A set of playing cards is shuffled to form a randomized set of playing cards.

The dealer requires two equal wagers (or a single wager covering two hands) at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards.

The dealer deals exactly three cards from the randomized set of playing cards to a first of the two locations.

The dealer moves exactly and only one card from the first of the two locations to a second location of the two locations.

The dealer completes three-card hands at the two locations.

The dealer provides a three (or four) card hand at a dealer’s position.

The dealer resolves the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the hand at the dealer’s position.
A SET OF PLAYING CARDS IS SHUFFLED TO FORM A RANDOMIZED SET OF PLAYING CARDS

THE DEALER REQUIRES TWO EQUAL WAGERS (OR A SINGLE WAGER COVERING TWO HANDS) AT A PLAYER POSITION AT TWO LOCATIONS, WHEREIN EACH OF THE TWO LOCATIONS REPRESENTS A WAGER ON A SINGLE POKER HAND OF THREE CARDS

THE DEALER DEALS EXACTLY THREE CARDS FROM THE RANDOMIZED SET OF PLAYING CARDS TO A FIRST OF THE TWO LOCATIONS

THE DEALER MOVES EXACTLY AND ONLY ONE CARD FROM THE FIRST OF THE TWO LOCATIONS TO A SECOND LOCATION OF THE TWO LOCATIONS

THE DEALER COMPLETES THREE-CARD HANDS AT THE TWO LOCATIONS

THE DEALER PROVIDES A THREE (OR FOUR) CARD HAND AT A DEALER'S POSITION


FIGURE 1
METHOD OF PLAYING VARIANT OF POKER

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to the field of wagering games, particularly poker-type wagering games and most particularly variants of poker games in which three or four cards are used to determine a poker rank. These games may be played with physical playing cards or virtual playing cards, and may be live casino table games or virtual electronic games.

[0003] 2. Background of the Art


[0005] U.S. Pat. Nos. 7,387,300 (Snow); 7,584,966 (Snow); 7,195,423 (Kenny); and 7,533,886 (Kenny) describe variants of poker games in which combinations of cards are used to form poker hands of four cards in a competition against a paytable and/or a dealer's hand.

[0006] U.S. Pat. No. 5,322,295 (Cabot et al.) describes a variant of blackjack in which a player is provided with multiple hands of initially two playing cards. The player may switch one card from each hand to the other hand, forming two new initial 2-card hands for playing blackjack. An initial set of cards is dealt and then additional cards are dealt to complete hands. In a commercial game similar to this disclosure (a game marketed as “Blackjack Switch™ game by Shuffle Master, Inc.”) specific rules are used to make the game commercially acceptable, very specific rules are provided. A player makes two equal wagers at two wagering positions. Two cards are dealt to each wagering position. Only the two top cards may be switched between the two hands. The dealer hand does not “bust” with a hand counting 22. Blackjacks by players are paid at 1:1 (rather than the typical 2:1 payment). These last two rules are needed to maintain a house advantage.

[0007] A 5-card poker variant is described on the internet as a licensable game. Two initial wagers are made at each player position, two 5-card poker hands are dealt to each player position and the player may move the top card from each hand to the other hand.

[0008] New and more enjoyable wagering games are regularly sought by the gaming industry.

SUMMARY OF THE INVENTION

[0009] A method of playing a wagering game places the game under the control of a dealer comprising:

[0010] a) a set of playing cards is shuffled to form a randomized set of playing cards;

[0011] b) the dealer requires two equal wagers (or a single wager covering two hands) at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;

[0012] c) the dealer deals exactly three cards from the randomized set of playing cards to a first of the two locations;

[0013] d) the dealer moves exactly and only one card from the first of the two locations to a second location of the two locations;

[0014] e) the dealer completes three-card hands at the two locations;

[0015] f) the dealer provides a three card hand at a dealer's position; and

[0016] g) the dealer resolves the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.

BRIEF DESCRIPTION OF THE FIGURES

[0017] FIG. 1 shows a flow chart for play of one embodiment of a game according to the present invention.

[0018] FIG. 2 shows a table layout for a game according to one embodiment of the present invention.

[0019] FIG. 3 shows a pay table and betting station at a single player position for one embodiment of the present invention.

[0020] FIG. 4 shows an example of an automated table system useful in the practice of the present invention.

[0021] FIG. 5 shows an electronic/processor schematic for a MultiPlayer Platform (MPP) game system.

[0022] FIG. 6 shows the electronic/processing schematics of the MPP Player Station Intelligence board.

DETAILED DESCRIPTION OF THE INVENTION

[0023] A method of playing a wagering game under the control of a dealer adds value to the existing commercial game of Three-Card Poker™ games. The game requires that at least:

[0024] a) a set of playing cards is shuffled to form a randomized set of playing cards.

The set of playing cards should comprise at least a standard deck of playing cards, fifty-two cards having four suits (spades, hearts, diamonds and clubs) having ranks from 2 to Ace. Multiple decks and/or specialty cards may also be included with the deck. The deck(s) must be randomized by shuffling to provide cards in a random order. The transformation of cards into a random order must be done before the play of each round of the game so that the cards provided cannot be predicted with any significant degree of certainty. Shuffling may be effected manually or mechanically. Manual shuffling is effected by one or more of mixing playing cards by moving them randomly over a gaming table surface, or by interleaving sections of the decks of cards together multiple times.

[0025] Mechanical shuffling may be performed by automated shufflers that may be electromechanical or mechanical equipment that is commercially available. These automated shufflers may operate by interleaving cards, removing cards from an input set of cards and moving cards to compartments in stacks or carousels, randomly mixing cards by inserting cards into random portions of shuffled stack(s) of cards, random ejection or random removal of cards from an input set of cards to an output set of randomized cards, and the like. Such
Shuffler systems are known in the art such as in U.S. Pat. Nos. 7,976,023; 7,413,191; 7,407,438; 7,384,044; 7,374,170; 7,367,561; 7,338,044; 7,255,344; 6,722,794; 6,719,288; 6,676,127; 6,655,684; 6,568,678; 6,529,894; 6,346,044; 6,325,373; 6,165,069; 6,126,166; 5,899,122; 5,695,189; and 4,586,712. These are merely representative examples of the types of shufflers that may be used and are not interpreted as limiting either as batch shufflers, continuous shufflers or as to the type of shuffling performed.

The dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;

The dealer controls the play of the game and dictates the rules of play of the game. The dealer will not allow cards to be dealt to player positions unless the appropriate wager is verified by the dealer.

c) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;

The dealer segments the shuffled set of playing cards into random content subsets of exactly three cards. The cards may be manually dealt or automatically dealt by a shuffling apparatus. The shuffling apparatus may be a batch shuffler or a continuous shuffler. Cards may be provided one at a time from a delivery position in the shuffler, entire randomized deck(s) may be provided from the shufflers, or individual hands of exactly three cards for delivery to individual player positions and the dealer position.

d) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;

There are a number of variations in the play of the game that may be used. The rules are controlled, enforced and implemented by the dealer (acting as a direct agent of the casino or house). In one embodiment, only a first hand of three cards is dealt to a players first wager position. The dealer removes a single card from the first three-card hand (or removes no cards if it is a "pat" hand using all three cards in a straight, flush, three-of-a-kind or straight flush) and puts that single card into the player’s second hand position. The selection of the specific card removed may be done according to a playbook of perfect play rules. Also the dealer may allow the player to have input into the selection of the card to be moved. In this variant, any one (or none) of the three cards may be moved. Perfect play rules might include the following: 1) always keep two cards that are consecutive and in-suit; 2) keep two cards in suit in preference to two cards in sequence; 3) keep two cards with an inside straight flush draw over a straight; 4) keep a pair in preference to two cards that offer an inside straight draw; and 5) other strategic rules.

In another variant (to be described in greater detail later), there are three cards in the first hand position and at least one card (up to three cards) in the second player hand position. The presence of less than three cards (one or two cards) in the second hand position enables dealer selection of the single card to be moved to be effected with more information or different Perfect Play rules or guidelines.

In another variant, the dealer requires a single wager to be placed which wager applies to both hands. This may require an even credit amount wager, or to increase house benefits, one win on an odd credit amount debt would pay the smaller of two sums (odd and even) that equal the total of the odd credit wager. For example, if there were a $25.00 wager, a one hand win would pay at a $12.00 rate and the second hand win would be paid at a $13.00 rate. There may be two separate bonus wagers (e.g., equivalents of Pair Plus™ wagers) made, one on each hand, or there may be a single bonus wager (e.g., again the equivalent of the Pair Plus™ wager used in the major commercial variant of the Three-Card Poker™ game played in U.S. Casinos). If there is a single such bonus wager covering both hands, the scale on the pay table should be less than the scale on a "normal" single hand bonus wager event. For example, if the Three-of-a-kind on a single hand bonus wager pays 40:1, then a single bonus event wager on two hands would pay between 15:1 and 25:1, maintaining a profitable result for the house long-term.

It is also possible, as the player gets to make at least one strategic move to improve player hands, or the house is required to order hands according to rules that are advantageous to the player, the dealer may better equalize the probability of outcomes or add significant advantage to the casino by getting a fourth card to use in making a three-card poker hand. It is also possible that the dealer may be required to discard one of the four cards if specific events occur. For example, if there are two pairs in the dealer’s hand, the dealer may be required to discard either one of the highest pair or one card of the lowest pair. Additionally, if there is three-of-a-kind in the dealer’s hand, the dealer may be required to discard one of the three similar cards. This allows a perception of balancing favorability with a player, but with only modest overall benefits to a player.

If there are three cards in both the player first hand position and the player second hand position, different rules may apply. There is essentially no set of perfect play guidelines as the dealer would move the cards (one from each three card hand) to form hands with the highest potential return on the two wagers.

e) the dealer completing three-card hands at the two locations;

The hands are completed with additional cards only when the player second position hand contains fewer than three cards. The dealer “completes” the hands when there are three cards in both player position hands and cards are switched (or not moved).

f) the dealer providing a three card hand at a dealer’s position; and

The dealer’s three card hand is provided face down (or one card exposed) so that any subsequent wagers made (e.g., a Play wager) in a typical commercial version of the Three-Card Poker™ game is made without totals information on the dealer’s hand. At this point, the dealer may or does require a Play wager at each player position for that player position to remain in the game. If the dealer does not obtain a Play wager at any single hand position, that hand position has completed the game. The dealer may require a wager from each of the two hands at a player position or only one hand at a player position. The rules may allow for the dealer requiring Play wagers from both hands for the two hands to remain active in play, may allow the dealer to accept only a single Play wager to keep both Ante wagers in Play, or may require the dealer to collect an Ante wager from any of the two hands where no Play wager has been received.

g) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.
The standard wagers in the commercial version of the Three-Card Poker™ game can be made (e.g., Pair Plus™ wager, Ante wager and Play wager, as well as bad beat wagers, progressive wagers and the like).

The method may require the dealer to deal three cards to the first location and moves the one card before any cards are dealt to the second location. As noted above, the dealer may be required by rules to move cards according to best play or perfect play strategy or move at the suggestion or inclination of a player. In any event, the dealer moves the card(s). In another variant of the game methods described herein, the dealer deals three cards to the first location and moves the one card after at least one card or exactly two cards are present in the second location.

Another variant in the game method is where the dealer deals three cards to the first location and moves the one card after exactly three cards are present in the second location. There may be rules for card movement where both hand positions have three cards. Among the possible rules are that only the last cards (top cards) may be moved, only the first hand top card may be moved (but any card in the second hand). Similar rules may be used with the bottom card and even the middle card.

Where there is a single card in the player second hand position, the at least one card in the second position may be moved by the dealer to the first location. Where there are two cards in the player second hand position, one card in the second position is moved by the dealer to the first location.

A method of playing a wagering game under the control of a dealer may also be described as having the steps of:

b) a set of playing cards is shuffled to form a randomized set of playing cards;

c) the dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;

d) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;

e) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;

f) the dealer completing three-card hands at the two locations;

g) the dealer providing a three card hand at a dealer’s position; and

h) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.

The method may require the dealer to deal three cards to the first location and moves the one card before any cards are dealt to the second location.

The game may also be played as an electronic version using a processor, video display and player input. The processor effectively operates as the dealer in the play of the game. A random number generator effectively acts as a shuffling mechanism, providing a random generation of cards from a closed set (e.g., a deck or deck(s)) into individual subsets of multiple player position hands and a dealer hand. Wagers are recorded by the processor and wagers are resolved according to paytables retained in memory.

Various aspects of games included within the scope of the present technology may be further and alternatively described as follows.

There may be a method of playing a wagering game under the control of a dealer having steps of:

a) a set of playing cards is shuffled to form a randomized set of playing cards;

b) the dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;

c) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;

d) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;

e) the dealer completing three-card hands at the two locations;

f) the dealer providing a three card hand at a dealer’s position; and

g) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.

Another alternative method may be a method of playing a wagering game under the control of a dealer having steps of:

a) a set of playing cards is shuffled to form a randomized set of playing cards;

b) the dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;

c) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;

d) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;

e) the dealer completing three-card hands at the two locations;

f) the dealer providing a three card hand at a dealer’s position; and

g) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.

The methods described above and below may allow equivalents or variants to the Standard Pair Plus (TM) side bet wager in versions of Three-Card Poker™ games presently played, where the dealer accepts a wager on each of the player’s two hand locations for a bonus wager paid off at odds
listed by the dealer on a paytable, the dealer resolving the wager by comparing three card poker ranks for each player position hand where a bonus wager has been placed against a list of three card poker ranks and odds and paying player position hands based on the odds listed on the paytable.

[0070] Another alternative method may be a method of playing a wagering game under the control of a dealer having steps of:

[a] a set of playing cards is shuffled to form a random set of playing cards;

[b] the dealer requires two equal wagers at a single player position at two hand locations, wherein each of the two hand locations represents a single wager of the two equal wagers on a single poker hand of three cards;

[c] the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;

[d] the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;

[e] the dealer completing three-card hands at the two hand locations;

[f] the dealer providing a four card hand from the randomized set of playing cards at a dealer’s position;

and

[g] the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a best three-card poker rank of the four card hands at the dealer’s position.

[0078] FIG. 1 shows a flow chart for one method of play of games within the present technology.

[0079] FIG. 2 shows an example of a gaming table layout 2 for play of a game according to the present technology. The layout 2 provides (for example) five (5) separate player positions 4, 6, 8, 10 and 12 having three separate locations where the dealer may require an Ante Wager, a Play wager and a Bonus wager at each player position, with two locations for each of the wagers provided at each player position, as there are two hands per player. The player positions also have a location 28 where the two hands of cards are dealer and arranged by the dealer. A shuffling device 22 and a dealer card position 24 are also shown.

[0080] FIG. 3 shows one example of an embodiment of a single player position 4 as generally shown in FIG. 2.

[0081] Games of the present invention may also be practiced on other gaming platforms, such as on an electronic gaming machine or EGM, on a multi-player EGM, on a chipless gaming table, which utilizes physical cards and simultaneously enables credit wagering.

[0082] One preferred construction of a Chipless Table has from three to eight players (Shown in FIG. 3 as six player positions) with five, six or seven player betting positions 112a-112f (with independent monitors 116a-116f) being preferred, a Dealer console 130, a playing card reading shoe 102 (or card reading shuffler or overhead camera imaging system or table mounted card reader—not shown), a chip tray 120, cards (not shown), a generic felt 136 and a table computer 128 using the Aquarius Controller™ protocol (game controller, under the table manufactured by Progressive Games, Inc. of Las Vegas, Nev.), for example, connected through an I/O port 134. The dealer position is at 110. Communication lines are shown, including for example 132.

[0083] The game information (which is preferable for multiple games) is configurable and will be set-up during the initial installation of the table and may be switched from game to game on-the-fly at each table. It is from the set-up that the Game information is selected so that the graphics on the Player Touch Screen 116a-116g, Dealer Console 118, Pit Display 134 and Table Display 132 provide the correct information regarding the game in play. It is the capability of changing individual types of game events (e.g., from blackjack to baccarat) at a table that enables, or even requires that the generic felt 136 is free of any permanent printing that identifies only a specific game at a table. There may be separate monitors (not shown) that enable display of games names, game rules and paytables for individual games, or under table back-lighting that may project such information display on the table.

[0084] Using the Pit Display 134, the game is selected by casino personnel and communicated to the table controller 128 via a touch screen control on the pit display 134. The table controller (and/or a central pit controller) sends out the appropriate graphics to each of the Players screens and table signs to begin game play.


[0086] In one form of the invention, the game is played according to a live gaming table format. Such a format typically includes a standard gaming table with a substantially horizontal gaming surface, and with a printed felt layout. Built into the table or positioned on the table is provided a card handling device, which in one example is an automatic card shuffling device with playing card recognition capacity. An example of a suitable device is disclosed in pending application Ser. No. 11/810,864, filed Jun. 6, 2007, the content which is incorporated by reference into entirety. The card handling device preferably is equipped with a processor that controls card handling functions, receives and stores card information from the card recognition components and also is programmed with “house way” hand setting instructions for the game. The shuffler reads each card in each set of cards. For example, when the shuffler is programmed to deliver a set of six cards to each player and the dealer, the identity of each card in each set is stored in the processor’s memory. Each set of cards is delivered to each player and to the dealer. In other embodiments, the card handling device is a shoe, and in order to capture the identity of each card in the set, the dealer inputs a command to designate the first and last card dealt into the set of cards. This type of system is similar to and may be enabled according to the teachings of Published US Patent Application Document 20100090405 filed 1 Oct. 2009 (Roger Snow) which is incorporated herein by reference.

[0087] The processor preferably has memory and preconfigured hardware (e.g., FPGA or ASIC) content that may be accessed. In the memory may be stored a look-up table of possible arrangements of six or other number of cards into a high-hand, mid-hand and low-hand, and identifies how each hand should be set according to house way rules. One way to display the house way rules is to provide an electronic house way display on the gaming table, and to display the rank and/or suit of at least two of the three hands. Upon display, the dealer sets the hand according to the house way rules.

[0088] Although the present invention has been described in terms of a live casino style game played with cards, chips and optionally an automatic card shuffler, it can be appreciated that the game may be offered in other formats, some well
known, and other newer formats. Some non-limiting examples of other formats for offering games of the present invention include: live gaming tables that use physical cards and other game pieces and that enable credit wagering, electronic single player gaming machines, electronic multiplayer gaming machines, hybrid gaming systems with physical game pieces and/or components for determining game outcome but that enable credit wagering such as the Rapid™ gaming systems distributed by Shuffle Master, Inc., games for practice play (i.e.—no monetary wagering) on cell phones, gaming stations, PC’s, wireless gaming platforms, hand held game devices, parlor games, and the like and some emerging gaming opportunities including but not limited to internet gaming and gaming on systems designed specifically for use on aircrafts, etc.

[0089] Some alternate formats for performing game play method steps of the present invention are described in more detail below.

Computer-Based Implementations

[0090] Methods of the present invention may be implemented in computer hardware, software, or computer hardware and software. A most common form of computer implementation is a stand-alone, single player electronic gaming machine with electronic player controls and one or more video output screens.

[0091] In computer-based embodiments, the gaming device preferably includes at least one processor, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC’s) or Field Programmable Gated Arrays (FPGA’s). The processor is in communication with or operable to access or to exchange signals with at least one data storage or memory device, and/or a player monitor or monitors. In one embodiment, the processor and the memory device reside within the cabinet of a gaming device. Multiple gaming devices are typically connected to a casino information network.

[0092] The memory device stores program code and instructions, executible by the processor, to control the gaming device. The memory device also stores other data such as image data, event data, player input data, random or pseudo-random number generators, pay-table data or information, House Ways distributions and applicable game rules that relate to the play of the gaming device. In one embodiment, the memory device includes random access memory (RAM): which can include non-volatile RAM (NVRAM); magnetic RAM (MRAM), ferroelectric RAM (FeRAM), and other forms as commonly understood in the gaming industry. In one embodiment, the memory device includes read only memory (ROM). In one embodiment, the memory device includes flash memory and/or EEPROM (electrically erasable programmable read only memory). Any other suitable magnetic, optical, and/or semiconductor memory may operate in conjunction with the gaming device disclosed herein.

[0093] In one embodiment, part or all of the program code and/or operating data described above can be stored in a detachable or removable memory device, including, but not limited to, a suitable cartridge, disk, CD, ROM, DVD, or USB memory device.

[0094] In other embodiments, part or all of the program code and/or operating data described above can be downloaded to the memory device through a suitable network. In one embodiment, an operator or a player can use such a removable memory device in a desktop computer, a laptop computer, a personal digital assistant (PDA), a portable computing device, or another computerized platform to implement the present disclosure. In one embodiment, the gaming device or gaming machine disclosed herein is operable over a wireless network, for example part of a wireless gaming system. The gaming machine may be a hand-held device, a mobile device, or any other suitable wireless device that enables a player to play any suitable game at a variety of different locations. It should be appreciated that a gaming device or gaming machine as disclosed herein may be a device that has obtained approval from a regulatory gaming commission or a device that has not obtained approval from a regulatory gaming commission. It should be appreciated that the processor and memory device may be collectively referred to herein as a “computer” or “controller” or “game controller.”

[0095] In one embodiment, as discussed in more detail below, the gaming device randomly generates awards and/or other game outcomes based on probability data. In one such embodiment, this random determination is provided through utilization of a random number generator (RNG), such as a true random number generator, a pseudo random number generator, or other suitable randomization process. In one embodiment, each award or other game outcome is associated with a probability and the gaming device generates the award or other game outcome to be provided to the player based on the associated probabilities. In this embodiment, since the gaming device generates outcomes randomly or based upon one or more probability calculations, there is no certainty that the gaming device will ever provide the player with any specific award or other game outcome.

[0096] In one embodiment, described in more detail below as a “chipless gaming platform”, the gaming device includes one or more display devices that are mounted into a gaming table surface and are controlled by the processor in addition to or separately from the individual player monitors. The display devices are preferably connected to or mounted into the table structure. This may include a central display device which displays a primary game, dealer images, jackpots, information, or information that is not specifically related to the game, such as sports information or winning events at other tables. This display device may also display any suitable secondary game associated with the primary game as well as information relating to the primary or secondary game (e.g., side bets, bonuses, jackpots and the like).

[0097] An alternative embodiment may include a central horizontal game display device and a vertically oriented virtual dealer display device as in Shuffle Master, Inc.’s Table Master® gaming system. The central display device may display the primary game, any suitable secondary game associated or not associated with the primary game and/or information relating to the primary or secondary game. These display devices may also serve as digital glass operable to advertise games or other aspects of the gaming establishment. The gaming device includes a credit display which displays a player’s current number of credits, cash, account balance, or the equivalent. In one embodiment, the gaming device includes a bet display displays a player’s amount wagered. In one embodiment, as described in more detail below, the gaming device includes a player tracking display which displays information regarding a player’s play tracking status.
In yet another embodiment, at least one display device may be a mobile display device, such as a PDA or tablet PC that enables play of at least a portion of the primary or secondary game at a location remote from the gaming device. The display devices may include, without limitation, a monitor, a television display, a plasma display, a liquid crystal display (LCD) a display based on light emitting diodes (LEDs), a display based on a plurality of organic light-emitting diodes (OLEDs), a display based on polymer light-emitting diodes (PLEDs), a display based on a plurality of surface-conduction electron-emitters (SDEs), a display including a projected and/or reflected image, or any other suitable electronic device or display mechanism.

In one embodiment, as described in more detail below, the display device includes a touch-screen with an associated touch-screen controller. The display devices may be of any suitable size and configuration, such as a square, a rectangle or an elongated rectangle. The display devices of the gaming device are configured to display at least one and preferably a plurality of game or other suitable images, symbols and indicia such as any visual representation or exhibition of the movement of objects such as mechanical, virtual, or video reels and wheels, dynamic lighting, video images, images of people, characters, places, things, faces of cards, images of dealers and the like.

Other forms of the invention are in the form of game software that is implemented in a variety of formats, such as internet gaming, PC practice play, hand-held game devices, wireless gaming devices and the like.

Chipless Gaming Table Implementation

One enabling system useful in the practice of the present invention is a system marketed under the name i-TABLE® by Shuffle Master, Inc. of Las Vegas, Nev. That system includes: a) a physical game table; b) player monitors at each player position; c) a playing card reading and delivery system (e.g., commercially available shufflers and playing card delivery shoes with reading capability as sold under the Trade names of One2Six® shuffler, Ace® shuffler, I-DEAL® shuffler, I-SHOE® delivery shoe, etc.); d) a processor receiving information (numbers of cards, rank of cards, suits of cards, etc.) from the card reading and delivery systems; e) communication connectivity (hardwired or wireless) between necessary combinations of the card reading/delivery systems and the processor, the processor and the individual player monitors, and/or the card reading/delivery systems and the video monitors; and f) software in the processor that defines predetermined advantage for distributions of playing cards into multiple hands, game rules, hand history, and the like.

With regard to software f), it is understood in the practice of the present technology that this is not complex software that reads individual player hand cards and determines advantageous card distributions for a first time by extensive calculations. Rather, the entire range of possibilities of hands (e.g., all possible five card sets dealt to players in poker-style games) are known in poker style games.

By way of non-limiting example, the following is directed to a live table game—electronic platform hybrid, marketed as SMT’s i-TABLE®. FIG. 3 shows an exemplary chipless gaming table 100 system for playing live card games with physical playing cards dealt from an automatic card shuffler 102 according to technologies enabled and disclosed herein. Gaming table 100 can be a variety of common constructions or configurations as are typically used as the structural components of gaming table in the industry. The typical gaming table has a tabletop or playing surface 104 and a perimeter pad or armrest (not shown) which extends at least about the portion of the table periphery facing players. The relatively straight back portion of the periphery 110 is used by the dealer (not shown) and can be partly or wholly padded as may vary with the particular table chosen. Six player display/input systems 112a-112f are shown. Other numbers of systems can alternately be provided. Each of the player input systems 112a-112f has a processor (not shown) and a touch screen entry surface 116a-116f. The table includes a dealer chip tray 120, even though players make credit wagers and not gaming chip wagers.

There is also a game controller, CPU or casino computer 128 whose location at the table system 118 is relatively unimportant, but which must be in direct (hardwired or wireless or networked) communication with each individual player processor 112a-114f, a card reading and/or delivery system 102, and a dealer input 130. The communication is represented graphically as broken lines 132 on the drawing. In a preferred form of the invention, the game controller 128 resides beneath the gaming table surface within a layer of the gaming table top structure. Layered gaming table tops enable the system to house all of the necessary electronics yet rest on a standard set of table legs and appear very similar to a standard gaming table to the untrained eye.

A preferable card handling device for administering a poker-style game is a hand-forming shuffler with integrated card recognition technology, from which playing cards are supplied, with a least a rank/count (and preferable also suit) of individual packs of cards are known before the cards are removed and delivered to player positions and/or the dealer position. The card delivery system 102 is in communication with the controller 128 by wired or wireless communication methods. Communication between the various system components is not limited to electronic or electrical signals, but may include optical signals, audio signals, magnetic transmission or the like.

An electronic player display (not shown) may be mounted on a pole and supported by pole support 134. The player display (not shown) may be a double-sided table sign. The side opposite the side viewable by the player is viewable by pit personnel. The player display is also in communication with game controller 128 and may provide information on the specific game being offered, historical player game results, game outcome trends, game rules, game play advice, advertisements and a variety of other information useful or entertaining for players.

Dealer display 130 includes data input capability and may be used by the dealer to input “buy in” amounts, to confirm game play results, to provide the dealer with game play instructions such as instructions on how to set the highest ranking hand, and the like. A random number generator may be included as part of the processing capability of the dealer display 130 and be used to determine which player receives a first hand, or for other purposes. In an alternate embodiment, the dealer display 130 resides on the card dispensing device 102 or as a separate keypad (not shown).

The individual player position processors (not shown) are preferable graphics processors and not full content CPUs as a cost saving, space saving, and efficiency
benefit. With the reduced capacity in the processor as compared to a CPU, there is actually reduced likelihood of tampering and fraudulent input.

[0109] The betting chip rack 120 is provided to allow the dealer to conveniently store betting chips used by the dealer in cashing players in and out of the game. A money drop slot (not shown) is further included to allow the dealer to easily deposit paper money billets therein when players purchase credits.


Multi Player Platform Implementation

[0111] FIG. 4 shows an example of an automated table system 101 useful to practice the game play methods of the present invention. This system is fully disclosed in U.S. Patent Publication 2005/0164759 A1. The content of this application is incorporated by reference in its entirety. The system 140 has an upright dealer display cabinet 142 with a top 144 and a virtual dealer viewing screen 146 which may be any form of display screen such as a CRT, plasma screen, liquid crystal screen, LED screen or the like. The common player area has a common player display screen 148 on which images of cards being dealt. 150, bets wagered (not shown) and touch screen player input controls 152 are located. Other player input functions may be provided on a panel 154 which might accept currency, coins, tokens, identification cards, player tracking cards, ticket in/ticket out acceptance, and the like.

[0112] FIG. 5 shows an electronic/processor schematic for a MultiPlayer Platform (MPP) gaming system. The MPP Game engine (dealer) comprises a Heber Pluto 5 casino game board 200 (Motorola 68340 board) operating off the PC Platform Pentium™ 4 MPP Game Display processor 202. The game display processor operates on a Windows XP platform. The respective subcomponents on the Pentium 4 processor are labeled to show the apportionment of activity on the motherboard and the component parts added to the board. As is shown, the game engine has an Uninterruptible Power Supply 204. The game display processor directs activity on the Speakers, directs activities onto the MPP Game Service panel, and the Plasma Monitor Card/Table display. It is important to note that all communications are direct from the game display processor, freeing up resources available to the game engine processor.

[0113] FIG. 6 shows the electronic/processing schematics of the MPP Player Station Intelligence board (Heber Pluto 5 Casino, Motorola 68340), each of which player stations (one for each player position) is in direct connection to the MPP Game Engine (Dealer), which is in turn directly connected to the PC Platform (not shown in this Figure). Each Intelligence board receives information for all player input systems specific to that player station, such as the shown Coin Acceptor, Coin Hopper, Bill Validator, Ticket Printer, Touch Screen and/or Display Button Panel, Dual Wire Ticket-in-Ticket-Out Printing and SAS System (SAS is one exemplary standard communications protocol used by a number of casinos central computer systems.). A significant benefit resides in the use of the independent Intelligence boards at each player position being in direct communication with the MPP Game Engine 300, as opposed to each individual player position button panel being dead or inactive until authorized by the main game processor, as previous automated gaming systems were constructed.

[0114] With the player intelligent boards, the main game PC can receive packets of information from each player station as events occur rather than having to poll each player position on a regular basis 100 times to gain the specific information for each player input that may be made.

[0115] The following is a discussion of exemplary hardware components that can be used in a multi-player gaming platform that enables play of games of the present invention.

Heber Board

[0116] A description of the Heber Board, (an exemplary board that can be used as a player station processor and/or game engine processor) a commercially available intelligent processing board as is follows. The Heber Board is known for its reliability and flexibility, especially for the Pluto 5 family of gaming products. The Pluto 5 is the controller of choice for the global gaming industry. Flexibility comes from a set of features built into the Pluto 5 (Casino) controller, and from the choice of optional add-on boards that can be used to adapt the Pluto family to best suit individual applications. In the area of interfacing, there are three distinct boards, each of which serves a particular function in helping the Pluto 5 to connect with the world outside:

[0117] RS485 Board

[0118] RS485 is an industrial-grade board for linking multiple systems in unforgiving circumstances for centralized information gathering. The Heber RS485 board is fully optoisolated to provide complete circuit safety when used within ‘electrically noisy’ environments. The RS485 board uses a single RS232 connection to the Pluto 5 board and all necessary power is also derived through this link. Two header connectors may be provided for the RS485 channel to allow daisy chain connections between multiple systems.

[0119] Hi/ceTalk Board

[0120] This board specializes in communicating with industry standard note/coin acceptors and payout hoppers. Equipped with dual communication channels, each port is configurable to use either the HIPI format to connect with Mars™ coin/note acceptors or the ccTalk format for Money Controls™ hoppers. Both channels are controlled via a single RS232 connection to the Pluto 5 board and all necessary power is also derived through this link. The Heber Fast-Track™ package contains modular library functions for passing information via these channels.

[0121] Four Channel Relay Board

[0122] The relay board allows control of medium-level to high-level loads such as solenoids, without risk of damage or interference to the Pluto 5 circuitry. Four power-switching channels are available with absolute isolation from the Pluto 5 control signals. Each relay is capable of switching direct or alternating currents of up to 7 A at a maximum voltage of 250V.

[0123] Like the Pluto 5 board itself, its modular options have been used extensively so that their designs are fully developed and entirely stable. The options that are specified are consistently provided in mass quantities. As with all Pluto products, programming for the modular options is straightforward. This is enhanced with the use of the Pluto 5 Enhanced Development Kit and also the FastTrack™ package. Between them, these kits contain all of the low level and high level programming tools and library functions needed.
for gaming applications. These systems can be provided through a Pluto 5 Enhanced Development Kit datasheet 80-15353-7 (Heber Limited, Belvedere Mill, Chalford, Stroud, Gloucestershire, GL6 8NT, UK Tel: +44 (0) 1453 886000 Fax: +44 (0) 1453 885013 www.heber.co.uk. Specifications for the various boards are identified below.

0124  RS485 Interface

Host Interface

0125  RS232 connection to Pluto 5/Pluto 5 Casino
All power provided via RS232 link from host system

Communication Port

0126  Dual four-way Molex 0.1" KK headers for daisy chaining purposes

Dimensions

0127  80x61 mm (3.14.times.2.4")
Opto-isolated RS485 board
01-14536-2
HII/ccTalk Interface

Host Interface

0128  RS232 connection to Pluto 5/Pluto 5 Casino
All power provided via RS232 link from host system

0129  Communication Port
Single or dual 10 way header connectors

Dimensions

0130  101.6x69.85 mm (4.times.2.8")
Part Number

0131  Dual channel HII/ccTalk board
01-16171-2

Four Channel Relay Board

0132  Host Interface
Connection to Pluto 5/Pluto 5 Casino via ribbon cable using four standard output lines
All power provided via ribbon cable link from host system

0133  Switching Capabilities
Up to 250V AC or DC @ 7 A maximum per channel

0134  Dimensions
80x61 mm (3.14.times.2.4")
Part Number

0135  Four channel relay board
01-15275-1
80-16949-1

0136  One proposed hardware configuration uses a “satellite” intelligent processor at each player position. The player station satellite processor is substantially the same as the primary game engine processor, a Heber Pluto 5 Casino board. The satellite processors receive instruction from the primary game engine but then handle the communications with player station peripherals independently. Each satellite processor communicates with only the peripherals at the same player station. Thus each player station has a dedicated satellite processor communicating with only the peripherals at the same player station and with the casino’s central computer system. The peripherals are, but not limited to: Slot accounting Systems, Bill Validator, Ticket Printer, Coin Acceptor, Coin Hopper, Meters, Button panel or LCD touch screen and various doors and keys.

0137  The satellite processors run proprietary software to enable functionality. The player station software is comprised of two modules, the first being an OS similar to the game engine Operating System and the second being station software that handles peripheral communications. The software may be installed on EPROMs for each satellite processor. The primary method of communication between the satellite processors and the primary game engine is via serial connectivity and the previously described protocol. In one example, information packets are prepared by the satellite processors and are sent to the game engine processor on the happening of an event.

0138  The proposed game engine provides communication to the player stations to set the game state, activate buttons and receive button and meter information for each player station. Communication is via a serial connection to each of the stations. The new protocol for communication between the game engine, game display and player stations is an event driven packet-for-packet bi-directional protocol with Cyclic Redundancy Check (CRC) verification. This is distinguished from the Sega system that used continuous polling. This communication method frees up resources in the same engine processor because the processor no longer needs to poll the satellites continuously or periodically.

0139  The new protocol uses embedded acknowledgement and sequence checking. The packet-for-packet protocol uses a Command Packet, Response Packet and a Synchronization Packet as illustrated below. The protocol uses standard ASCII characters to send data and a proprietary verification method.

0140  Format of Command Packet
TABLE-U.S. Pat. No. 00006 STX SEQ DATA LENGTH
data CRC-16 ETX 1 1 3 3-999 5 1

Format of Response Packet

0141  TABLE-U.S. Pat. No. 00007 STX SEQ DSP PRV
etx 1 1 1 1

Format of Synchronization Response Packet

0142  TABLE-U.S. Pat. No. 00008 STX MTS MRS ETX
1 1 1 1

Legend for Figures

0143  TABLE-U.S. Pat. No. 00009 STX Start of Packet Character SEQ Sequence # (Cycles from ‘0’ thru ‘9’) LEN Length of Data Area (‘003’ thru ‘999’) DATA ASCII Data Fields Separated with ‘|’ Character CRC CRC-16 Value (‘0000’ thru ‘65535’) Cyclic Redundancy Check ETX End of Packet Character DSP Disposition Code (‘A’,’ACK’, ‘N’,’NAK’, or ‘I’,’Invalid Sequence’) PRV Sequence Number of Last ACK’d Packet (0 thru 9) MTS Main’s Current Transmit Sequence Number MRS Main’s Current Receive Sequence Number.

0144  The Command Packet and Response Packet are used during primary game communications. The protocol uses redundant acknowledgement. For example: The packet is initially acknowledged when first received by the recipient. The same recipient will resend another acknowledgement in
the next communication. This second acknowledgement is the ‘PRV’ data in the response packet.

0145 The communications between the Game Engine and the Player Station intelligence is preferably a transaction-based protocol. Either device can start a transaction, which is why it is essential that there be an intelligent board at each player position. All packets of information may be sent in any acceptable format, with ASCII format preferred as a matter of designer choice. All command packets usually contain a sequence number that is incremented after each successful packet exchange. The Game Engine and the Player Station intelligence use sequence numbers that are independent of each other. The sequence number keeps the communications in synchronization. This synchronization method is described later.

0146 The command packet is used to send various commands such as Lamps, Doors, Errors, Chip, Game Results, player input, coin acceptance, player identification, credit acceptance, wagers, etc. The command packet format may be, by way of a non-limiting example: [0121] <STX><Sequence number><Data Length><Data><CRC-16><ETX>

0147 The data format with in the command packet may be:

0148 <Address><Command><Field 1><Field 2><Field n>

The response packet format may be:

0149 <STX><Sequence number><Disposition><Previous ACK><ETX>

The sync request packet format may be:

0150 <SYN>

The sync response packet format may be:

0151 <STX><SMain Current Transmission Sequence><Mains Current Receive Sequence><ETX>

0152 A major strength of the protocol is its resilience of the Game Protocol and its ability to free up resources within the game engine. Those resources can in turn be used to provide more intricate games, and multimedia effects.

0153 Synchronization Method:
The satellite and host must become synchronized in order to provide for reliable communications using packet numbers. To facilitate this, a novel protocol synchronization method that is used. Upon applying power to the satellite, or after a communications failure, the satellite automatically enters into synchronization mode. In the synchronization mode the satellite sends out the ASCII SYN (0x16) character about every second. It is expecting a special response packet containing transmit and receive packet sequence numbers to be used from that point on. After receiving the special response packet, the sequence numbers are used as-is, and not incremented until a successful packet exchange is completed. After communications is synchronized, the sequence numbers are incremented after each packet is successfully sent or received.

0154 As was noted before, the main game processor may contain information, data, programming and other necessary functions to enable the play of multiple games off the same machine. For example, the main game engine may have rules and commands that will enable play of high and low games of the present invention and other card games. The system may be controlled so that different games may be played at different times on command of the casino or players.

0155 The scope of the invention shown in the above examples and descriptions are intended to be only specific, non-limiting examples and descriptions of the generic concepts claimed herein. All references cited herein are incorporated herein by reference in their entirety.

What is claimed is:
1. A method of playing a wagering game under the control of a dealer comprising:
a) a set of playing cards is shuffled to form a randomized set of playing cards;
b) the dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;
c) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;
d) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;
e) the dealer completing three-card hands at the two locations;
f) the dealer providing a three card hand at a dealer’s position; and

g) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.

2. The method of claim 1 wherein the dealer deals three cards to the first location and moves the one card before any cards are dealt to the second location.

3. The method of claim 1 wherein the dealer deals three cards to the first location and moves the one card after at least one card is present in the second location.

4. The method of claim 1 wherein the dealer deals three cards to the first location and moves the one card after at least two cards are present in the second location.

5. The method of claim 1 wherein the dealer deals three cards to the first location and moves the one card after exactly three cards are present in the second location.

6. The method of claim 3 wherein the at least one card in the second position is moved by the dealer to the first location.

7. The method of claim 4 wherein one card in the second position is moved by the dealer to the first location.

8. The method of claim 5 wherein one card in the second position is moved by the dealer to the first location.

9. A method of playing a wagering game under the control of a dealer comprising:
a) A set of playing cards is shuffled to form a randomized set of playing cards;
b) the dealer requires two equal wagers at a player position at two locations, wherein each of the two locations represents a wager on a single poker hand of three cards;
c) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;
d) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;
e) the dealer providing a three card hand at the two locations;
f) the dealer completing three-card hands at the two locations;

m) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a three-card poker rank of the three card hand at the dealer’s position.
10) The method of claim 9 wherein the dealer deals three cards to the first location and moves the one card before any cards are dealt to the second location.

11) The method of claim 9 wherein the dealer deals three cards to the first location and moves the one card after at least one card is present in the second location.

12) The method of claim 9 wherein the dealer deals three cards to the first location and moves the one card after at least two cards are present in the second location.

13) The method of claim 9 wherein the dealer deals three cards to the first location and moves the one card after exactly three cards are present in the second location.

14) The method of claim 11 wherein the at least one card in the second position is moved by the dealer to the first location.

15) The method of claim 12 wherein one card in the second position is moved by the dealer to the first location.

16) The method of claim 13 wherein one card in the second position is moved by the dealer to the first location.

17) The method of claim 1 wherein the dealer accepts a wager on each of the player’s two hand locations for a bonus wager paid off at odds listed by the dealer on a paytable, the dealer resolving the wager by comparing three card poker ranks for each player position hand where a bonus wager has been placed against a list of three card poker ranks and odds and paying player position hands based on the odds listed on the paytable.

18) The method of claim 9 wherein the dealer accepts a wager on each of the player’s two hand locations for a bonus wager paid off at odds listed by the dealer on a paytable, the dealer resolving the wager by comparing three card poker ranks for each player position hand where a bonus wager has been placed against a list of three card poker ranks and odds and paying player position hands based on the odds listed on the paytable.

19) A method of playing a wagering game under the control of a dealer comprising:
   h) a set of playing cards is shuffled to form a randomized set of playing cards;
   i) the dealer requires two equal wagers at a single player position at two hand locations, wherein each of the two hand locations represents a single wager of the two equal wagers on a single poker hand of three cards;
   j) the dealer dealing exactly three cards from the randomized set of playing cards to a first of the two locations;
   k) the dealer moving exactly and only one card from the first of the two locations to a second location of the two locations;
   l) the dealer completing three-card hands at the two hand locations;
   m) the dealer providing a four card hand from the randomized set of playing cards at a dealer’s position; and
   n) the dealer resolving the two wagers by comparing three-card poker ranks of each of the two locations against a best three-card poker rank of the four card hand at the dealer’s position;

20) The method of claim 19 wherein the dealer accepts a wager on each of the player’s two hand locations for a bonus wager paid off at odds listed by the dealer on a paytable, the dealer resolving the wager by comparing three card poker ranks for each player position hand where a bonus wager has been placed against a list of three card poker ranks and odds and paying player position hands based on the odds listed on the paytable.

* * * * *