend to be more popular with players and thus more lucrative for casinos for a number of reasons, such as increased game varieties, more attractive and dynamic presentations and the ability to award larger jackpots.

[0005] Electronic and microprocessor-based gaming machines can include a number of hardware and software components to provide a wide variety of game types and game playing capabilities. A typical electronic gaming machine comprises a central processing unit ("CPU") or master gaming controller ("MGC") that controls various combinations of hardware and software devices and components that encourage game play, allow a player to play a game on the gaming machine and control payouts and other awards. Software components can include, for example, boot and initialization routines, various game play programs and subroutines, credit and payout routines, image and audio generation programs, various component modules and a random number generator, among others. Exemplary hardware devices can include bill validators, coin acceptors, card readers, keypads, buttons, levers, touch screens, coin hoppers, ticket printers, player tracking units and the like.

[0006] In addition, each gaming machine can have various audio and visual display components that can include, for example, speakers, display panels, belly and top glasses, exterior cabinet artwork, lights, and top box dioramas, as well as any number of video displays of various types to show game play and other assorted information, with such video display types including, for example, a cathode ray

tube ("CRT"), a liquid crystal display ("LCD"), a light emitting diode ("LED"), a flat panel display and/or a plasma display, among others. Devices and methods for providing displays in gaming machines and/or within a casino are described, for example, in U.S. Pat. No. 5,971,271, U.S. Pat. No. 6,135,884, U.S. Pat. No. 6,251,014 and U.S. Pat. No. 6,503,147, all of which are incorporated herein by reference in their entirety and for all purposes.

[0007] The use of quality visual and audio display components to encourage, heighten and maintain interest in game play is often an important consideration for a casino operator or gaming establishment proprietor. Variety and interchangeability in games and machine displays are also important characteristics, as interest in any given game or display tends to decrease over time. Electronic gaming machines have traditionally been relatively simple, however, in that the various displays, functions and peripheral devices associated with any particular gaming machine are usually limited for any given machine.

[0008] In general, the functionality of a traditional gaming machine has been relatively constant in that new displays, themes, peripheral devices and gaming software are infrequently added to any particular machine once that machine has been deployed. In addition, the connections, communication protocols, and software drivers for many peripheral devices are often customized and proprietary, varying from manufacturer to manufacturer and from peripheral device to peripheral device, such that the swapping out of different model peripherals is usually impractical.

[0009] Although it may become desirable to change a game theme or add new capabilities or features to a particular gaming machine once that machine has been deployed, such changes can be expensive and particularly difficult if new or updated gaming software and/or peripheral devices are involved. In even a simple example, the creation and installation of artwork and information on various gaming machine displays, such as a top glass and belly glass, is a very resource-intensive task. Typically, artwork is silk-screened onto a top glass and/or belly glass by a controlled and expensive process. (Although the term "glass" is used, the material may be one of various types, including but not limited to glass or plastic.)

[0010] Because these displays are usually backlit such that light shines through the glass, the quality of the silk-screen process must be high to ensure that pinholes or other defects in the painted areas are not present. Even a simple retrofit of a gaming machine to provide a different theme can involve the replacement of a top glass, a belly glass, and reel strips (on a spinning reel slot machine), among other items. Although often desirable, such retrofitting results in at least the costs of purchasing and installing new silk-screened glasses, even where new software and/or other electronic components are not needed. Hence, retrofitting a machine to generate and maintain interest in game play can represent a significant expense to a casino.

[0011] Another method of gaining and maintaining interest in game play is to provide a gaming machine with a plurality of games. Although gaming machines have traditionally provided only a single game per machine, recent innovations have resulted in machines that permit a player to select from a number of different gaming games on the same machine. On some networked gaming machines, the game