CONCEPTS FOR PLAYING SLOT MACHINE GAMES

Inventor: Max Stern, Las Vegas, NV (US)

Correspondence Address:
Jeffrey C. Maynard
154 Barbara Road
Severna Park, MD 21146 (US)

Appl. No.: 10/746,671
Filed: Dec. 24, 2003

Related U.S. Application Data
Provisional application No. 60/436,360, filed on Dec. 24, 2002.

Publication Classification

Int. Cl.7 .................................................. A63F 1/00
U.S. Cl. ................................................. 273/292

ABSTRACT

Concepts for playing slot machine games, with the participant having an opportunity to “hold” selected elements. The slot machine deals a FLOP, and the player establishes the COMMUNITY ELEMENTS for each slot, based on the number of elements of the designated game. The remaining number of elements in the slot is dealt, to be combined with the COMMUNITY ELEMENTS; and participants with a winning combination are paid in accordance with a selected ranking winning combination.
Fig. 2
Figure 5

COMPLEMENTARY CARDS
CONCEPTS FOR PLAYING SLOT MACHINE GAMES

CROSS REFERENCE TO RELATED APPLICATION

[0001] This Application claims the benefit of U.S. Provisional Application, Serial No. 60/436,360 entitled Concepts for Playing Slot Machine Games, filed with the U.S. Patent and Trademark Office on Dec. 24, 2002 by the inventor herein.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to gaming machines of the type generally referred to as slot machines, and in particular, the invention provides an improvement to a game played on such a machine. This invention relates generally to games of chance such as would be found in casinos and other legal gambling establishments and more particularly to electronic gaming systems that can be used as slot machines. The game is enabled, in particular, for video gambling machines, computer games, or other electronic or mechanical devices.

[0004] 2. Background of the Prior Art

[0005] In the gaming business there are two kinds of games, one in which the results depend solely on luck, and another in which the results depend on the skill of the players. Examples of games depending solely on luck include basic slot machines, roulette, and craps. Examples of games depending on the players’ skill include draw poker and blackjack.

[0006] Although, the gaming industry has undergone a significant expansion in recent years, the most popular form of gaming continues to be centered around slot machines. They account for approximately three-fourths of the total volume of all gambling activities in the United States. Because of the volume of slot machine gaming, numerous devices, rules, and methods of operation have been proposed and introduced in efforts to improve the games.

[0007] Over the years and in keeping with the changes in technology, slot machines have evolved from purely mechanical devices, to electro-mechanical devices to present day electronic slot machines, most of which are controlled entirely by computer. Most present day slot machines have a video screen to display symbols based on graphic data stored in memory associated with a computer processor.

[0008] Video slot machine games are generally played on an electronic video gaming machine that uses a video screen display to show images of predefined symbols to a player. Computer controls carried on a printed circuit board mounted on the interior of the gaming machine electronically randomize the symbols, activate the game sequence in response to input by a player, cause the symbols to be displayed on the video screen display, and analyze the results to determine winning and losing combinations. The computer controls also affect payouts to the player based on the amount of the player’s wager and the rank of winning combinations of symbols.

[0009] The higher the combination achieved by the player, the greater the player’s winnings based on the number of coins, tokens or credits wagered by the player. Typically, a payout schedule is posted on the gaming machine to advise the player of the payoffs available for certain winning combinations.

[0010] Nevertheless, players have become bored with traditional video games. Players prefer to play machines that have pay tables with high payoffs for the types of winning combinations that are achievable. With the growth that has occurred in the gaming machine market, there is intense competition among manufacturers to supply the existing and new venues. Gaming casino operators are desirous of having different types of electronic video games to offer to players. When selecting a supplier of gaming machines, the operator of a venue will often pay close attention to the popularity of various games with their patrons. Therefore, gaming machine manufacturers are keen to devise games, which are popular with players, as a mechanism for improving sales.

[0011] Despite numerous improvements in the quality and variety of gaming machines made over the years, there remains a need for improved gaming machines and methods that provide more attractive machine play and associated entertainment. Although there have been attempts to improve upon existing games and to develop new games of chance, there exists a need for a game that more closely meets the player’s needs for excitement, risk, quickly and easily understood play, and possibility of success. At the same time, the game must meet the casinos’ prerequisite for profitability from the use of the game.

[0012] Applicant knows of no slot machine that, after a first “spin” of the reels, allows a player to hold some, or all, of the displayed elements to attempt to improve the combination of elements by a second “spin”. Furthermore, the slot machine game described herein enables simultaneous play of a plurality of lines for increased enjoyment.

[0013] A need exists for a wagering game that is intended to be played in gambling casinos, that is simple to learn and play, and that results in increased revenues for the casino. There is a need for new video gaming machines that are capable of encouraging a high volume of play while at the same time offering what the players consider to be good pay tables. Furthermore, there is a need to provide new and interesting electronic video games that attract players and that can increase the volume of wagering in each gaming machine.

SUMMARY OF THE INVENTION

[0014] The present invention fulfills these needs. It is a fast-paced game of simple consistent rules, player participation, choice of risk offered by a variety of games, and corresponding to varying payoff. The house edge is fairly derived and players will detect this fairness through the payout odds. These features will increase the number of players to the game, both experienced and inexperienced players, generating player satisfaction and profitability to the casino.

[0015] Primary objects are to provide: (a) game concepts, (b) method steps for play of a round, and (c) software programming concepts for apparatus enabling a slot machine game in which a player can select to hold some or all of the random elements.
Another object of the present invention is straightforward entertainment with some of the atmosphere of a casino. A related object of the present invention is to provide an enjoyable gambling game.

It is a further object of the present invention to provide a game that will be easy for players to learn.

Another object is implementation of supervision and control of the flow of a slot machine game by a computer software program.

Another object is to provide visible winning results promptly for entertainment purposes, or, additionally, for wagering such that a casino atmosphere of chance is available for a single, or for a plurality of participants, in a single round of a slot machine game.

Another object is to enable a participant to play more than one hand in a single round of the slot machine game being played.

It is a still further object of the invention to provide a video gaming machine apparatus, which displays a new and interesting game that encourages a high amount of individual player interest while maintaining acceptable payback percentages.

A further object of the present invention is to enable adaptation of the invention to usage independent of a gaming establishment, including individual personal usage.

The above and other objects, features, and advantages of the present invention are described in more detail with reference to the accompanying drawings.

According to a first aspect, the present invention provides a video gaming machine including display means arranged to display a game being played on the machine, game initiating means to initiate a game on the machine, and game control means responsive to the initiating means to control the playing of the game, characterized in that the game enables a player to play a game based on a combination of luck and skill, the display means is arranged to display a plurality of indicia, each indicia being associated with random elements according to a selected game, the control means including indicia selection means is arranged to allow a player to select some or all indicia in such display to ‘hold’ selected elements, and to enable continued play by displaying additional indicia to complete a slot according to the game being played based on the indicia being ‘held’. The control means is further characterized by evaluating such slot based on predetermined winning combinations and awarding a prize to the player, in the event indicia of such ‘held’ elements and such additional elements creates a winning combination.

In a preferred embodiment, the display means is a touch sensitive video screen and the player selects indicia by touching areas of the screen on which the selected indicia are displayed; however, other selection mechanisms are also possible, such as buttons indicating grid references on the display.

Whether solely for amusement or for entertainment with wagering, an electronic video game machine can be used. Such sets of indicia can be displayed in an electronic or other game machine apparatus.

The various features of novelty that characterize the invention will be pointed out with particularity in the claims of this application.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other features, aspects, and advantages of the present invention are considered in more detail, in relation to the following description of embodiments thereof shown in the accompanying drawings, in which:

FIG. 1 is an illustration of a touch screen slot machine incorporating the present invention;

FIG. 2 is a block diagram illustration of processing components for performing functions according to the present invention;

FIG. 3 shows a view of an electronic video gaming machine screen display illustrating one embodiment of the present invention;

FIG. 4 shows a view of a screen display for describing set-up of an embodiment of the present invention;

FIG. 5 shows a view of a screen display with a FLOP and COMPLEMENTARY CARDS;

FIG. 6 shows a view of a screen display for describing a winning combination of the present invention;

FIG. 7 shows a view of a screen display illustrating a FLOP for an alternate embodiment of the present invention;

FIG. 8 shows a view of a screen display for describing set-up of an alternate embodiment of the present invention;

FIG. 9 shows a view of a screen display with a FLOP and COMPLEMENTARY CARDS for describing winning combinations of an alternate embodiment of the present invention; and

FIG. 10 is a schematic diagram of a slot machine control circuit according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The invention summarized above and defined by the enumerated claims may be better understood by referring to the following detailed description, which should be read in conjunction with the accompanying drawings in which like reference numbers are used for like parts. This detailed description of embodiments, set out below to enable one to build and use an implementation of the invention, is not intended to limit the enumerated claims, but to serve as particular examples thereof. Those skilled in the art should appreciate that they may readily use the conception and specific embodiments disclosed as a basis for modifying or designing other methods and systems for carrying out the same purposes of the present invention. Those skilled in the art should also realize that such equivalent assemblies do not depart from the spirit and scope of the invention in its broadest form.

In the following detailed description, the methodology of the embodiments will be described and it is to be understood that it is within the capabilities of a non-inven-
tive worker in the art to introduce the methodology on any standard microprocessor based gaming machine by means of appropriate programming.

[0041] Referring to FIG. 1, the illustrated embodiment of the invention is housed in a slot machine cabinet 10 including a decorative panel 13 for displaying advertising, a trademark, a decorative picture, a brief description of game instructions, and the like. A coin entry slot 16 is provided to receive coins, tokens or game chips (hereinafter coins) for wagering on a play of the game. A payout tray or coin hopper 18 is disposed on the front of cabinet 10 for holding coins dispensed in the course of a game.

[0042] Preferably, a game display means comprises a video display screen 20 controlled to display indicia images as described later herein. The video screen is preferably of the touch sensitive variety, having a touch sensitive input area 23 located on its display surface on which player selections for play of the game described herein are to be made.

[0043] Referring to FIG. 2, a block diagram illustration of processing components for performing functions according to the present invention is shown. A central processing unit (CPU) 24 is connected to touch sensitive input area 23 for receiving player input. The central processing unit 24 receives player input and controls the play of the game. CPU 24 also controls the display of images (characters, numbers, and symbols) on video screen 20 to operate each unit. A display controller 27 controls the display of images to video screen 20.

[0044] A storage device 30 is constituted of a ROM, a hard disk, or the like, and stores a program for playing a slot machine game, symbol patterns of each playing element, and the like. RAM 31 is used for storing data input from the touch sensitive input 23, such as a score list indicating the contents of played games, the number of credited coins, and the like.

[0045] In an alternate embodiment, an amplifier 33 drives speaker 34 for generating sounds to resemble shuffling cards, to highlight game result conditions, game termination, and the like.

[0046] A coin sensor 36 detects a coin inserted into the coin entry slot 16. The hopper 18 ejects credited coins.

[0047] In prior slot machine games, a single slot of three or more elements is displayed and analyzed for a single player. The present invention enables a single player to play a plurality of slots, simultaneously.

[0048] In a first embodiment, each cylinder in a slot for such a single round comprises a plurality of indicia to emulate a standard deck of 52 cards established by software control, which also achieves a promptly executed round of play, notwithstanding that more than one hand can be played by a single participant. The number of cylinders per slot is determined by the style of game being played.

[0049] Whether solely for amusement or for entertainment with wagering, in a first embodiment, standard designations for playing cards are utilized. The slot machine game may be a variety of poker. The participant makes that choice before play begins, and that choice provides certain, but limited, mechanics for play of a round, which are implemented by concepts taught herein.

[0050] The apparatus for home or private club play enables selective determination if wagering is to be involved.

[0051] FIG. 3 shows and initial screen display 40 to start a play of the game. Play begins when a participant presents a wager, which can include an administrative fee for management of the game, as well as the “ante” to participate. Such a quantitatively fixed wager is made for each hand/slot, if that participant selects to play more than one hand/slot. A minimum and maximum for competitive wagering can be prescribed for an individual round. Present concepts can provide for handling differing wagering amounts for one or more participants.

[0052] The screen displays a single slot comprising five separately controlled cylinders 45, 46, 47, 48, 49. In a first embodiment, each cylinder can display indicia representing one card randomly selected from a standard 52-card deck.

[0053] Controls may be provided on such display screen 40 to enable selection of a plurality of slots, such as shown generally at 53. In an embodiment with wagering, additional controls may be provided on such display screen 40 to enable variations to the game, such as ‘Double Double’ 55, ‘Double Bonus’ 57, ‘Jacks or Better’ 59, and the like. Such wagering varieties are known in the art.

[0054] Once such game selections are defined, the slot cylinders 45, 46, 47, 48, 49 rotate. Each cylinder initially contains 52 random indicia similar to a 52-card deck. The participant designates a selected number of elements referred to as a “FLOP.” A FLOP comprises designated elements from which common elements are selected and become part of each slot played by the participant in the selected round. The number of elements contained in a FLOP can depend on the game being played. For example, a five-card poker FLOP may contain up to five cards. (Other FLOP selection embodiments are described later.)

[0055] In some embodiments, a participant can select the number of FLOPs to be used in the game. Selection may be enabled by controls, such as shown generally at 61.

[0056] A predetermined number of cylinders display card elements, as if dealt face up from one deck of 52 cards. Then, the participant evaluates the card elements in that FLOP based on his or her skill or knowledge in establishing common elements which are most likely to lead to the best hand combination available, according to the participant, considering the variety of game to be played.

[0057] FIG. 4 shows a FLOP 63 consisting of a ten of spades 65, a ten of hearts 66, and Ace of hearts 67, a two of spades 68, and a four of spades 69. The participant selects card elements from the FLOP that are to be “COMMUNITY ELEMENTS.” Such COMMUNITY ELEMENTS are established to be used by the participant in the selected round, as part of that participant’s hand or hands. In this example, the participant has selected the ten of spades 65 and the ten of hearts 66 to be the COMMUNITY ELEMENTS. Additionally, it can be seen in FIG. 4 that the participant has chosen to play three slots 71, 73, 75 in this game.

[0058] Next, additional cylinders having the indicia for the remaining cards in the deck are spun. Card elements, as needed, are dealt to the poker hand(s) for the participant, according to the variety of game being played. Such ele-
ments are referred to as COMPLEMENTARY ELEMENTS selected from the remaining cards in the deck. For example, in a five-card poker game, if two COMMUNITY ELEMENTS have been selected, then each slot would receive three card elements to complete his or her poker hand(s)/
slot. Such three cards are randomly selected from the 49 cards remaining in the deck after removal of the COMMUNITY ELEMENTS. (That is, the first additional complementatory element is selected from the remaining 49 cards, the next element is selected from the remaining 48 cards, and the last additional element is selected from the 47 remaining cards for each slot.)

[0059] Each slot is evaluated according to standard rank of poker hands for the combination of cards, including such COMMUNITY ELEMENTS and COMPLEMENTARY ELEMENTS, dealt to each slot.

[0060] Each slot with a winning poker combination is paid according to the rank for each such winning combination.

[0061] As shown in FIG. 5, slot 71 has a Full House, a winning combination; slot 73 has three-of-a-kind, a winning combination; and slot 75 has a Full House, a winning combination. Notice that the ten of diamonds 77 occurs in slot 71 and 73, and that both the four of spades 78 and four of clubs 79 occur in slots 71 and 75. Such duplication is possible because the COMPLEMENTARY ELEMENTS for each slot are produced from a separate deck of cards.

[0062] In one embodiment, the participant can choose the COMMUNITY ELEMENTS from a single FLOP for a particular round. In a further embodiment, the game can be played using a plurality of FLOPS, in which the participant selects one FLOP from such plurality of FLOPS, which is believed to offer the greatest opportunity, with the community card, for achieving the highest ranking poker hand for the variety of poker being played. In an embodiment with a plurality of FLOPS, each FLOP may be dealt from a separate deck of cards.

[0063] In a computerized embodiment of the game, each hand is displayed in a horizontal presentation of cards on a video screen, and is referred to as a “slot”. In an alternate embodiment, a participant can play a hand selected from a plurality of slots. Such selected slot may be dealt without the benefit of a FLOP or COMMUNITY ELEMENTS. Selection of such alternate slot is based on such participant’s skill and knowledge of the selected variety of poker to obtain a higher-ranking poker hand.

[0064] In the example shown in FIG. 6, the FLOP contains a winning combination, a Royal Flush in hearts. In this case, the participant selects all the elements in the FLOP to be the COMMUNITY ELEMENTS. Therefore, all three slots also contain a winning combination of elements.

[0065] Referring to FIG. 7, an alternate embodiment is illustrated in which a variety of symbols is used for each line in a slot. Each line contains a plurality of elements, the elements of one line being the same for each line. In the examples illustrated, each line contains forty (40) different elements. In an alternate embodiment, each line may contain more or less different elements, and in some embodiments, the different elements may be repeated in each line or may be of different colors. In the embodiments in which the symbols do not resemble playing cards, winning combinations include only three-of-a-kind, four-of-a-kind, and five-of-a-kind. Straight and flush combinations, as available in poker, do not exist. In FIG. 7, the FLOP 83 contains five different elements. The player can hold as many elements as desired.

[0066] Play of the game is similar to the game described above, except that each line is selected from all the possible elements, not from only the elements remaining in the deck. That is, the probability of obtaining each element is 1 in 40, for each line in a slot, regardless of the number of elements selected for the FLOP.

[0067] Referring to FIG. 8, it can be seen that the player has selected to hold a single element; element 86 has been selected. Additionally, it can be seen in FIG. 8 that the player has chosen to play three slots 87, 88, 89 in this game.

[0068] Next, as shown in FIG. 9, COMPLEMENTARY ELEMENTS, as needed, are provided to complete each slot. In the examples shown in FIG. 9, it can be seen that slot 87 has no value, because none of the elements match. It can also be seen that slot 88 has three-of-a-kind when combined with the COMMUNITY ELEMENT. Notice that slot 89 also has a winning combination of three-of-a-kind, but does not include the COMMUNITY ELEMENT.

[0069] A goal of the game is to pick COMMUNITY ELEMENTS successfully which, when combined with additional COMPLEMENTARY ELEMENTS, will provide a winning combination of elements. Participants succeed by obtaining a hand/slot, or hands/slots, that contains a winning combination of elements according to defined combination rankings. If a participant’s hand/slot contains a winning combination, the participant receives payment on his or her wager. If a participant’s hand/slot does not contain a winning combination, that participant loses his or her wager.

[0070] The steps and functions of a controller are established on software and take place electronically in video games to provide and distribute electronic designation of playing cards, to maintain control of play of the game for plural participants, and to sequence the steps of the game properly, while providing for selections made by a participant, or participants. Such game controller is also responsible for collecting wagers that are lost and making payments to winners, according to the applicable game of poker.

[0071] Embodiments of the game taught herein vary significantly from contemporary slot machine games by, enabling one or a plurality of COMMUNITY ELEMENTS to be included in all slots for a plurality of hands. Such multiple use of COMMUNITY ELEMENTS is facilitated by electronic control of the game providing prompt play of the game by multiple participants. Until now, no slot machine enabled a participant to “hold” elements to try to achieve a winning combination.

[0072] New game concepts are based on use of common elements; that is, each slot uses the same COMMUNITY ELEMENTS and each slot is dealt the same number of elements to complete the hand as necessary for the selected game being played.

[0073] The number of elements to be dealt is established when a participant at a video machine selects a type of game to be played and the number of elements, which is at least one less than the total number in the type of game selected, to be included in a FLOP.
Among the advantages of the invention are the simplicity of play and ease of administration. Novel concepts of this invention provide for games that are easy to administer and fun to play.

The game is preferably played in video poker machines, computers, video game machines, and hand-held, mechanical, or video poker devices. A video machine can enable a single player to play more than one hand at a time and can be used to accommodate a plurality of players.

As can be seen from the description of the embodiments, the present invention is readily adaptable to play on a computer or video game. A person skilled in the art of computer and video game construction, as well as those skilled in other arts, will incorporate the method and conduct of this invention in such computer and video games.

Referring to FIG. 10, a program to implement the sequence of the game can execute on a standard gaming machine as illustrated schematically in FIG. 25. CPU 24 forms part of slot machine controller 150 that drives the video screen display 20 and receives touch input signals from touch sensors 23 as well as receiving coin input pulses from coin sensor 36 and driving a coin payout mechanism 153.

In a preferred embodiment, a plurality of slot machine devices, as taught herein, can be connected to a central controller, which can be used to maintain a jackpot prize schedule for all devices in a network of devices. In this manner, several gaming establishments can combine to offer a single prize larger than any one establishment. Alternatively, each slot machine device can be adapted for maintaining a jackpot prize schedule for independent operation.

The invention has been described with references to a preferred embodiment. While specific values, relationships, materials and steps have been set forth for purposes of describing concepts of the invention, it will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the basic concepts and operating principles of the invention as broadly described. It should be recognized that, in the light of the above teachings, those skilled in the art could modify those specifics without departing from the invention taught herein. Having now fully set forth the preferred embodiments and certain modifications of the concept underlying the present invention, various other embodiments as well as certain variations and modifications of the embodiments herein shown and described will obviously occur to those skilled in the art upon becoming familiar with said underlying concept. It is intended to include all such modifications, alternatives and other embodiments insofar as they come within the scope of the appended claims or equivalents thereof. It should be understood, therefore, that the invention may be practiced otherwise than as specifically set forth herein. Consequently, the present embodiments are to be considered in all respects as illustrative and not restrictive.

What is claimed is:

1. Method of conducting a slot machine game, comprising
   (A) providing a set of contest elements for said game in which said set includes a plurality of contest elements having a surface area with playing indicia on said surface area, said contest elements
   (B) designating a version of a showdown card game in the poker family to be utilized in play of a round of the slot machine game;
   (C) identifying the number of elements for forming a FLOP;
   (D) displaying the identified number of elements for such FLOP;
   (E) selecting COMMUNITY ELEMENTS from such FLOP to be used for play of the game, with the number of such COMMUNITY ELEMENTS, which can be established based on the number of elements in a slot of the designated slot machine, game;
   (F) removing such COMMUNITY CARDS from each individual deck to be used by such a participant;
   (G) displaying a predetermined number of elements to each participant from remaining elements, for each slot being played; with
      (i) the same number of elements being dealt from individual decks,
      (ii) such number of elements being established as the number necessary for combining with such COMMUNITY ELEMENTS, to form a slot capable of being played in such selected version of a slot machine game; and
   (H) evaluating the combination of elements in each slot for such round.

2. The method of claim 1, including the steps of permitting a participant to make a wager to participate when the version of the game to be played in the round has been designated, and
   paying such a participant a preestablished amount, based on the amount of such wager, if a slot of such participant in such round comprises a predetermined winning combination of elements.

3. The method of claim 2, in which such predetermined winning combinations are based on an accepted standard for poker hand rankings.

4. The method of claim 1, wherein said combinations are determined for five card poker hands.

5. The method of claim 4, in which said combinations are selected using a separate deck for each card in said five card poker hand.

6. The method of claim 1, in which said game is played on a device selected from the group consisting of:
   a) electronic video game machines;
   b) computers;
   c) hand-held mechanical devices; and
   d) hand-held video devices.

7. A slot machine comprising:
   (A) a game initiating means to initiate a game on the machine;
   (B) display means disposed to display the game being played on the machine wherein said display means is arranged to display a plurality of elements; and
(C) game control means responsive to the initiating means to control the playing of the game, wherein the control means displays a first combination of elements to be used as a FLOP, wherein the number of elements in such first combination corresponds to a selected game of chance, said control means permits a player to select at least one element, from said first combination, to be used as COMMUNITY ELEMENTS, said control means displays a second combination of COMPLEMENTARY ELEMENTS, wherein the number of COMPLEMENTARY ELEMENTS in such second combination when combined with said COMMUNITY ELEMENTS correspond to said selected game of chance, said control means compares the combination of COMMUNITY ELEMENTS and COMPLEMENTARY ELEMENTS to determine if a winning combination is displayed, and awarding a prize to the player in the event that said combination matches a winning combination.

8. The slot machine of claim 7, further comprising means for a player to wager on the displayed combination of elements.