

## POOL GAMING MACHINE

### FIELD OF INVENTION

5           The present invention relates broadly to a gaming machine, to a POOL game system, to a method of implementing a POOL game on a gaming machine, and to a computer readable data storage medium having stored thereon computer code means for instructing a computer processor of a gaming machine to execute a method of implementing a POOL game.

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### BACKGROUND

          In the context of payout rates, gaming machines with relatively high payout rates typically attract more players. Attracting more players may result in higher revenues that  
15    may be generated on the gaming machines. However, for commercial reasons, the payout rates of gaming machines are now typically programmed to be significantly lower than payout rates that may have been available in the past.

          By lowering the payout rate, a problem arises that players are typically not attracted to such gaming machines. A lower player attraction in turn reduces the revenue  
20    that may be generated on such gaming machines. Therefore, there exists an issue of attracting players to the gaming machines while maintaining a low payout rate to the players.

          On the other hand, there exists an issue of facilitating an environment in which players' spending habits on gaming machines may be improved in terms of making the  
25    spending of money more transparent or evident to the player.

          Hence, there exists a need for a gaming machine that seeks to address at least one of the above issues.

### SUMMARY

30           According to a first aspect of the present invention there is provided a gaming machine comprising a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine; a database for storing a points balance; a POOL game module for coupling the gaming machine to

an external POOL game system; a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game; wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under  
5 the control of the POOL game system.

A winning rate for the entertainment game may be higher than a winning rate of the POOL game system.

The prizes may be won based on events in the entertainment game or based on a draw executed by the POOL game system.

10 The gaming machine may be implemented as a physical gaming machine or as a virtual gaming machine.

The virtual gaming machine may be implemented on a portable device or a desktop device.

15 The virtual gaming machine may be implemented via the Internet or via interactive TV.

A POOL amount available for the awarding of prizes may be based on data representing the purchased points on a plurality of gaming machines coupled to the POOL game system.

20 The entertainment game may comprise a reel game, a sports game, a card game or a numbers game.

According to a second aspect of the present invention there is provided a POOL game system comprising a first database for storing current POOL data; a plurality of gaming machines, each gaming machine comprising a points purchase module for purchasing non-redeemable points for playing an entertainment game on  
25 the gaming machine; a second database for storing a points balance; a POOL game module for coupling the gaming machine to the first database, the POOL game module transferring data representing the purchased points to the first database and facilitating awarding prizes to a player; and a processor for maintaining the points balance stored in the second database based on points wins and losses from the  
30 entertainment game; and a POOL game unit coupled to the gaming machines for awarding prizes to players on the respective gaming machines based on the POOL data stored in the first database.

A winning rate for the entertainment game may be higher than a winning rate of the POOL game module.

The prizes may be won based on events in the entertainment game or based on a draw executed by the POOL game module.

Each gaming machine may comprise physical gaming machines, virtual gaming machines or both.

5 The virtual gaming machines may be implemented on a portable device, a desktop device, or both.

The virtual gaming machines may be implemented via the Internet or via interactive TV.

10 The entertainment game may comprise a reel game, a sports game, a card game or a numbers game.

According to a third aspect of the present invention there is provided a method of implementing a POOL game on a gaming machine, the method comprising providing a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine; providing a database for storing a points balance; providing a POOL game module for coupling the gaming machine to an external POOL game system; providing a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game; wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.

20 According to a fourth aspect of the present invention there is provided a computer readable data storage medium having stored thereon computer code means for instructing a computer processor of a gaming apparatus to execute a method of implementing a POOL game, the method comprising providing a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine; providing a database for storing a points balance; providing a POOL game module for coupling the gaming machine to an external POOL game system; providing a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game; wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.

## BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

Figure 1 shows a flow chart illustrating the gaming process of an example embodiment.

Figure 2 is a schematic perspective view of a gaming machine in an example embodiment.

Figure 3 is a screenshot showing a reel game in an example embodiment.

Figure 4 is a schematic diagram illustrating a POOL game system according to an example embodiment.

Figure 5 is a schematic drawing of a computer controlled gaming machine for implementing an example embodiment.

Figure 6 is a schematic drawing of a gaming machine according to an example embodiment.

Figure 7 shows a flowchart illustrating a method of implementing a POOL game on a gaming machine, according to an example embodiment.

## DETAILED DESCRIPTION

In an example embodiment, an entertainment game is implemented as a typical reel game on a gaming machine. Additionally, the gaming machine is coupled to a POOL game or lottery, i.e. POOL prizes may be won while playing the gaming machine. The POOL prizes may include, but are not limited to, cash prizes, for example in the form of cash-credits, or physical prizes such as a car or condominium. A player plays the entertainment game using non-redeemable points.

The non-redeemable points are bought at the start of accessing the gaming machine. If a player terminates playing on the gaming machine, he or she will not be able to redeem a current points balance for cash. However, while playing the reel game using the non-redeemable points, the player has the chance of winning POOL prizes.

Figure 1 is a schematic flowchart illustrating the gaming process of the example embodiment. At step 102, the player inserts money to buy non-redeemable points. The money from buying the points immediately contributes to an accumulated POOL for the POOL game, and the POOL prizes are awarded from the POOL. The player, i.e. the gaming machine, automatically participates in the next "draw" of the POOL game.

At step 104, the reel game is played and it is determined if the player has won or lost any points based on the reel game at step 106. The wins or losses are used to deduct or increase the non-redeemable points balance. At step 108, it is determined whether or not a POOL prize has been won. If no, the process loops back to step 104 for continued playing.

If a POOL prize has been won, the POOL prize is awarded to the player at step 114. After the POOL prize has been awarded, the process loops back to step 104.

In the example embodiment, the amount of points can increase or decrease based on the player's progress when playing the reel game, i.e. wins and losses are added or deducted from the points balance respectively. Unused points are not paid out to the player.

In addition to a participating in the POOL game for a chance to win POOL prizes, the player has the entertainment of playing the reel game using the non-redeemable points. Furthermore, playing the reel game "successfully" may prolong the playing time of the player without increasing the initial amount paid to utilise the gaming machine. A prolonged playing time in turn increases the chance of winning a POOL prize. The entertainment of playing the reel game may also compensate the player for a relatively lower rate of "real" payout of the POOL game.

In the following, an implementation of the example embodiment is described. It will be appreciated by a person skilled in the art that numerous variations and/or modifications may be made to the implementation and/or the example embodiment. The

present embodiments are, therefore, to be considered in all respects to be illustrative and not restrictive.

With reference to Figure 2, the example embodiment can be implemented on a gaming machine 200. The gaming machine 200 comprises a liquid crystal display (LCD) screen 202, a keyset 204 of push buttons, a credit input mechanism in the form of a stored-value card slot 206, a prize pay-out tray 208 and a top box 210. The LCD screen 202 displays the reel game. The LCD screen 202 is incorporated with touch screen technology to allow the player to play the games contained in the gaming machine 200. The keyset 204 of push buttons allows a player to operate or initiate the gaming machine 100. The stored-value card slot 206 receives a stored-value card from the player for buying points to play the games in the gaming machine 200.

The prize pay-out tray 208 allows real cash to be paid out by the POOL game to the player when the player collects cash POOL prizes, if any, won from the POOL game, e.g. when the player stops playing the gaming machine. The top box 210 is located on the top of the gaming machine 200 and comprises an artwork panel 212. The artwork panel 212 displays winning combinations for winning the reel game. The amount of points won or lost when the player plays each turn of the reel game is governed based on an odds table stored or programmed in the gaming machine 200.

Figure 3 is a screenshot 302 of the LCD screen 202 showing the reel game 304 in the example embodiment. The reel game 304 comprises a plurality of rotatable reels 306 containing graphical symbols e.g. 308. The reel game 304 involves a matching of a pre-determined sequence of the graphical symbols e.g. 308 appearing on the reels 306. Once the player obtains an occurrence of a combination of graphical symbols e.g. 308 and the combination matches one of those of the graded winnings scale as displayed on the artwork panel 212 (Figure 2), the gaming machine 200 (Figure 2) awards a pre-determined amount of points to the player according to the winnings scale. A touch screen SPIN button 310 is displayed and the player can play each turn of the reel game by depressing the SPIN button 310. A current points amount 312 is displayed.

After each turn of the reel game is played by the player, the points amount 312 is graphically increased or decreased based on the results of the secondary game. The points amount 312 can be used as a variable wager for playing the reel

game. As will be appreciated, when the player first initiates the gaming machine 200 (Figure 2), the points amount 312 is the amount of points the player has bought using the stored-value card. A variable amount of points is wagered for the next turn of each reel game. A touch screen reel wager button 316 is also displayed on the LCD screen 202. Depressing the reel wager button 316 allows the player to adjust an amount of waged points on the reel game before each turn of the reel game.

Touch screen Increase/Decrease buttons 321, 323 respectively and a reel wager amount display 319 are displayed on the LCD screen 202. The player can adjust the wager amount for the reel game in pre-determined steps by depressing the Increase/Decrease buttons 321, 323 respectively. For example, for each time the Increase/Decrease buttons 321, 323 are depressed, the wager amount in the reel wager amount display 319 is adjusted by fifty points. The wager amount is displayed in the reel wager amount display 319 and the points amount 312 is correspondingly decremented according to the wager amount.

During playtime on the gaming machine 200 (Figure 2), the player, i.e. the gaming machine, participates in the POOL game for a chance to win POOL prizes. It will be appreciated by a person skilled in the art that the POOL game may be implemented in a variety of different ways. For example, the POOL game may be such that the POOL is won based on a particular winning combination of the graphical symbols e.g. 308 displayed on the rotatable reels 306. Alternatively or additionally, the POOL prize may be awarded based on events not directly linked to the reel game itself. For example, the POOL prizes may be awarded based on a random lottery to a particular gaming machine, or based on operating parameters of the gaming machine such as operating time, total of consumed points etc. In the example embodiment, a winning combination of graphical symbols for which the POOL prize is awarded is displayed on the artwork panel 212 (Figure 2).

If the player wins the POOL game, winnings from the POOL game may be credited into a cash prize amount 314. However, it is noted again that the POOL prize(s) may be awarded in different forms, e.g. awarding physical prizes such as a car or a condominium. In such embodiments, a POOL prize award message may be displayed on the LCD screen 202, notifying the player of the awarded prize and the mode of collection of the awarded prize. Typically, casino staff would be alerted to the awarding of a POOL prize by a central processing/control system to which the gaming machine is connected, and a casino staff member may be alerted to

approach the player of the relevant gaming machine to ensure an appropriate awarding of the won POOL prize.

In an embodiment in which a cash prize from the POOL game is awarded into the cash prize amount 314, the current balance of the cash prize amount of 314  
5 may be collected by the player by depressing an appropriate redemption button (not shown). Furthermore, the cash prize amount 314, or parts thereof, may be used to buy additional non-redeemable points for playing the reel game, by depressing a points purchase button (not shown).

In the example embodiment, the payout rate of the POOL game may be pre-  
10 programmed to a desired rate while the "payout" rate of the reel game (i.e. of non-redeemable points) may be programmed to be as high as 100%. A payout rate of about 100% may attract the player to play the reel game with the hope of winning points each turn the reel game is played. Odds tables governing the pay-out rates of the POOL game and the reel game respectively may be stored or programmed in the gaming  
15 machine.

The relatively high payout rate of the reel game may serve to sustain the player's interest in the reel game and prolong the playtime of the player. By maximizing the playtime or entertainment of the player, the player may be compensated for the relatively lower POOL payout rate of the POOL game. Therefore, by offering a potentially longer  
20 playtime together with a chance of winning a POOL prize, players may be more attracted to playing the games on the gaming machine. In other words, the more points are won, the longer the playing time, which in turn leads to more chances of winning the POOL prizes. This may in turn result in higher revenues from such gaming machines

Furthermore, in the example embodiment, a player "knows" that the points  
25 initially bought are not redeemable. Only POOL prizes can be redeemed or collected by the player. Therefore, this knowledge may influence the player to judge and control an amount of money initially paid to the machine for buying the points. If points were redeemable, a player may be tempted to initially buy a larger amount of points, thinking that he would redeem the remaining points should winnings not be forthcoming. In  
30 reality, under those circumstances the player may continue to gamble the entire amount notwithstanding.

Figure 4 shows a schematic drawing of a POOL game system 400 according to an example embodiment. The POOL system comprises a plurality of gaming machines for 402, 404, 406, each coupled to a POOL game unit 408. The gaming

machines 402, 404, 406 may be implemented in a variety of different ways. For example, one or more of the gaming machines 402 are implemented as physical gaming machines. One or more other gaming machines 404 are implemented as virtual gaming machines on desktop devices. One or more other gaming machines  
5 406 are implemented as virtual gaming machines on portable devices such as mobile phones, Personnel Digital Assistants (PDAs) or the like. The virtual gaming machines 404, 406 may be implemented via the Internet, interactive TV or other service networks. The coupling between the POOL game unit 408 and the respective gaming machines 402, 404, 406 may be implemented in a variety of different ways,  
10 including via the Internet, or via other wired or wireless networks.

The POOL game unit 408 comprises a database 410 for storing current POOL data, and a processor 412 coupled to the database 410 for awarding prizes to players on the respective gaming machines 402, 404, 406, based on the POOL data stored in the database 410.

15 Each of the gaming machine 402, 404, 406 comprises respective POOL game modules (not shown) for transferring data representing non-redeemable points purchased on the respective gaming machines 402, 404, 406 to the database 410. Accordingly, money spent by players on the respective gaming machines 402, 404, 406 contributes to the POOL data stored in the database 410, based on which  
20 prizes are awarded to players on the respective gaming machines 402, 404, 406 under the control of the processor 412.

The processor 412 may award the prizes based on events in the entertainment games implemented on the respective gaming machine 402, 404, 406, or based on a draw executed by the processor 412. It will be appreciated that  
25 the POOL game system 400 thus provides a distributed entertainment gaming environment with a centralized POOL database for awarding prizes to players on the respective gaming machines 402, 404, 406. Since money spent on each of the gaming machines 402, 404, 406 is recorded in the central database 410, based on which prizes can be awarded from the POOL, the example embodiment can provide  
30 a distributed entertainment system with a centralized awarding of POOL prizes, which may be centrally governed by entities such as government bodies. This may provide transparency of the POOL game system 400 for players, where information such as current POOL money balances and POOL winning rates may be made available to the public.

The example embodiments may be implemented on computer controlled gaming machines. They may be implemented as software, such as a computer program being executed within the gaming machine, and instructing the gaming machine to conduct the gaming process of the example embodiment.

5           The gaming machine may comprise a computer module 502, schematically shown in Figure 5. The computer module 502 in the example includes a processor 518, a Random Access Memory (RAM) 520 and a Read Only Memory (ROM) 522. The computer module 502 also includes a number of Input/Output (I/O) interfaces, for example I/O interface 524 to a display 508.

10           The components of the computer module 502 typically communicate via an interconnected bus 528 and in a manner known to the person skilled in the relevant art.

          The application program is typically supplied to the operator of the gaming machine encoded on a data storage medium such as a CD-ROM or a flash memory module such as a memory card/stick and read utilising a corresponding data storage medium drive of a data storage device 530. The application program is read and controlled in its execution by the processor 518. Intermediate storage of program data maybe accomplished using RAM 520.

          Figure 6 shows a schematic drawing of a gaming machine 600 according to an example embodiment. The gaming machine 600 comprises a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine 600. The gaming machine 600 further comprises a database 604 for storing a points balance, and a POOL game module 606 for coupling the gaming machine 600 to an external POOL game system (not shown). A processor 608 of the gaming machine 600 maintains the points balance stored in the database 604 based on points wins and loses from the entertainment game. The POOL game module 606 transfers data representing the purchased points to the POOL game system (not shown) and facilitates awarding prizes to a player under the control of the POOL game system (not shown). The points purchase module 602, the database 604, the POOL game modules 606 and the processor 608 are interconnected via a bus 610.

          Figure 7 shows a flowchart 700 illustrating a POOL game on gaming machine. At step 702, a points purchase module for purchasing non-redeemable points is provided for playing an entertainment game on the gaming machine. At

step 704, a database for storing a points balance is provided. At step 706, a POOL game module is provided coupling the gaming machine to an external POOL game system. At step 708, a processor for maintaining the points balance stored in the database based on points wins and loses from the entertainment game is provided.

5 The POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under control of the POOL game system.

It will be appreciated by a person skilled in the art that numerous variations and/or modifications may be made to the present invention as shown in the specific embodiment without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects to be illustrative and not restrictive.

As would be appreciated by a person skilled in the art, the paying for points to initiate the gaming machine is not restricted to stored-value cards and may comprise usage of coins, chip tokens or credit cards.

The gaming machines may be implemented as physical or virtual gaming machines, such as via the Internet, interactive TV or other service networks. The virtual gaming machines may be implemented on desk top devices or portable devices. For gaming machines implemented as physical gaming machines, although touch screen keys have been described in the example embodiment, other actuators such as mechanical keys or pull/push handles may also be used to play the games contained in the gaming machine.

Furthermore, although the entertainment game has been described as a reel game, other forms and graphical representations of games including, but not limited to, card games, numbers games, sports games etc., can be implemented instead.

**CLAIMS**

1. A gaming machine comprising:
  - 5 a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine;
  - a database for storing a points balance;
  - a POOL game module for coupling the gaming machine to an external POOL game system;
  - 10 a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game;
  - wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.
- 15 2. The gaming machine as claimed in claim 1, wherein a winning rate for the entertainment game is higher than a winning rate of the POOL game system.
3. The gaming machine as claimed in claims 1 or 2, wherein the prizes are won based on events in the entertainment game or based on a draw executed by the POOL game system.
- 20 4. The gaming machine as claimed in any one of the preceding claims, wherein the gaming machine is implemented as a physical gaming machine or as a virtual gaming machine.
5. The gaming machine as claimed in claim 4, wherein the virtual gaming machine is implemented on a portable device or a desktop device.
- 25 6. The gaming machine as claimed in claims 4 or 5, wherein the virtual gaming machine is implemented via the Internet or via interactive TV.
7. The gaming machine as claimed in any one of the preceding claims, wherein a POOL amount available for the awarding of prizes is based on data representing the purchased points on a plurality of gaming machines coupled to the POOL game system.
- 30 8. The gaming machine as claimed in any one of the preceding claims, wherein the entertainment game comprises a reel game, a sports game, a card game or a numbers game.
9. A POOL game system comprising:
  - a first database for storing current POOL data;

a plurality of gaming machines, each gaming machine comprising  
a points purchase module for purchasing non-redeemable points for  
playing an entertainment game on the gaming machine;  
a second database for storing a points balance;  
5 a POOL game module for coupling the gaming machine to the first  
database, the POOL game module transferring data representing the purchased  
points to the first database and facilitating awarding prizes to a player; and  
a processor for maintaining the points balance stored in the second  
database based on points wins and losses from the entertainment game;  
10 and  
a POOL game unit coupled to the gaming machines for awarding prizes to  
players on the respective gaming machines based on the POOL data stored in the  
first database.

10. The system as claimed in claim 9, wherein a winning rate for the  
15 entertainment game is higher than a winning rate of the POOL game module.

11. The system as claimed in claims 9 or 10, wherein the prizes are won  
based on events in the entertainment game or based on a draw executed by the  
POOL game module.

12. The system as claimed in any one of claims 9 to 11, wherein each  
20 gaming machines comprise physical gaming machines, virtual gaming machines or  
both.

13. The system as claimed in claim 12, wherein the virtual gaming  
machines are implemented on a portable device, a desktop device, or both.

14. The system as claimed in claims 12 or 13, wherein the virtual gaming  
25 machines are implemented via the Internet or via interactive TV.

15. The system as claimed in any one of claims 9 to 14, wherein the  
entertainment game comprises a reel game, a sports game, a card game or a  
numbers game.

16. A method of implementing a POOL game on a gaming machine, the  
30 method comprising:

providing a points purchase module for purchasing non-redeemable points  
for playing an entertainment game on the gaming machine;  
providing a database for storing a points balance;

providing a POOL game module for coupling the gaming machine to an external POOL game system;

providing a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game;

5        wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.

17.     A computer readable data storage medium having stored thereon computer code means for instructing a computer processor of a gaming apparatus to  
10     execute a method of implementing a POOL game, the method comprising:

providing a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine;

providing a database for storing a points balance;

15     providing a POOL game module for coupling the gaming machine to an external POOL game system;

providing a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game;

20     wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.

## POOL GAMING MACHINE

### ABSTRACT

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A gaming machine and a POOL game system. The gaming machine comprises a points purchase module for purchasing non-redeemable points for playing an entertainment game on the gaming machine; a database for storing a points balance; a POOL game module for coupling the gaming machine to an external POOL game system; a processor for maintaining the points balance stored in the database based on points wins and losses from the entertainment game; wherein the POOL game module transfers data representing the purchased points to the POOL game system and facilitates awarding prizes to a player under the control of the POOL game system.

10  
15**FIG. 6**

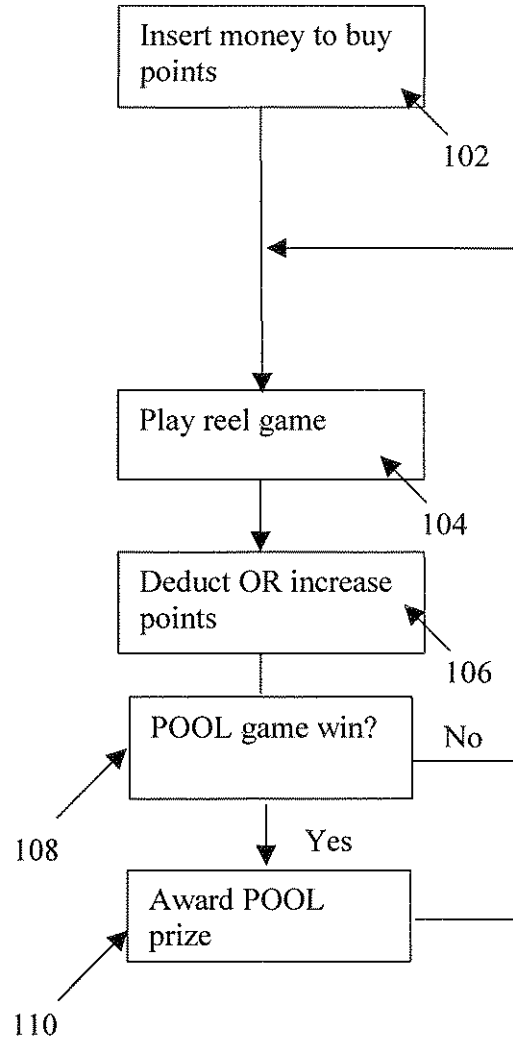


Figure 1

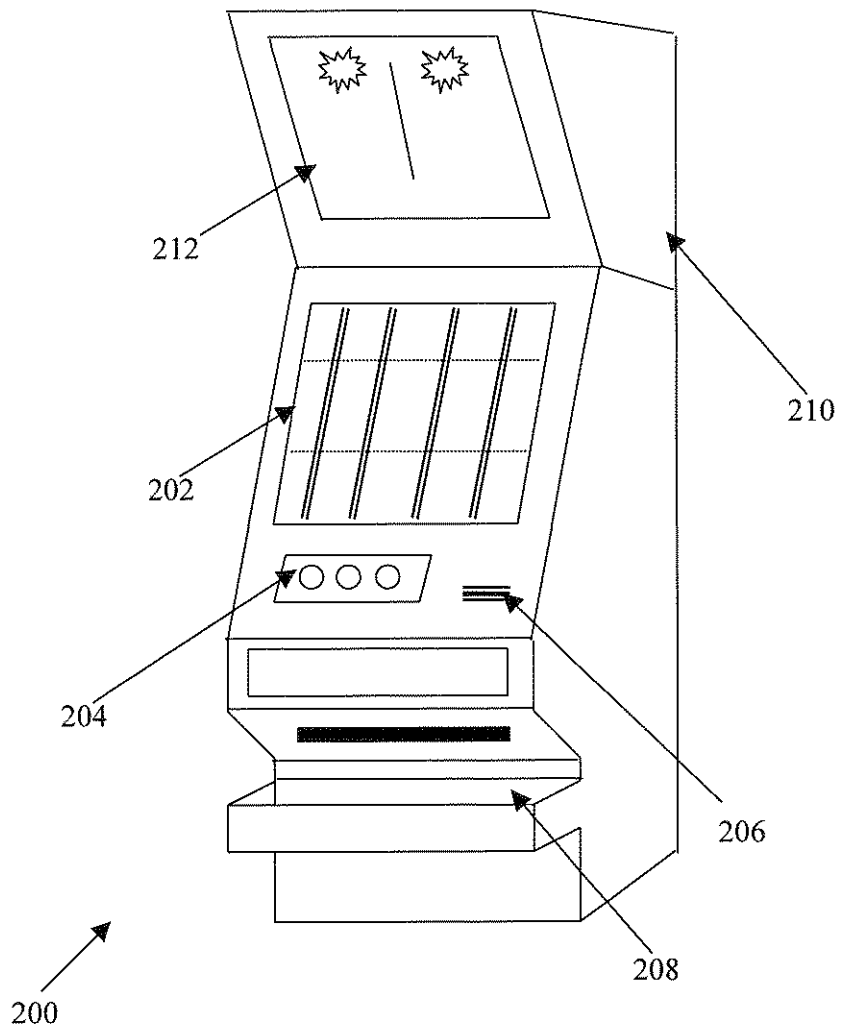


Figure 2

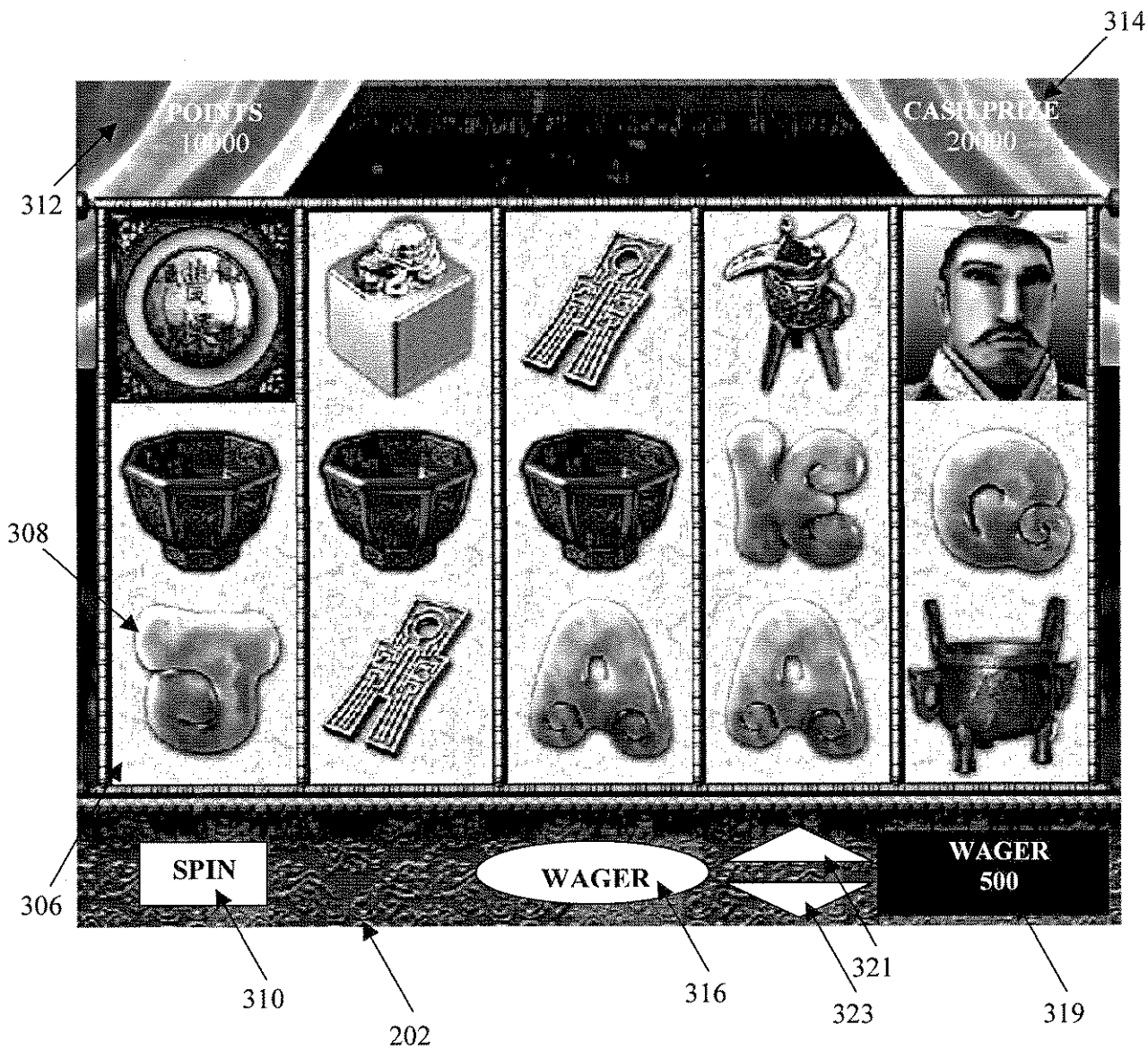


Figure 3

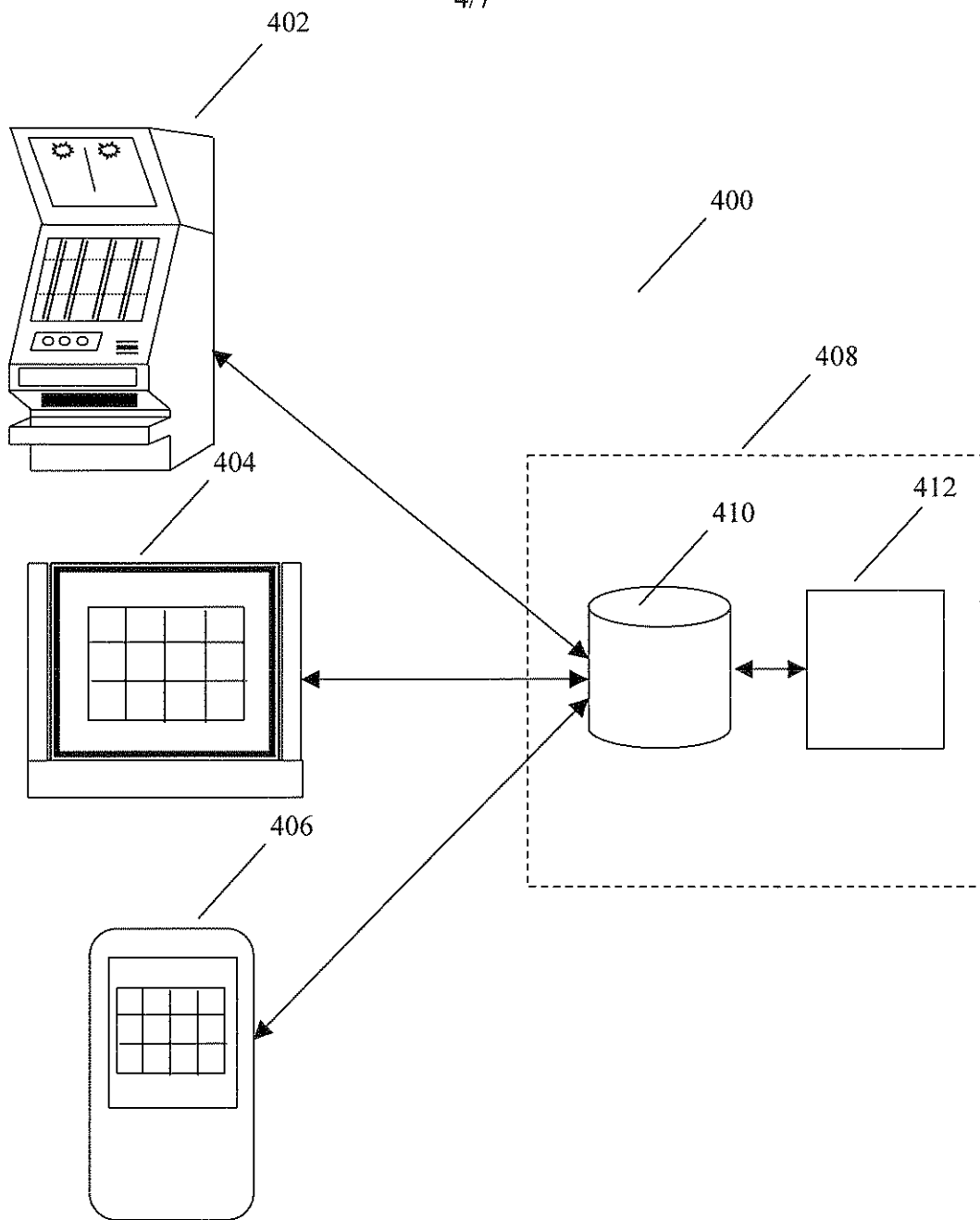


Figure 4

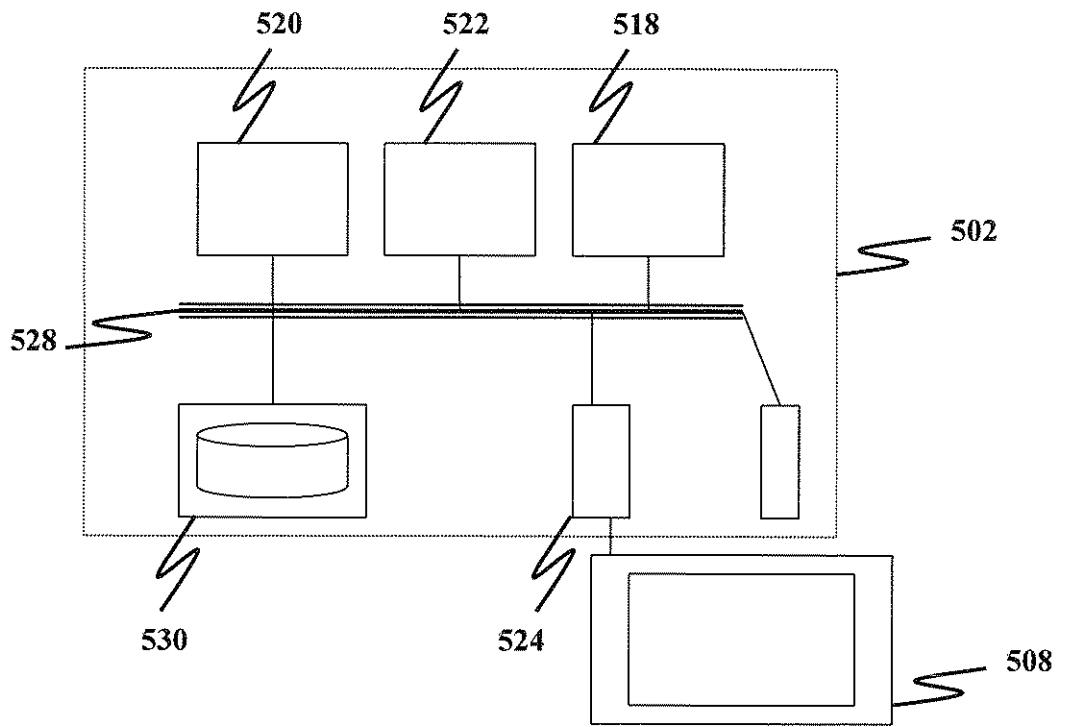


Figure 5

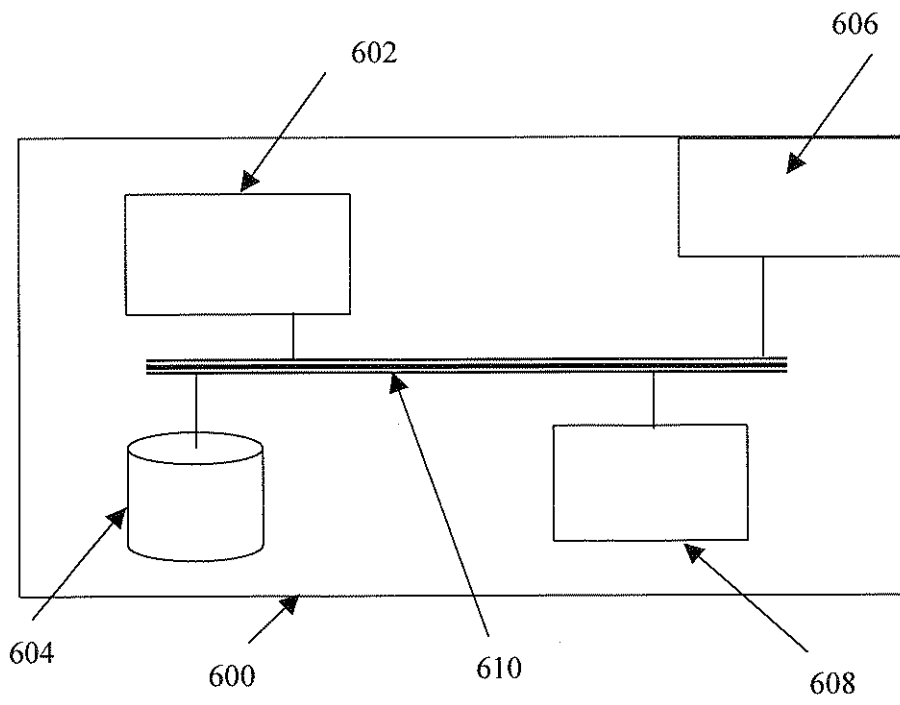


Figure 6

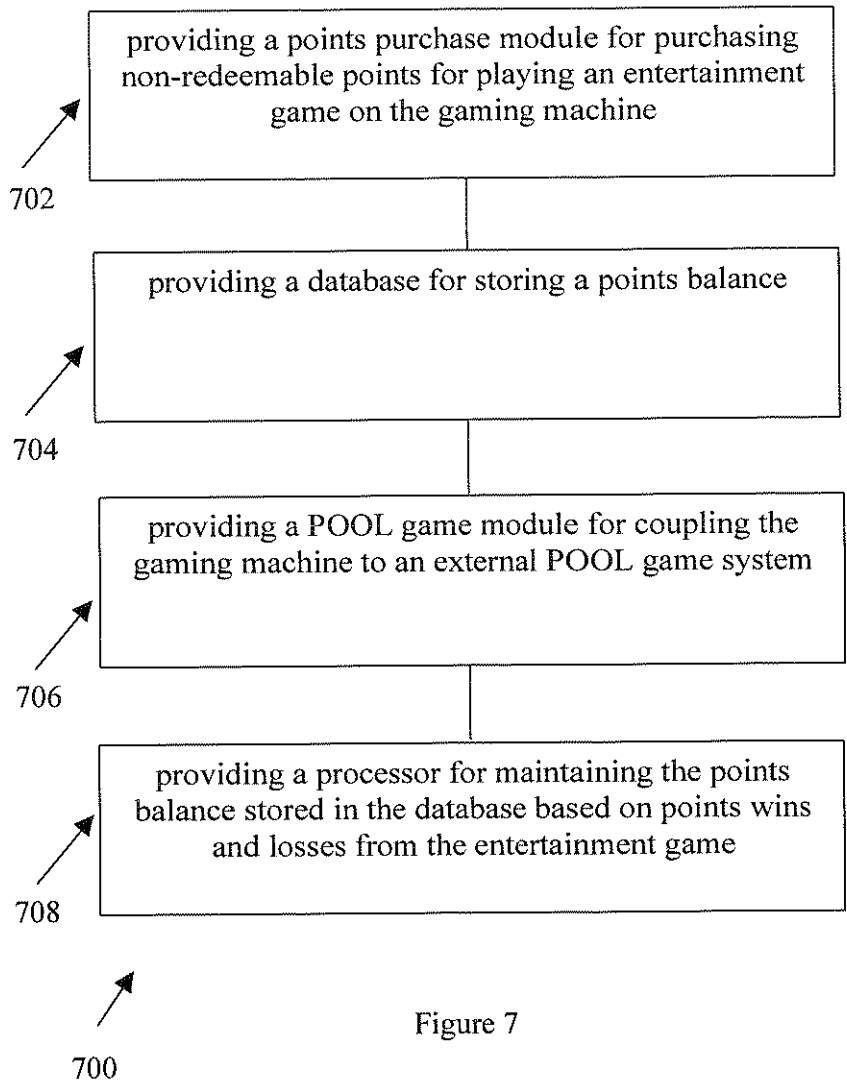


Figure 7