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Abstract of the disclosure

A gaming machine provides a base game, from which a spin and hold feature game is triggered when a determined number of configurable symbols are displayed in a base game outcome. When the feature game is triggered, the configurable symbols are held in place on the display and the player is provided more spins during the feature in which to collect additional configurable symbols. Any additional configurable symbols are retained on the display during subsequent spins until the feature is completed. At the end of the feature, the player is awarded a prize based on the values carried by the configurable symbols. During play of the feature, the configurable symbols include Repeater symbols whose value is determined by summing the values of the configurable symbols that triggered the feature game.

A GAMING MACHINE

RELATED APPLICATION

[0001] This application is a divisional of Australian patent application number 2024201253, which in turn is a divisional of Australian patent application number 2022200079, which in turn is a divisional of Australian patent application number 2019264644, which in turn is a divisional application of Australian application no. 2018203489, the disclosure of which is incorporated herein by reference.

FIELD

[0002] This application relates to a gaming machine.

BACKGROUND

[0003] Electronic gaming machines (“EGMs”) or gaming devices provide a variety of wagering games such as slot games, video poker games, video blackjack games, roulette games, video bingo games, keno games and other types of games that are frequently offered at casinos and other locations. Play on EGMs typically involves a player establishing a credit balance by inputting money, or another form of monetary credit, and placing a monetary wager (from the credit balance) on one or more outcomes of an instance (or single play) of a primary or base game. In many games, a player may qualify for secondary games or bonus rounds by attaining a certain winning combination or triggering event in the base game. Secondary games provide an opportunity to win additional game instances, credits, awards, jackpots, progressives, etc. Awards from any winning outcomes are typically added back to the credit balance and can be provided to the player upon completion of a gaming session or when the player wants to “cash out.”

[0004] “Slot” type games are often displayed to the player in the form of various symbols arrayed in a row-by-column grid or matrix. Specific matching combinations of symbols along predetermined paths (or paylines) through the matrix indicate the outcome of the game. The display typically highlights winning combinations/outcomes for ready identification by the player. Matching combinations and their corresponding awards are usually shown in a

“pay-table” which is available to the player for reference. Often, the player may vary his/her wager to include differing numbers of paylines and/or the amount bet on each line. By varying the wager, the player may sometimes alter the frequency or number of winning combinations, frequency or number of secondary games, and/or the amount awarded.

[0005] Typical games use a random number generator (RNG) to randomly determine the outcome of each game. The game is designed to return a certain percentage of the amount wagered back to the player (RTP = return to player) over the course of many plays or instances of the game. The RTP and randomness of the RNG are critical to ensuring the fairness of the games and are therefore highly regulated. Upon initiation of play, the RNG randomly determines a game outcome and symbols are then selected which correspond to that outcome. Notably, some games may include an element of skill on the part of the player and are therefore not entirely random.

[0006] In existing gaming systems, feature games may be triggered for players in addition to the base game. A feature game gives players an additional opportunity to win prizes, or the opportunity to win larger prizes, than would otherwise be available in the base game. Feature games can also offer altered game play to enhance player enjoyment.

[0007] The popularity of such gaming machines with players is heavily dependent on the entertainment value of the machine relative to other gaming options. Operators of gaming businesses therefore strive to provide the most entertaining, engaging, and exciting machines to attract customers to use the machines and increase profitability to the operator. Accordingly, there is a continuing need for gaming machine manufacturers to develop new games in order to maintain or increase player enjoyment.

SUMMARY

[0008] According to one aspect of the present disclosure, a gaming machine includes a credit input mechanism, a memory a display and a controller. The credit input mechanism may be configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item. The credit balance is increasable and decreasable based at least on a wagering activity. The memory may be configured to store data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols. The controller may be configured to conduct a game in response to wagering

activity. In conducting the game, the controller may be configured to select a plurality of symbols from the set of symbols for display on the display during play of game in response to wagering activity, randomly assign a prize value to at least some of the selected configurable symbols, cause the display to display the selected symbols, and trigger a feature game if the displayed symbols include a defined number of configurable symbols. During play of the feature game, the controller may be configured to cause the display to retain of any configurable symbols on the display, remove any non-configurable symbols from the display, and replace any removed non-configurable symbol with another symbol selected from the set of symbols.

[0009] In an embodiment, the feature game comprises a plurality of spins in which the player attempts to collect additional configurable symbols. The number of free spins awarded may, for example, be (i) a fixed number, (ii) determined at random, (iii) based on the number of triggering symbols in the base game.

[0010] In some embodiments, the player may be randomly awarded a number of extra feature spins at the end of a feature round.

[0011] In some embodiments, the player is allowed to select from a plurality of options to reveal a number of additional spins at the end of a feature round.

[0012] In some embodiments, the number of spins awarded is a predetermined number. In some embodiments, the number of spins awarded may be assigned randomly. In some embodiments, the configurable symbols may include Repeater symbols whose value is not assigned until a feature game is triggered. In some embodiments the value of the repeater symbol may be determined based on the value of one or more configurable symbols that are displayed at the time the feature game is triggered. In an embodiment, the value of each Repeater symbol is set to the sum of the values of all configurable symbols that are displayed when the feature game is triggered.

[0013] In some embodiments, the value of the repeater symbols may change across feature spins: i) at random, ii) according to defined table/order, iii) based upon results of a feature spin, iv) wager level, v) number of initiating feature initiating symbols, vi) number of symbols collected in feature, vii) based upon the combined result of multiple players game

events, wager level or other criteria across multiple linked gaming units (i.e. progressive repeater value), and/or viii) any combination of the foregoing.

[0014] In an embodiment, the configurable symbols may include Mystery symbols whose value that is not revealed at the time the Mystery symbol is displayed.

[0015] In an embodiment, the value of the Mystery symbol is only determined after it has been displayed. In an embodiment, the value of a Mystery symbol may be determined, *e.g.*, randomly, and any time following its display. The Mystery symbol may then be modified to display its determined value.

[0016] In an embodiment, the configurable symbols may each comprise at least a common component and a variable component, wherein the variable component is indicative of a value of a prize that is associated with each of the configurable symbols.

[0017] In an embodiment, at least some values of the respective prizes may be generated by selecting one of a plurality of defined multipliers that is applied to an amount wagered on the base game from which the feature is game triggered.

[0018] In an embodiment, the plurality of defined multipliers are selected at random, a probability of selecting one of the plurality of defined multipliers being weighted based at least in part on the amount wagered.

[0019] In an embodiment, at least one of the values of the respective prizes may comprise a defined value.

[0020] In an embodiment, at least some of the values of the respective prizes may be generated based on the values of one or more jackpot prizes.

[0021] In an embodiment, at least one of the values of the respective prizes may comprise a progressive value which increases for each wager that is placed on the base game by an amount proportional to the wager.

[0022] In an embodiment, the gaming machine further comprises a configurable symbols counter for counting each of the configurable symbol that is selected for display.

[0023] In an embodiment, the feature game is triggered, the configurable symbol counter is initiated to the number of selected configurable symbols that comprise the trigger event.

[0024] In an embodiment, the configurable symbol counter is incremented each time a configurable symbol is selected for display in the feature game.

[0025] In an embodiment, a jackpot is awarded when the configurable symbol counter counts a defined number of configurable symbols. In an embodiment, the jackpot is a progressive prize that receives funding contributions from a plurality of other gaming machines.

[0026] In an embodiment, the gaming machine further comprises a free games counter for counting the number of free games to be awarded in the feature game, wherein a defined number of free games is initially awarded when the feature game is triggered.

[0027] In an embodiment, the free games counter may be reset to a defined number of free games each time a configurable symbol is selected for display in the feature game.

[0028] In an embodiment, the free game counter is decremented each time no configurable symbols are selected for display in the feature game.

[0029] In an embodiment, the gaming machine further comprises an outcome evaluator for evaluating the outcome of the game and for awarding an accumulated prize based on the outcome.

[0030] In an embodiment, the value of the accumulated prize is calculated by accumulating the respective prizes associated with each of the configurable symbols that are displayed.

[0031] In an embodiment, an enhanced prize may be awarded if a determined number of configurable symbols are collected during the feature game. In some embodiments, the display comprises a display matrix having a number of rows and columns and an enhanced prize may be awarded for completely filling the display matrix with configurable symbols. In some embodiments, a multiplier, such as a 2x or 3x multiplier may be applied to the accumulated prize value when the display matrix is completely filled with configurable symbols.

[0032] In another aspect there is provided a gaming machine comprising:

- a display device;
- a user interface;
- a random number generator;

a credit input mechanism configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item, the credit balance being increasable and decreasable based at least on a wagering activity;

a memory device storing data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols and a plurality of non-configurable symbols for a first symbol presentation stage and a second symbol presentation stage, the configurable symbols including a repeater symbol whose value is not assigned until the second symbol presentation stage is triggered; and

a controller executing instructions stored in the memory device which cause the controller to at least:

initiate a first symbol presentation stage based on input received via the user interface;

generate a first symbol presentation outcome and display a plurality of symbols at a plurality of display positions on the display device, wherein the plurality of symbols are selected from the configurable symbols and the non-configurable symbols using the random number generator;

initiate a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed in the first symbol presentation outcome;

for each instance of the initial quantity of instances of the second symbol presentation stage:

select and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the configurable symbols;

for each instance, if any, of an additional quantity of instances of the second symbol presentation stage:

keep each displayed configurable symbol; and

select and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the kept configurable symbols; and

determine a second symbol presentation stage result based at least in part on a value of each of the configurable symbols in the plurality of display positions at the end of the second symbol presentation stage,

wherein the value of the repeater symbol is determined based on a value of one or more configurable symbols that are displayed in the first presentation outcome that triggers the second symbol presentation stage.

[0033] In another aspect there is provided a method comprising:

initiating play of a first symbol presentation based on input received via a user interface;

selecting using a random number generator and displaying a plurality of symbols at a plurality of display positions on a display device, wherein the plurality of symbols are selected from configurable symbols and non-configurable symbols, wherein at least one of the configurable symbols is a repeater symbol whose value is not assigned until a second symbol presentation stage is triggered;

initiating a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed;

for each instance of the second symbol presentation stage, selecting and displaying replacement symbols for non-configurable symbols in the plurality of display positions;

determining a value for any displayed repeater value symbols based on a prize value of one or more of the configurable symbols that triggered the second symbol presentation stage; and

awarding a second symbol presentation stage award based at least in part on a value of each of the configurable symbols held in the plurality of display positions,

wherein the value of a displayed repeater symbol is determined by summing the prize value of each of the configurable symbols that triggered the second symbol presentation stage.

[0034] In another aspect there is provided an apparatus comprising:

a memory device storing data indicative of a set of symbols that includes a plurality of configurable symbols and a plurality of non-configurable symbols; and

a controller executing instructions stored in the memory device which cause the controller to at least:

display a plurality of symbols from the set of symbols in a first symbol presentation stage;

trigger a second symbol presentation stage in response to determining that the displayed plurality of symbols include a determined number of configurable symbols, the second symbol presentation stage involving an initial quantity of instances, wherein the configurable symbols include at least one repeater symbol, a value of a displayed repeater symbol not being assigned until the second symbol presentation stage is triggered;

in response to triggering the second symbol presentation stage:

award an additional quantity of instances of the second symbol presentation stage upon completion of the initial quantity of instances;

for each instance in the initial and additional quantities of instances:

display a retaining of any configurable symbols on the display; and

replace each non-configurable symbol, if any, with a symbol selected from the set of symbols,

wherein at least some of configurable symbols include respective outcome values, and wherein the value of a displayed repeater symbol is determined based on the outcome value of one or more configurable symbols in the displayed plurality of symbols that triggers the second symbol presentation stage.

[0035] In another aspect there is provided an electronic gaming machine comprising:

a display device;

a game play mechanism including a plurality of buttons configured for operation by a player to input a wager from the established credits and to initiate a play of a game;

a random number generator;

a credit input mechanism configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item, the credit balance being increasable and decreasable based at least on a wagering activity;

meters configured for monitoring credits established via the credit input mechanism and changes to the established credits due to play of the gaming machine, the meters including a credit meter to which credit input via the credit input mechanism is added and a win meter;

a memory device storing data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols and a plurality of non-configurable symbols for a first symbol presentation stage and a second symbol presentation stage, the configurable symbols including a repeater symbol whose value is not assigned until the second symbol presentation stage is triggered; and

a controller executing instructions stored in the memory device which, responsive to initiation of play of a game by a player interacting with the game play mechanism, cause the controller to at least:

initiate a first symbol presentation stage based on input received from the player via the game play mechanism;

generate a first symbol presentation outcome and display a plurality of symbols at a plurality of display positions on the display device, wherein the plurality of symbols are selected from the configurable symbols and the non-configurable symbols using the random number generator;

initiate a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed in the first symbol presentation outcome;

for each instance of the initial quantity of instances of the second symbol presentation stage:

select, using the random number generator, and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the configurable symbols;

for each instance, if any, of an additional quantity of instances of the second symbol presentation stage:

keep each displayed configurable symbol; and

select, using the random number generator, and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the kept configurable symbols; and

determine a second symbol presentation stage result based at least in part on a value of each of the configurable symbols in the plurality of display positions at the end of the second symbol presentation stage,

wherein the value of the repeater symbol is determined based on a value of one or more configurable symbols that are displayed in the first presentation outcome that triggers the second symbol presentation stage, and

on conclusion of the instances of the second presentation stage making an award of credits to the win meter or the credit meter based on values assigned to displayed configurable symbols.

[0036] In another aspect there is provided a method for implementation in an electronic gaming machine comprising a display device, a game play mechanism including a plurality of buttons configured for operation by a player to input a wager from the established credits and to initiate a play of a game, a random number generator, a credit input mechanism configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item, the credit balance being increasable and decreasable based at least on a wagering activity, meters configured for monitoring credits established via the credit input mechanism and changes to the established credits due to play of the gaming machine, the meters including a credit meter to which credit input via the credit input mechanism is added and a win meter, a memory device storing data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols and a plurality of non-configurable symbols for a first symbol presentation stage and a second symbol presentation stage, the configurable symbols including a repeater symbol whose value is not assigned until the second symbol presentation stage is triggered, and a controller executing instructions stored in the memory device which, responsive to initiation of play of a game by a player interacting with the game play mechanism, cause the controller to implement the method comprising the steps of:

initiating play of a first symbol presentation based on input received from the player via the game play mechanism;

selecting using a random number generator and displaying a plurality of symbols at a plurality of display positions on a display device, wherein the plurality of symbols are selected from configurable symbols and non-configurable symbols, wherein at least one of the configurable symbols is a repeater symbol whose value is not assigned until a second symbol presentation stage is triggered;

initiating a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed;

for each instance of the second symbol presentation stage, selecting, using the random number generator, and displaying replacement symbols for non-configurable symbols in the plurality of display positions on the display;

determining a value for any displayed repeater value symbols based on a prize value of one or more of the configurable symbols that triggered the second symbol presentation stage; and

awarding a second symbol presentation stage award based at least in part on a value of each of the configurable symbols held in the plurality of display positions,

wherein the value of a displayed repeater symbol is determined by summing the prize value of each of the configurable symbols that triggered the second symbol presentation stage, and

on conclusion of the instances of the second presentation stage making an award of credits to the win meter or the credit meter based on values assigned to displayed configurable symbols.

BRIEF DESCRIPTION OF THE DRAWINGS

[0037] Features and advantages of certain embodiments of the present invention will become apparent from the following description of embodiments thereof, by way of example only, with reference to the accompanying drawings, in which;

[0038] Figure 1 is a block diagram of the core components of a gaming system;

[0039] Figure 2 is a perspective view of a standalone gaming machine;

[0040] Figure 3 is a block diagram of the functional components of a gaming machine;

[0041] Figure 4 is a schematic diagram of the functional components of a memory;

[0042] Figure 5 is a schematic diagram of a network gaming system;

[0043] Figure 6 is a further block diagram of a gaming system;

[0044] Figure 7 is a flow diagram of a feature game of the gaming machine of Figure 2;

[0045] Figure 8 is a representation of a screen of the feature game of Figure 7;

[0046] Figures 9A-9C are screen shots of the feature game of Figure 7;

[0047] Figures 10A and 10B are screen shots of the feature game of Figure 7, showing one of the progressive jackpot prizes being won;

[0048] Figures 11A to 11N are screen shots of another embodiment of a feature game.

[0049] Figures 12A and 12B are screen shots of another embodiment of a feature game.

[0050] The foregoing summary, as well as the following detailed description of certain embodiments of the present invention, will be better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, certain embodiments are shown in the drawings. It should be understood, however, that the present invention is not limited to the arrangements and instrumentality shown in the attached drawings.

DETAILED DESCRIPTION

[0051] Referring to the drawings, there are shown example embodiments of gaming machines having components which enable the implementation of a base game, from which may be triggered a spin and hold feature game. In these embodiments, symbols are selected from a set of symbols comprising a plurality of configurable symbols and non-configurable symbols. In one example, the gaming system is configured so that a feature game is triggered when six of the configurable symbols are selected for display during a play of the base game. The invention is not limited to triggering a feature game only when six

configurable symbols are selected, however. In other embodiments, any number of configurable symbols may trigger the feature game.

[0052] Furthermore, each of the configurable symbols comprises a variable portion which is indicative of the value of a prize. In an embodiment, the configurable symbols may each comprise at least a common component and a variable component, wherein the variable component is indicative of a value of a prize that is associated with each of the configurable symbols.

[0053] In an embodiment, the configurable symbols may include Repeater symbols whose value is not being determined until a feature game is triggered. In an embodiment, the value of the Repeater symbol is generated based on the value(s) of one or more of the configurable symbols that trigger a respective feature game. In an embodiment, the value of the Repeater symbol is set to the sum of the values of the configurable symbols that trigger a respective feature game. For example, in an instance where a feature game is triggered by configurable symbols having values of 10 credits, 10 credits, 10 credits, 20 credits, 20 credits, 50 credits, 40 credits, and the Repeater symbol's value would be 160 credits. Any Repeater symbols that spin up during the ensuing feature game would be set to 160 credits in this example.

[0054] In an embodiment, the configurable symbols may include Mystery symbols whose value is not revealed at the time the Mystery symbol is displayed. In an embodiment, the value of a Mystery symbol may be determined, *e.g.*, randomly, and any time following its display. The Mystery symbol may then be modified to display its determined value. Mystery symbols may be displayed in connection with play of both the base game and the feature game. Accordingly, it is possible for a mystery symbol to be part of the defined number of triggering symbols in a base game. For example, a base game result could include a Mystery symbol along with five other configurable symbols. In such instance, the value of the Mystery symbol may be determined and displayed prior to determining the value of the Repeater symbol. If additional Mystery symbols are awarded during the assigned value ensuing feature game, the value could be assigned this same value or other values may be separately determined. In an embodiment, the value of each Mystery symbol that is awarded during play of the feature game is not revealed until the feature game is completed.

General construction of gaming machine

[0055] The gaming machine can take a number of different forms. In a first form, a standalone gaming machine is provided wherein all or most components required for implementing the game are present in a player operable gaming machine.

[0056] In a second form, a distributed architecture is provided wherein some of the components required for implementing the game are present in a player operable gaming machine and some of the components required for implementing the game are located remotely relative to the gaming machine. For example, a “thick client” architecture may be used wherein part of the game is executed on a player operable gaming machine and part of the game is executed remotely, such as by a gaming server; or a “thin client” architecture may be used wherein most of the game is executed remotely such as by a gaming server and a player operable gaming machine is used only to display audible and/or visible gaming information to the player and receive gaming inputs from the player.

[0057] However, it will be understood that other arrangements are envisioned. For example, an architecture may be provided wherein a gaming machine is networked to a gaming server and the respective functions of the gaming machine and the gaming server are selectively modifiable. For example, the gaming machine may operate in standalone gaming machine mode, “thick client” mode or “thin client” mode depending on the game being played, operating conditions, and so on. Other variations will be apparent to persons skilled in the art.

[0058] Irrespective of the form, the gaming machine 1 has several core components. At the broadest level, the core components are a player interface 50 and a game controller 60 as illustrated in Figure 1. The player interface is arranged to enable manual interaction between a player and the gaming machine and for this purpose includes the input/output components required for the player to enter instructions to play the game and observe the game outcomes.

[0059] Components of the player interface may vary from embodiment to embodiment but will typically include a credit mechanism 52 to enable a player to input credits and receive payouts, one or more displays 54, a game play mechanism 56 including one or more input devices that enable a player to input game play instructions (*e.g.* to place a wager), and one or more speakers 58.

[0060] The game controller 60 is in data communication with the player interface and typically includes a processor 62 that processes the game play instructions in accordance with game play rules and outputs game play outcomes to the display. Typically, the game play rules are stored as program code in a memory 64 but can also be hardwired. Herein the term “processor” is used to refer generically to any device that can process game play instructions in accordance with game play rules and may include: a microprocessor, microcontroller, programmable logic device or other computational device, a general purpose computer (*e.g.* a PC) or a server. That is a processor may be provided by any suitable logic circuitry for receiving inputs, processing them in accordance with instructions stored in memory and generating outputs (for example on the display). Such processors are sometimes also referred to as central processing units (CPUs). Most processors are general purpose units, however, it is also known to provide a specific purpose processor using an application specific integrated circuit (ASIC) or a field programmable gate array (FPGA).

[0061] A gaming machine in the form of a standalone gaming machine 10 is illustrated in Figure 2. The gaming machine 10 includes a console 12 having a display 14 on which are displayed representations of a game 16 that can be played by a player. A mid-trim 20 of the gaming machine 10 houses a bank of buttons 22 for enabling a player to interact with the gaming machine, in particular during game play. The mid-trim 20 also houses a credit input mechanism 24 which in this example includes a coin input chute 24A and a bill collector 24B. Other credit input mechanisms may also be employed, for example, a card reader for reading a smart card, debit card or credit card. Other gaming machines may configure for ticket in such that they have a ticket reader for reading tickets having a value and crediting the player based on the face value of the ticket. A player marketing module (not shown) having a reading device may also be provided for the purpose of reading a player tracking device, for example as part of a loyalty program. The player tracking device may be in the form of a card, flash drive or any other portable storage medium capable of being read by the reading device. In some embodiments, the player marketing module may provide an additional credit mechanism, either by transferring credits to the gaming machine from credits stored on the player tracking device or by transferring credits from a player account in data communication with the player marketing module.

[0062] A top box 26 may carry artwork 28, including for example pay tables and details of bonus awards and other information or images relating to the game. Further artwork and/or information may be provided on a front panel 29 of the console 12. A coin tray 30 is mounted beneath the front panel 29 for dispensing cash payouts from the gaming machine 10.

[0063] The display 14 shown in Figure 2 is in the form of a video display unit, particularly a liquid crystal display. Alternatively, the display 14 may be an LCD, OLED, plasma screen, or any other suitable video display unit. The top box 26 may also include a display, for example a video display unit, which may be of the same type as the display 14, or of a different type.

[0064] Figure 3 shows a block diagram of operative components of a typical gaming machine which may be the same as or different to the gaming machine of Figure 2.

[0065] The gaming machine 10 includes a game controller 101 having a processor 102 mounted on a circuit board. Instructions and data to control operation of the processor 102 are stored in a memory 103, which is in data communication with the processor 102. Typically, the gaming machine 10 will include both volatile and non-volatile memory and more than one of each type of memory, with such memories being collectively represented by the memory 103.

[0066] The gaming machine has hardware meters 104 for purposes including ensuring regulatory compliance and monitoring player credit, an input/output (I/O) interface 105 for communicating with peripheral devices of the gaming machine 100. The input/output interface 105 and/or the peripheral devices may be intelligent devices with their own memory for storing associated instructions and data for use with the input/output interface or the peripheral devices. A random number generator module 113 generates random numbers for use by the processor 102. Persons skilled in the art will appreciate that the reference to random numbers includes pseudo-random numbers.

[0067] In the example shown in Figure 3, a player interface 120 includes peripheral devices that communicate with the game controller 101 including one or more displays 106, a touch screen and/or buttons 107 (which provide a game play mechanism), a card and/or ticket reader 108, a printer 109, a bill acceptor and/or coin input mechanism 110 and a coin output

mechanism 111. Additional hardware may be included as part of the gaming machine 100, or hardware may be omitted as required for the specific implementation. For example, while buttons or touch screens are typically used in gaming machines to allow a player to place a wager and initiate a play of a game any input device that enables the player to input game play instructions may be used. For example, in some gaming machines a mechanical handle is used to initiate a play of the game. Persons skilled in the art will also appreciate that a touch screen can be used to emulate other input devices, for example, a touch screen can display virtual buttons which a player can “press” by touching the screen where they are displayed.

[0068] In addition, the gaming machine 100 may include a communications interface, for example a network card 112. The network card may, for example, send status information, accounting information or other information to a bonus controller, central controller, server or database and receive data or commands from the bonus controller, central controller, server or database. In embodiments employing a player marketing module, communications over a network may be via player marketing module – i.e. the player marketing module may be in data communication with one or more of the above devices and communicate with it on behalf of the gaming machine.

[0069] Figure 4 shows a block diagram of the main components of an exemplary memory 103. The memory 103 includes RAM 103A, EPROM 103B and a mass storage device 103C. The RAM 103A typically temporarily holds program files for execution by the processor 102 and related data. The EPROM 103B may be a boot ROM device and/or may contain some system or game related code. The mass storage device 103C is typically used to store game programs, the integrity of which may be verified and/or authenticated by the processor 102 using protected code from the EPROM 103B or elsewhere.

[0070] It is also possible for the operative components of the gaming machine 100 to be distributed, for example input/output devices 106, 107, 108, 109, 110, 111 to be provided remotely from the game controller 101.

[0071] Figure 5 shows a gaming machine 200 in accordance with an alternative embodiment. The gaming machine 200 includes a network 201, which for example may be an Ethernet network. Gaming machines 202, shown arranged in three banks 203 of two gaming

machines 202 in Figure 5 are connected to the network 201. The gaming machines 202 provide a player operable interface and may be the same as the gaming machines 10, 100 shown in Figures 2 and 3, or may have simplified functionality depending on the requirements for implementing game play. While banks 203 of two gaming machines are illustrated in Figure 5, banks of one, three or more gaming machines are also envisaged.

[0072] One or more displays 204 may also be connected to the network 201. For example, the displays 204 may be associated with one or more banks 203 of gaming machines. The displays 204 may be used to display representations associated with game play on the gaming machines 202, and/or used to display other representations, for example promotional or informational material.

[0073] In a thick client embodiment, game server 205 implements part of the game played by a player using a gaming machine 202 and the gaming machine 202 implements part of the game. With this embodiment, as both the game server and the gaming device implement part of the game, they collectively provide a game controller. A database management server 206 may manage storage of game programs and associated data for downloading or access by the gaming devices 202 in a database 206A. Typically, if the gaming machine enables players to participate in a Jackpot game, a Jackpot server 207 will be provided to perform accounting functions for the Jackpot game. A loyalty program server 212 may also be provided.

[0074] In a thin client embodiment, game server 205 implements most or all of the game played by a player using a gaming machine 202 and the gaming machine 202 essentially provides only the player interface. With this embodiment, the game server 205 provides the game controller. The gaming machine will receive player instructions, pass these to the game server which will process them and return game play outcomes to the gaming machine for display. In a thin client embodiment, the gaming machines could be computer terminals, *e.g.* PCs running software that provides a player interface operable using standard computer input and output components. Other client/server configurations are possible, and further details of a client/server architecture can be found in WO 2006/052213 and PCT/SE2006/000559, the disclosures of which are incorporated herein by reference.

[0075] Servers are also typically provided to assist in the administration of the gaming network 200, including for example a gaming floor management server 208, and a licensing

server 209 to monitor the use of licenses relating to particular games. An administrator terminal 210 is provided to allow an administrator to run the network 201 and the devices connected to the network.

[0076] The gaming machine 200 may communicate with other gaming machines, other local networks, for example a corporate network, and/or a wide area network such as the Internet, for example through a firewall 211.

[0077] Persons skilled in the art will appreciate that in accordance with known techniques, functionality at the server side of the network may be distributed over a plurality of different computers. For example, elements may be run as a single “engine” on one server or a separate server may be provided. For example, the game server 205 could run a random generator engine. Alternatively, a separate random number generator server could be provided. Further, persons skilled in the art will appreciate that a plurality of game servers could be provided to run different games or a single game server may run a plurality of different games as required by the terminals.

Further detail of gaming machine

[0078] The player operates the game play mechanism 56 to specify a wager and hence the win entitlement which will be evaluated for this play of the game and initiates a play of the game. Persons skilled in the art will appreciate that a player’s win entitlement will vary from game to game dependent on player selections. In most spinning reel games, it is typical for the player’s entitlement to be affected by the amount they wager and selections they make (i.e. the nature of the wager). For example, a player’s win entitlement may be based on how many lines they play in each game – e.g. a minimum of one line up to the maximum number of lines allowed by the game (noting that not all permutations of win lines may be available for selection) and how much they wager per line. Such win lines are typically formed by a combination of symbol display positions, one from each reel, the symbol display positions being located relative to one another such that they form a line.

[0079] In many games, the player’s win entitlement is not strictly limited to the lines they have selected, for example, “scatter” pays are awarded independently of a player’s selection of paylines and are an inherent part of the win entitlement.

[0080] Persons skilled in the art will appreciate that in other embodiments, the player may obtain a win entitlement by selecting a number of reels to play and an amount to wager per reel. Such games are marketed under the trade name “Reel Power” by Aristocrat Leisure Industries Pty Ltd. The selection of the reel means that each displayed symbol of the reel can be substituted for a symbol at one or more designated display positions. In other words, all symbols displayed at symbol display positions corresponding to a selected reel can be used to form symbol combinations with symbols displayed at a designated, symbol display positions of the other reels. For example, if there are five reels and three symbol display positions for each reel such that the symbol display positions comprise three rows of five symbol display positions, the symbols displayed in the center row are used for non-selected reels. As a result, the total number of ways to win is determined by multiplying the number of active display positions of each reel, the active display positions being all display positions of each selected reel and the designated display position of the non-selected reels. As a result for five reels and fifteen display positions there are 243 ways to win.

[0081] In Figure 6, the processor 62 of game controller 60 of gaming machine 1 is shown implementing a number of modules based on game program code 641 stored in memory 64. Persons skilled in the art will appreciate that various of the modules could be implemented in some other way, for example by a dedicated circuit.

[0082] These modules include the outcome generator 622 which operates in response to the player's operation of game play mechanism 56 to place a wager and initiate a play of the game and generates a game outcome which will then be evaluated by outcome evaluator 623. The first part of forming the game outcome is for a symbol selector 622A to select symbols from a set of symbols specified by symbol data 642 using random number generator 621. The selected symbols are advised to the display controller 625 which causes them to be displayed as a symbol display on display 54 at a set of display positions.

[0083] In the embodiment described below, the display positions of the symbol display are arranged in a rectangular matrix comprising a plurality of columns and a plurality of rows. However, in other arrangements as known in the gaming industry could be employed in embodiments of the invention. For example, in some arrangements there are more symbols in some columns than other, such as 3-4-3-4-3 arrangement of seventeen display positions

corresponding to respective ones of five reels. In such arrangements, the columns of four symbols can be arranged so that they are off-set or staggered relative to the columns having two symbols so that the middle two symbols in the columns of four symbols share boundaries with two symbols of each neighboring reel.

[0084] Figure 7 shows a flow diagram of one embodiment, in which a feature game may be triggered from play of the base game at step 702. In this embodiment, the base game comprises using symbol selector 622A to select a plurality of symbols from a set of symbols to display at the respective display positions arranged on display 54, at step 704. The set of symbols, which are stored as symbol data 642 in memory 64, comprises a plurality of configurable symbols and non-configurable symbols.

[0085] In an embodiment, the configurable symbols each comprise at least a common component and at least a variable component. The variable component is indicative of a value of a prize that is associated with each of the configurable symbols. An example of a configurable symbol is shown in Figures 9A-9C, in the form of a pearl symbol. The common component is the pearl itself 902, while the variable component is the indicia 904 overlaying pearl 902. In this case, indicia 902 are numerals directly indicative of the value of the prize. In other embodiments, such as shown in Figure 10A-10B, the indicia indirectly indicate the value of the prize, such as “major” indicia 1002, “minor” indicia 1004 or “mini” indicia 1006. It will be appreciated that the indicia can also be in other forms, which may also be indicative of a prize. For example, the car icon indicates that the player has the opportunity to, or has, won a car. In some embodiments, the indicia may indicate only a portion of a prize. Continuing with the car example, the car icon may be split into four portions, each portion being assigned to a different configurable symbol. In such embodiments, all four portions of the car icon are required to be selected for display in order for the car prize to be won.

[0086] In one embodiment, at least one value of the respective prizes is generated by randomly selecting one of a plurality of defined multipliers that is applied to an amount wagered on the base game from which the feature is game triggered. This is accomplished at step 706 using value assigner 622C, which selects the predefined multipliers from value data 644 using a value obtained from the random number generator (RNG) 621, applies the

multiplier to the initial wager to obtain a prize value and assigns the prize value to each of the configurable symbols selected by symbol selector 622A. The plurality of defined multipliers in this embodiment are selected at random according to a weighted probability based at least in part on the amount wagered on the base game. That is the value assigner 622C obtains a value from RNG 621 and uses this to determine from the weighted table which value to assign to a configurable symbol. In an embodiment, the assignment of values to the configurable symbols is performed by the value assigner 622C after the symbols have been selected and the game controller knows they will be displayed but before they are displayed on the display. In another embodiment, the assignment occurs after the symbols have been displayed on display 54. In an embodiment, values are assigned to all configurable symbols irrespective of whether they will be displayed.

[0087] In this or other embodiments, at least one value of the respective prizes may comprise a defined value and/or a jackpot. As used herein, the term “jackpot”, as opposed to “prize”, refers to a progressive prize which accumulates over multiple plays of the base game and/or the feature game. As will be appreciated, the jackpot may be funded from a variety of sources including from only the gaming machine 10 itself, or from a plurality of gaming machines 202 – a so-called “link”. Furthermore, the jackpot may be triggered by any means known in the art, such as by using a mystery trigger or by using the Hyperlink™ system developed by the applicant.

[0088] In another embodiment, the variable prizes may be randomly selected under the control of value assigner 622C from a set of available prizes. Specific prizes may be weighted so as to control the probability of certain prizes occurring. In some embodiments, there may be a plurality of sets of prizes and the value assigner 622C may be configured to choose the set of prizes from which values will be randomly selected on the basis of a player’s wager in the base game.

[0089] Returning to Figure 7, at step 710, outcome evaluator 623 monitors play of the base game and determines whether a trigger event has occurred. In this embodiment, a trigger event occurs when six configurable symbols appear on display 54. If a trigger event has not occurred, play of the base game continues and control reverts to step 702, once any awards are paid at step 708. However, if a trigger event does occur, the feature game initiates by

first holding the configurable symbols in their respective display positions 824, at step 711. Outcome generator 622 causes the feature game to be displayed on display 54 by retrieving symbol data 642 from memory 64 and passing the data to display controller 625 which controls display 54 to display the feature game. In other embodiments, more than or less than six symbols will be required to trigger the feature game, or the feature game will be modified in a way that is proportional to the number of configurable symbols that are displayed to trigger the feature game. For example, the average or total prize achievable in the feature game may be increased in proportion to the number of configurable symbols appearing.

[0090] When the feature game starts, the configurable symbol counter 810 of Figure 8 is set to the number of configurable symbols that are held on reels 814-822 at step 712. In the preferred embodiment, this is also the number of configurable symbols which originally triggered the feature game. That is, in this embodiment, the configurable symbol counter 810 is initially set to 6, as six configurable symbols are required to trigger the feature game. Alternatively, for example if seven configurable symbols are selected for display, but only six are required for triggering the feature game, the configurable symbol counter 810 may be initially set to seven.

[0091] Once configurable symbol counter 810 is set, control moves to step 714 which sets free game counter 812 to the defined number of free games. In an embodiment, the preferred number of free games is three, so counter 812 is set to 3. In other embodiments, the number of free games may be more than or less than three, or may be derived by the game controller from the number of configurable symbols that appear. For example, an additional free game may be offered for each configurable symbol that appears in addition to a predefined minimum (for example, six) required to trigger the feature game.

[0092] Then, similar to the base game, the symbol selector 622A selects symbols from symbol data 642 to be displayed in the other display positions 824 not already displaying a configurable symbol, via display controller 625 at step 716. Note that in this embodiment, symbols in the feature game are selected from the full set of symbols defined by symbol data 642, including any configurable symbols. In other embodiments, the symbols may be selected from a reduced set of symbols taking into account of the configurable symbols

already held. In an alternative embodiment, the symbols may be selected from an increased set of symbols. For example, symbols may be purchased or otherwise awarded for addition to the reel strip prior to the initiating the feature game. If one or more configurable symbols are selected, value assigner 622C assigns randomly selected values to each configurable symbol.

[0093] Outcome evaluator 623 then monitors play of the feature game to determine whether a configurable symbol is selected and displayed at step 718. If a configurable symbol is not displayed, free game counter 812 is decremented by a defined amount at step 720. In the preferred embodiment, free game counter 812 is only decremented by one, but of course the counter may be decremented by any number as is known in the art.

[0094] If there are a number of free games remaining as determined by controller 60 at step 722, control returns to step 716 to continue the feature game. On the other hand, once the number of free games is depleted, that is, when the free game counter 812 reaches zero, the feature game ends and control returns to step 702 after any prizes are paid at step 728. In one embodiment, the accumulated value of all the individual prizes as indicated by the variable components of the collected configurable symbol is paid at step 728.

[0095] Returning to step 718, if outcome evaluator 623 determines that at least one configurable symbol is displayed on reels 814-822, then that symbol is held on the reel, at step 723, and the configurable symbol counter 810 is incremented at step 724. Outcome evaluator 623 then checks whether a defined number of configurable symbols has been displayed on reels 814-822 at step 726 and, if the defined number has been reached, a jackpot is paid at step 728.

[0096] The defined number of configurable symbols required to trigger a jackpot in this embodiment is fifteen. That is, for this embodiment in which a game is implemented using a 5x3 matrix, configurable symbols must be selected and displayed in all the matrix positions of reels 814-822. In other embodiments, the defined number may be more than or less than fifteen. For example, in a 3-4-3-4-3 matrix configuration discussed as discussed above, the number of configurable symbols required to fill all matrix positions would be 17. In yet other embodiments, not all of the matrix positions need necessarily be filled, and the number of configurable symbols required may be determined randomly.

[0097] In the above embodiments, an end conditions is that the feature game ends when the Grand jackpot 802 is triggered at step 726. In other embodiments, the feature game does not necessarily end at this point. In such embodiments, one or more of reels 814-822 are configured to expand and display additional configurable or non-configurable symbols when counter 810 reaches the defined number. For example, a game implemented using a 5x3 matrix may expand to a 3-4-3-4-3 configuration. In such embodiments, a prize in addition to the Grand jackpot 802 is paid if configurable symbols are also selected for display in those additional positions.

[0098] Alternatively, if outcome evaluator 623 determines that the defined number of configurable symbols has not been reached at step 726, the feature game continues. In the embodiment of Figure 7, each time a configurable symbol is displayed and the jackpot is not won, free game counter 812 is reset to the default position by returning control to step 714, which in this embodiment is three as noted above. Therefore, the number of free games awarded by the outcome evaluator 623 is indefinite and is not determined by a defined limit.

[0099] In this or other embodiments, if no configurable symbols appear on reels 814-822 in any of the free games initially awarded, free games counter 812 is reset. Such embodiments ensure the player is guaranteed to win a prize over and above the prize payable for triggering the feature game.

[00100] In the above embodiments, the jackpot paid in response to counter 810 reaching the defined threshold is Grand prize 802. The grand prize in this embodiment is a linked jackpot which receives contributions from a plurality of linked gaming machines and incremented based on the turnover of the linked machines. A linked jackpot may be a single site progressive (SSP), a multiple site progressive (MSP) or a wide area progressive (WAP). In some embodiments, a lower threshold of configurable symbols may be required for Major prize 804, Minor prize 806 or Mini prize 808 to be won. Alternatively or additionally, as best shown in Figures 10A and 10B, Major, Minor and Mini prizes may be paid by assignment of those prizes to one of the configurable symbols, such as “major” indicia 1002, “minor” indicia 1004 or “mini” indicia 1006.

[00101] Note that in some embodiments, one or all of the Grand 802, Major 804, Minor 806 and Mini 808 prizes may all be implemented as jackpots, as fixed bonus amounts that do

not increment or as a mixture of both. In the embodiment of Figures 9A to 10B, as noted above, Grand prize 802 is implemented as a linked progressive jackpot, while Major prize 804 is implemented as a standalone progressive (SAP) jackpot which only takes contributions from the gaming machine itself, incrementing the jackpot as a function of turnover. Minor 806 and Mini 808 prizes are implemented as fixed bonus amounts in proportion to the initial bet wagered. In some embodiments, Grand 802 prize may also be implemented as a SAP, or the Major 804 prize may also be implemented as a linked jackpot.

[00102] This embodiment implements Grand 802 and Major 804 prizes as jackpots and, while both may be awarded simultaneously, neither can be awarded more than once in the same feature game. However, in other embodiments, either jackpot may be won multiple times within the same feature game. In such embodiments, players are awarded a seed value (i.e. reset value) of the jackpot for subsequent triggers of that same jackpot.

[00103] As embodiments of the feature game described above automatically adjust awards based on turnover and proportionality to the initial wager, this invention is particularly suited to variable denomination games. Therefore, in some embodiments, controller 60 allows player selection of the minimum bet denomination. For example, before play of the game, controller 60 causes display controller 625 to output a message on display 54 requesting the player to select a minimum bet denomination. The player makes a selection through the game play mechanism 56 in response to which controller 60 adjusts the amount contributed to Grand 802 and Major 804 jackpot prizes and the magnitude of Minor 806 and Mini 808 bonus awards. Controller 60 also adjusts the weightings of the values in value data 644 from which value assigner 622C may assign to the configurable symbols. In one embodiment, there are four denominations available for selection, 1c, 2c, 5c and 10c. Those skilled in the art would appreciate that the denominations are not limited to four, but can include any suitable amount in any given currency. Note also that in this embodiment, while the selected denomination affects the magnitude of the Minor 806 and Mini 808 fixed bonus prizes offered, it does not affect the magnitude of the Grand 802 and Major 804 jackpots – only the contributions funding the amount.

Examples

[00104] More specific examples of embodiments of the invention are now described with reference to Figures 9A-10B. In general, as shown in these Figures, the game has a traditional 3 x 5 grid layout, and is referred to in the examples below as the “Hold & Spin” feature.

[00105] Referring to Figure 9A, the Hold & Spin feature is triggered when six (6) pearl symbols 902 are selected for display. When triggered, pearls 902 are held in their respective display positions, being all of column 1, column 2 rows 1 and 2 and column 5 row 1, and the controller 60 waits for a player instruction to initiate the game through game play mechanism 56. In some embodiments, controller 60 will wait indefinitely while in other embodiments, controller 60 will wait for a predefined period of time before automatically initiating the game.

[00106] At this point, counter 810 is set to 6, and the player is guaranteed to win the accumulated value as indicated by the variable components 904 of the six pearls 902. That is, even before play of Hold & Spin starts, the player has won 4,300 credits in the embodiment of Figure 9A.

[00107] Moving on to Figure 9B, the player has spun an additional four (4) pearls 902. Accordingly, counter 810 is incremented from 6 to 10 and free games counter 812 is reset to default, which is 3 feature games in this embodiment. As compared to Figure 9A, the additional pearls 902 are selected for display at display positions C2R3, C3R1, C4R3 and C5R2, and are also held at those positions for the subsequent games.

[00108] Over the remaining feature games, the player spins only an additional one (1) pearl 902, displayed at C4R1, as shown in Figure 9C. Accordingly, the free games end and the player wins the accumulated value of the values indicated on pearls 902. In this case, the total award is the 4,300 credits for the six (6) pearls 902 that originally triggered the Hold & Spin game, plus the additional five (5) pearls 902 selected during play of the Hold & Spin game – 5,800 credits. In this embodiment, the accumulated award is totaled at the end of the Hold & Spin game and first transferred to the win meter 908 before being transferred to the credit meter 910 by the controller 60. Meter data 648 is adjusted accordingly before the next

game can be initiated at step 702. In alternative embodiments, the accumulated award may bypass the win meter and be credited directly to the credit meter.

[00109] Figures 10A and 10B are examples showing the jackpots being won. In Figure 10A, value assigner 622C has assigned “Major” indicia 1002 to pearl 902, which has been selected for display at C4R1. This triggers Major prize 804 which, in one embodiment, is paid directly into credit meter 910 rather than first into win meter 908. That is, jackpot wins are paid immediately when they are won rather than being accumulated at the end of the Hold & Spin game as per the other prizes described above. Thus in the Figure 10A embodiment, Major jackpot 804 is paid when the associated pearl 902 is selected, while the remaining 4,000 credits will be accumulated and paid at the completion of the feature game, in addition to any new pearls 902 that are selected and displayed in the remaining free games. In alternative embodiments, the Major jackpot may be accumulated at the end of the feature game along with the other 4,000 credits, and the accumulated total may be paid first into win meter 908 or directly into credit meter 910.

[00110] Figure 10B shows Grand jackpot 802 being triggered, as fifteen (15) pearls 902 have been selected for display in the matrix by the end of the feature game. Again, the Grand 802 jackpot is first accounted for and paid directly into credit meter 910, and the remaining prizes indicated by indicia 904 on pearls 902 are then accumulated and paid into win meter 908 before being transferred to credit meter 910. Therefore, in this Figure 10B embodiment, the total winnings is made up of the initial Grand jackpot 802, plus 63,000 credits indicated by indicia 904 and Minor 806 and Mini 808 prizes indicated by “Minor” indicia 1004 and “Mini” indicia 1006. Again, in alternative embodiments, the Grand jackpot may be accumulated at the end of the feature game along with the other 63,000 credits, Minor prize 806 and Mini prize 808, and the accumulated total may be paid first into win meter 908 or directly into credit meter 910.

[00111] In another example, the configurable symbols may only be provided during part of the game, such as a feature game.

[00112] In another example, after a feature game is triggered, the game controller initiates a feature game using different reels to those used in the base game. Depending on the embodiment, the trigger may be the configurable symbol trigger described above or some

other trigger, e.g., a symbol combination. In this example, in the feature game, individual reels are associated with each of the symbol display positions. That is, if there are fifteen symbol display positions, fifteen reels are used. Each of the reels comprises a mixture of non-configurable symbols and configurable symbols. Before the free games, the configurable symbol counter is set to zero. In the first free game, the symbol selector determines stopping positions for all of the reels. If any of the reels are stopped with a configurable symbol in place, that configurable symbol is held in position by holding/locking the reel (i.e. not spinning the reels in a subsequent free game). That is, in subsequent free games, only the reels corresponding to symbol positions where a configurable symbol has not been displayed are re-spun. Each configurable symbol is assigned a value by value assigner by selecting a prize value from a set of prize values. The set of prize values from which values are selected depends on the player's wager in the base game. As in the example, described above, a player is awarded the sum of the values of the configurable symbols at the end of the free games and may be awarded an additional prize such as a jackpot prize depending on what value the counter reaches during the free games.

[00113] In another example, the configurable symbol may have an alternative visual representation, for example, a door which opens once the configurable symbol is displayed in a display position to reveal the assigned prize value.

[00114] As indicated above, the method may be embodied in program code. The program code could be supplied in a number of ways, for example on a tangible computer readable storage medium, such as a disc or a memory device, e.g. an EEPROM, (for example, that could replace part of memory 103) or as a data signal (for example, by transmitting it from a server). Further, different parts of the program code can be executed by different devices, for example in a client server relationship. Persons skilled in the art will appreciate that program code provides a series of instructions executable by the processor.

Repeater Symbols & Mystery Symbols

[00115] Figure 11A to 11N illustrate another embodiment of a feature game. In particular, Figures 11A to 11N are screen shots of a display 1100 at different phases during play of a base game and an ensuing feature game. Instead of the pearls described above, the configurable symbols in this embodiment carry diamonds. While diamonds are used for

illustration purposes, it will be appreciated the configurable symbols could take a variety of other forms in according with the theme of the underlying game.

[00116] In this embodiment, there may be multiple types of configurable symbols, including Value symbols 1102 (*see, e.g.*, FIG. 11A), Repeater symbols 1104 (*see, e.g.*, FIG. 11I), Mystery symbols 1106 (*see, e.g.*, FIG. 11M), and Jackpot Symbols 1108 (*see, e.g.*, FIG. 11B). Each Value symbol 1102 displays a numeric value, *e.g.*, a number of credits or currency. The Repeater and Mystery symbols 1104, 1106 each display a respective generic symbol but no associated value. In the illustrated embodiment the Repeater symbol 1104 displays a tree and the Mystery symbol 1106 displays Question mark. Each Jackpot symbol 1108 displays the name of a particular jackpot, *e.g.*, a MINI jackpot 1120, MINOR jackpot 1122, MAXI jackpot 1124, MAJOR jackpot 1126 or GRAND jackpot 1128.

[00117] There may be different levels of diamond symbols that to allow a player to play for different payout levels, for example. For example, the illustrated embodiment includes 5 different levels of diamond symbols that are designated by different colored diamonds, namely blue diamonds 1110, purple diamonds 1112, green diamonds 1114, red diamonds 1116, and yellow diamonds 1118.

[00118] The color level that is played during a game may be selected based on a player input, such as a betting denomination or an ante bet. In an embodiment, the player places a base bet and in addition may make an ante bet, where the amount of the ante entitles the player to increased values on the Value symbols and/or different levels of Jackpot symbols. In the illustrated embodiment, there are five different ante bets where each is associated with a different color diamond. Larger ante bets entitle the player to diamonds with larger credit values and larger Jackpot symbols. For example, a first ante bet amount may be associated with blue diamonds that carry values up to 2000 credits and MINI jackpot symbols, a second ante bet amount may associated with purple diamonds that carry values up to 3000 credits and MINOR jackpot symbols, a third ante amount bet may be associated with green diamonds that carry values up to 5000 credits and MAXI jackpot symbols, a fourth ante bet amount may associated with red diamonds that carry values up to 5000 credits and MAJOR jackpot symbols, and a fifth ante bet amount may be associated with Yellow diamonds that carry values up to 7000 credits and Grand Jackpot symbols.

[00119] As discussed above, a Hold & Spin feature game is triggered when a determined number of configurable symbols (diamonds in the present example) appear in the outcome of a base game. For illustration purposes, a feature game is triggered when six (6) of the diamond symbols appear in the base game outcome.

[00120] Figure 11A and 11B illustrate the display 1100 during play of the base game. Briefly the display 1100 presents a game outcome using a 3x5 display matrix 1130 where each column represents a different reel 1132-1140. The reels 1132-1140 are displayed as spinning and then stopping to present the matrix of display symbols representing a game outcome. Figure 11A illustrates the reels spinning and Figure 11B illustrates the reels in their stopped position to provide a base game outcome. The game outcome shown Figure 12B triggers the feature game because it includes at least six (6) configurable, *i.e.*, diamond, symbols. In this instance, the game outcome includes 6 (six) diamond symbols, in the form of two MINI Jackpot symbols and four Value symbols (10 credits, 10 credits, 10 credits and 20 credits).

[00121] As discussed above, the configurable symbols may also include Repeater symbols whose value is not determined until a feature game is triggered. When a feature game is triggered, the controller determines the value of Repeater prize to be assigned to the Repeater symbols based on the value(s) of one or more of the configurable, *e.g.*, diamond, symbols that triggered the feature game. In a preferred embodiment, the value of the Repeater prize is determined by summing (accumulating) the values of the configurable symbols that triggered the feature game. Accordingly, in the example illustrated in Figure 12B, the value of the Repeater prize is 3050 credits, which is the sum (1500 + 1500 + 10 + 10 + 10 + 20) of the six (6) diamond symbols that triggered the feature game. (Note, in the illustrated embodiment, the MINI jackpot has a value of \$15.00 and the game is a 1 cent game where each credit has a value of 1 cent. Accordingly, the MINI jackpot symbol has a corresponding value of 1500 credits).

[00122] An animation may be provided to visually display the credits being accumulated (or summed) from the triggering symbols to determine the value of the Repeater prize during the ensuing feature game. For example, as is shown in Figures 11C and 11E, the animation may display rockets 1142 or other elements sequentially moving from each respective

diamond symbols to a Repeater prize meter 1146. When a respective rocket reaches the meter it may explode and the value from the originating diamond symbol may be added to the Repeater prize meter. For example, FIG. 11 shows a rocket 1142 moving from a MINI jackpot prize symbol 1108 to the Repeater prize meter 1146. Figure 11D shows the meter updated to reflect that the 1500 credits (the value of the MINI jackpot) has been accumulated towards the Repeater prize. The animation may continue with rockets shooting from each of the individual diamond symbols until all of the credits have been accumulated to the Repeater prize meter, *see e.g.* FIG. 11E where the Repeater prize meter 1146 displays 3050 credits.

[00123] The game then transitions to the feature game. Figure 11F is a screen shot of a transition screen that may be shown on the display 1100 when transitioning from the base game to the feature game. The transition screen may prompt the player to make an input, such as press a start button to begin the feature game.

[00124] Figures 11G to 11N are screen shots illustrating play of the feature game. The feature game is in the form of a hold and spin game in which any diamond symbols from the triggering game outcome are retained on the display and the player is awarded an additional number of spins (*e.g.*, 6 in the illustrated example) during which the player tries to accumulate more of the diamond symbols. The display includes a spin counter that displays an indication of the number of spins remaining in the feature game.

[00125] Figure 11G and 11H show the reels spinning during a first spin of the feature game. As shown, the diamond symbols that appeared in the triggering game outcome are held in place on the display while the reels are shown spinning in the other symbol positions. Figure 11I illustrates the reels in their stopped position to provide a game outcome following the first spin of the feature game. As shown in Figure 11I, the first spin has resulted in the award of two additional diamond symbols, namely 20 credit Value symbol 1102 and a Repeater symbol 1104. The Repeater symbol 1104 may be modified to display its value (3050 credits in this example) before the next spin. For example, as is shown in Figures 11J and 11K, an animation may a display rocket 1150 or other element moving from the Repeater prize meter 1146 to the Repeater symbol 1108 where it explodes to reveal the Repeater symbol modified to display its value. When a round results in the award of more than one

Repeater symbol, the Repeater symbols may be modified simultaneously or sequentially to display their values.

[00126] As shown in in Figure 11K, the display may also include a configurable symbol counter 1152 that displays the number of diamond symbols that have been collected by the player. The configurable symbol counter may be initially set following the triggering game outcome and may be updated following each spin during the feature game.

[00127] The player is then prompted to initiate a second spin of the feature game. During the second spin, the diamond symbols that were previously awarded (collected) are held in place on the display matrix and the reels are shown spinning in the other symbol positions of the display matrix. Figure 11L shows the display during the second spin of the feature game and FIG. 11L shows the reels in their stopped position to provide a game outcome following the second spin of the feature game. As shown in Figure 11L, the second spin has resulted in the award of two (2) additional diamond symbols, namely another Repeater symbol 1104 and a Mystery symbol 1106. The Mystery symbol 1106 is designated by a Question mark to indicate that it has an unknown value. The value of the Mystery symbol may be determined and revealed at any time following its appearance in a game outcome. For example, in some embodiments, Mystery symbols may be available during both the base game and the feature game. If a Mystery symbol appears as part of a triggering game outcome in a base game, its value may be determined and revealed prior to initiation of the feature game. In such an embodiment, the determined value of the Mystery symbol may be included in the values accumulated to determine the Repeater prize value. Alternatively, in some embodiments, the value of one or more of the Mystery symbol(s) may not be determined and revealed until the feature game is completed.

[00128] In some embodiments the value of the Mystery symbol may be randomly determined by the controller. In such embodiments, the display may present this determination to the player via a spinning wheel, for example, that comprises of a plurality of sections with each section. Each section of the wheel may display a numeric value (*e.g.*, a number of credits or currency) or a jackpot label (*e.g.*, MINI, MINOR, MAXI, MAJOR, GRAND). The wheel may be shown as spinning and stopping at one of the segments to indicate the value that is to be awarded for the Mystery symbol. The indicated value is then

used to replace the question mark on one or more the displayed Mystery symbols. In some embodiments, a single random determination (*e.g.*, wheel spin) may be used to set the value for all of the displayed Mystery symbols. Alternatively, the values of each Mystery symbol may be separately determined or determined in subgroups.

[00129] In other embodiments, the value of the Mystery symbols may be set in other ways. For example, there may be a player skill feature where the skill level of the player is determined or is based on particular data regarding the particular player, and the value of the Mystery symbol is set accordingly. Also, pick n' pop may be used to set the value of the Mystery symbol.

[00130] Figure 11N shows the display after the Repeater and Mystery symbols that were awarded during the second spin have been modified to show their determined values, *e.g.*, 3050 credits for the Repeater symbol and 30 credits for the Mystery symbol.

[00131] The feature game continues in the manner described until all of the spins have been completed. Once the feature game is completed, the controller determines and pays out a feature game award. For example, if the matrix 1130 is not fully populated with diamond symbols, the player may be awarded a prize amount corresponding to the accumulated value of the displayed diamond symbols. If the display matrix is completely filled with diamond symbols, the player may be awarded an enhanced prize such as a 2x multiplier of the accumulated value.

[00132] Figures 12A and 12B are screen shots further illustrating an embodiment of a feature game employing Mystery symbols. Figure 12A shows a base game outcome that triggers a feature game because it includes six (6) configurable symbols, namely two (2) value symbols 1102 (100 credit and 1000 credits) and four (4) Mystery symbols 1106. The configurable symbols are held in place during play of the ensuing hold & spin feature game in the manner described above. In this embodiment, the values of the Mystery symbols may remain a secret from the player until the feature game ends. FIG. 12 B is a screen shot of the display at the end of the feature game with the matrix completely filled with configurable symbols. At this time in the game, the values of the Mystery symbols have each been determined (in the manner described above) and each Mystery symbol has been modified to

display its respective value. Specifically, the Mystery symbols have resulted in awards of a MINOR jackpot, two (2) MINI jackpots, and a MAXI jackpot.

[00133] It is to be understood that, if any prior art is referred to herein, such reference does not constitute an admission that the prior art forms a part of the common general knowledge in the art in any country.

[00134] In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word “comprise” or variations such as “comprises” or “comprising” is used in an inclusive sense, *i.e.*, to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

CLAIMS

1. An electronic gaming machine comprising:

a display device;

a game play mechanism including a plurality of buttons configured for operation by a player to input a wager from the established credits and to initiate a play of a game;

a random number generator;

a credit input mechanism configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item, the credit balance being increasable and decreasable based at least on a wagering activity;

meters configured for monitoring credits established via the credit input mechanism and changes to the established credits due to play of the gaming machine, the meters including a credit meter to which credit input via the credit input mechanism is added and a win meter;

a memory device storing data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols and a plurality of non-configurable symbols for a first symbol presentation stage and a second symbol presentation stage, the configurable symbols including a repeater symbol whose value is not assigned until the second symbol presentation stage is triggered; and

a controller executing instructions stored in the memory device which, responsive to initiation of play of a game by a player interacting with the game play mechanism, cause the controller to at least:

initiate a first symbol presentation stage based on input received from the player via the game play mechanism;

generate a first symbol presentation outcome and display a plurality of symbols at a plurality of display positions on the display device, wherein the plurality

of symbols are selected from the configurable symbols and the non-configurable symbols using the random number generator;

initiate a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed in the first symbol presentation outcome;

for each instance of the initial quantity of instances of the second symbol presentation stage:

select, using the random number generator, and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the configurable symbols;

for each instance, if any, of an additional quantity of instances of the second symbol presentation stage:

keep each displayed configurable symbol; and

select, using the random number generator, and display replacement symbols for non-configurable symbols in a plurality of display positions not occupied by the kept configurable symbols; and

determine a second symbol presentation stage result based at least in part on a value of each of the configurable symbols in the plurality of display positions at the end of the second symbol presentation stage,

wherein the value of the repeater symbol is determined based on a value of one or more configurable symbols that are displayed in the first presentation outcome that triggers the second symbol presentation stage, and

on conclusion of the instances of the second presentation stage making an award of credits to the win meter or the credit meter based on values assigned to displayed configurable symbols.

2. The electronic gaming machine of claim 1, wherein the value of the repeater symbol is determined by summing the value of each of the configurable symbols displayed in the first symbol presentation outcome that triggers the second symbol presentation stage.

3. The electronic gaming machine of claim 1 or claim 2, wherein at least one of the plurality of configurable symbols except the repeater symbol has a value that is predefined.

4. The electronic gaming machine of any one of claims 1 to 3, wherein at least one of the plurality of configurable symbols has a value that comprises a progressive value.

5. The electronic gaming machine of any one of claims 1 to 4, wherein the instructions further cause the controller to determine an award of the second symbol presentation stage at least in part on a sum of values of the configurable symbols displayed at a completion of the second symbol presentation stage.

6. The electronic gaming machine of any one of claims 1 to 5, wherein the instructions further cause the controller to:

determine whether a mystery symbol is displayed in the displayed plurality of symbols; and

in response to determining that a mystery symbol is displayed, determine a value for the mystery symbol.

7. The electronic gaming machine of claim 6, wherein the game controller conducts a first valuation to determine the value of the mystery symbol.

8. The electronic gaming machine of any one of claims 1 to 7, wherein the second symbol presentation stage includes a quantity of instances, and the instructions further cause the controller to, for at least one instance in the quantity of instances:

replace each displayed non-configurable symbol, if any, with a symbol selected using the random number generator from the set of symbols; and

hold each displayed configurable symbol for a remainder of the quantity of instances.

9. A method of game play implemented on an electronic gaming machine comprising a display device, a game play mechanism including a plurality of buttons configured for operation by a player to input a wager from the established credits and to initiate a play of a game, a random number generator, a credit input mechanism configured to receive a physical item to establish a credit balance based, at least in part, on a monetary value associated with the physical item, the credit balance being increasable and decreasable based at least on a wagering activity, meters configured for monitoring credits established via the credit input mechanism and changes to the established credits due to play of the gaming machine, the meters including a credit meter to which credit input via the credit input mechanism is added and a win meter, a memory device storing data indicative of a set of symbols, the set of symbols including a plurality of configurable symbols and a plurality of non-configurable symbols for a first symbol presentation stage and a second symbol presentation stage, the configurable symbols including a repeater symbol whose value is not assigned until the second symbol presentation stage is triggered, and a controller executing instructions stored in the memory device which, responsive to initiation of play of a game by a player interacting with the game play mechanism, cause the controller to implement the method comprising the steps of:

initiating play of a first symbol presentation based on input received from the player via the game play mechanism;

selecting using a random number generator and displaying a plurality of symbols at a plurality of display positions on a display device, wherein the plurality of symbols are selected from configurable symbols and non-configurable symbols, wherein at least one of the configurable symbols is a repeater symbol whose value is not assigned until a second symbol presentation stage is triggered;

initiating a second symbol presentation stage with an initial quantity of instances when a triggering number of configurable symbols are displayed;

for each instance of the second symbol presentation stage, selecting, using the random number generator, and displaying replacement symbols for non-configurable symbols in the plurality of display positions on the display;

determining a value for any displayed repeater value symbols based on a prize value of one or more of the configurable symbols that triggered the second symbol presentation stage; and

awarding a second symbol presentation stage award based at least in part on a value of each of the configurable symbols held in the plurality of display positions,

wherein the value of a displayed repeater symbol is determined by summing the prize value of each of the configurable symbols that triggered the second symbol presentation stage, and

on conclusion of the instances of the second presentation stage making an award of credits to the win meter or the credit meter based on values assigned to displayed configurable symbols.

10. The method of claim 9, wherein the prize value of each of the configurable symbols except the repeater symbol is predefined.

11. The method of claim 9, wherein the prize value of at least one of the configurable symbols comprises a progressive value.

12. The method of any one of claims 9 to 11, further comprising determining an award of the second symbol presentation stage based at least in part on a sum of values of the configurable symbols displayed at a completion of the second symbol presentation stage.

13. The method of any one of claims 9 to 12, further comprising:

determining whether a mystery symbol is displayed at the plurality of display positions; and

in response to determining that a mystery symbol is displayed, determining a value for the mystery symbol.

14. The method of claim 13, further comprising conducting a first valuation to determine the value for the displayed mystery symbol.

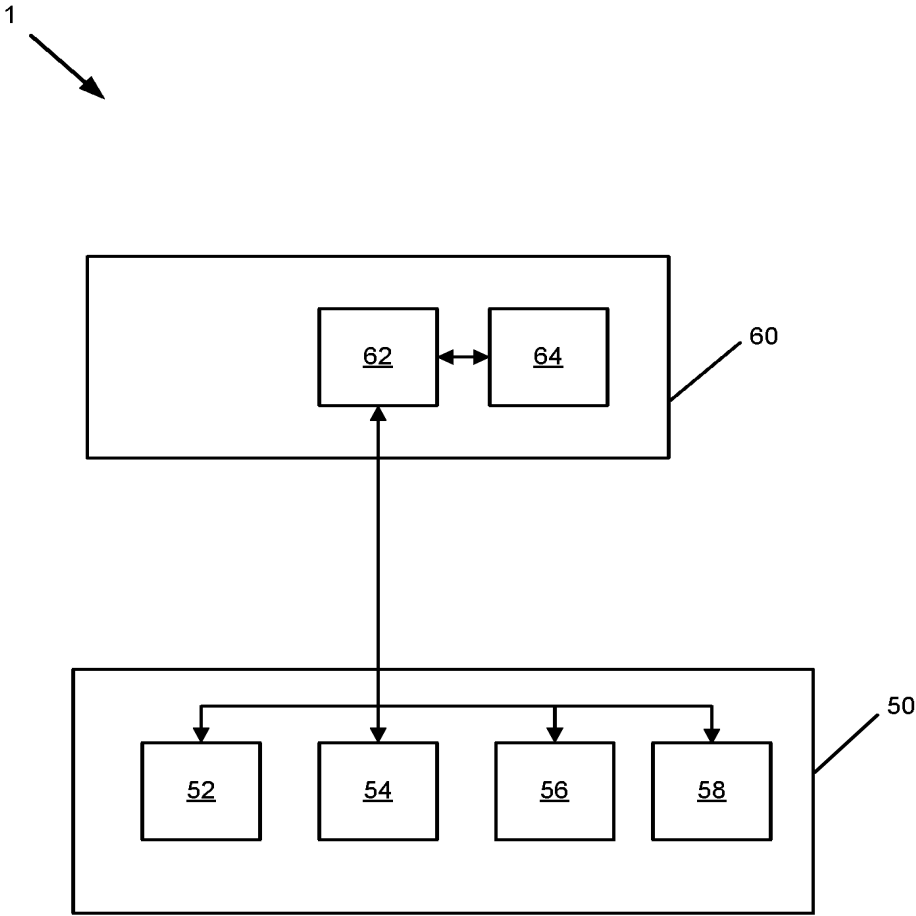


Figure 1

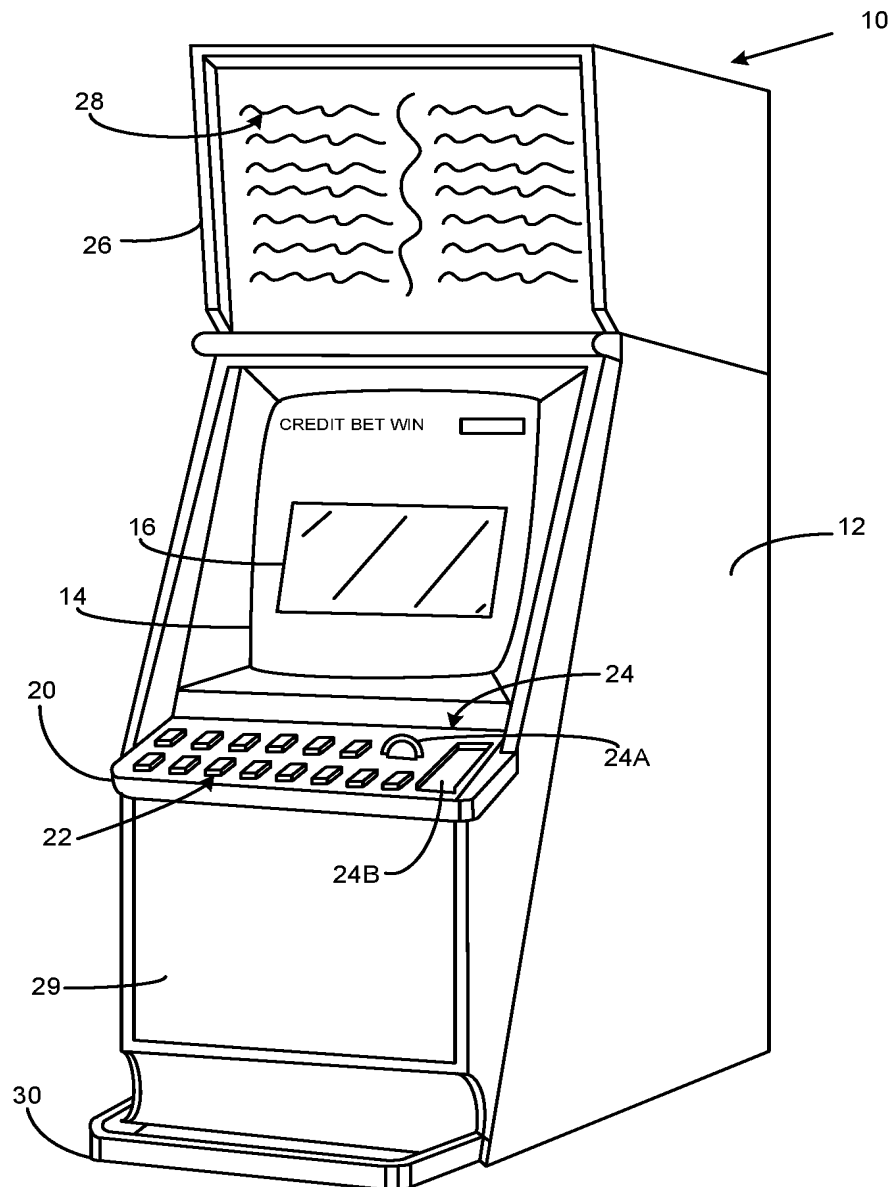


Figure 2

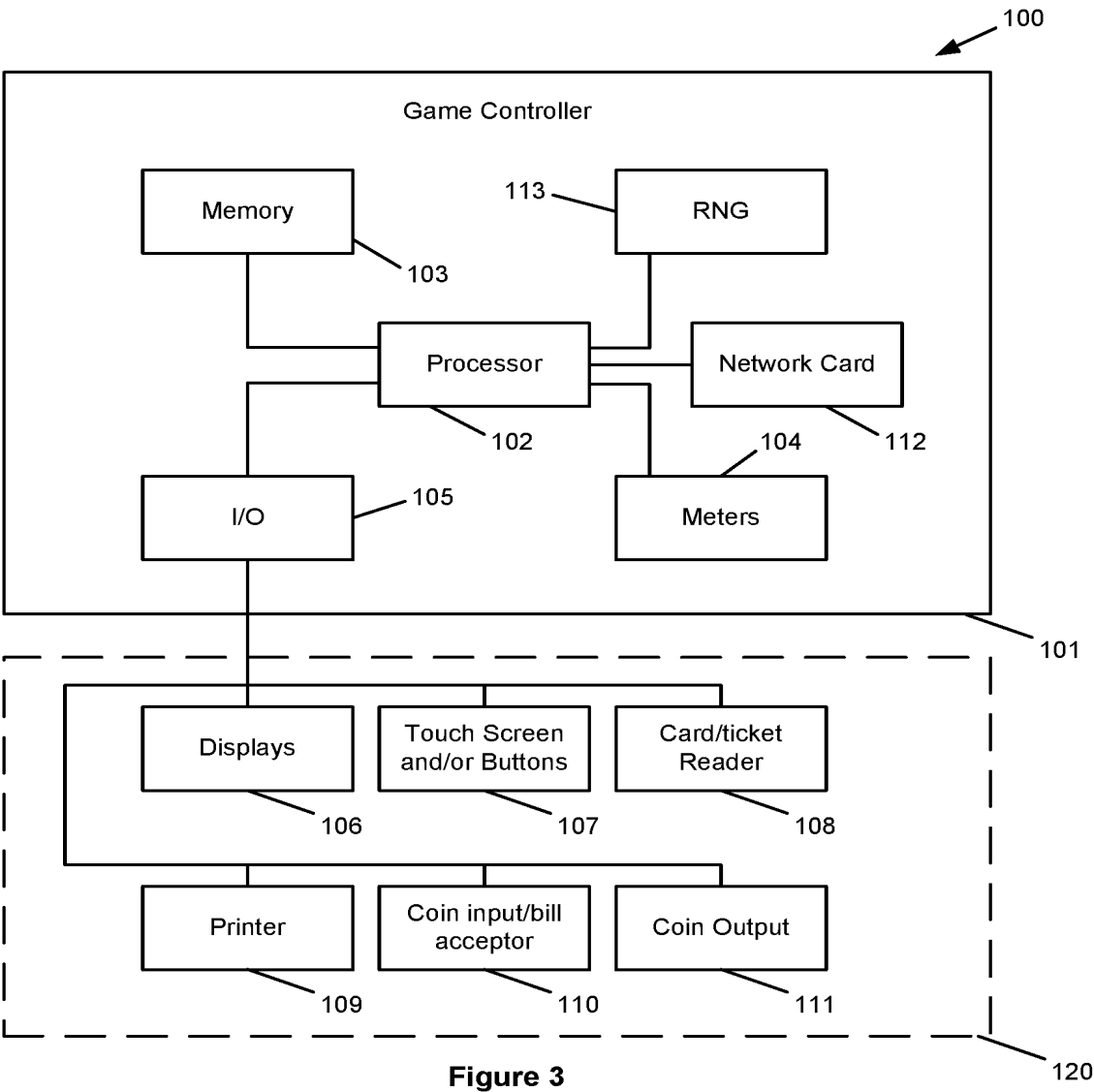


Figure 3

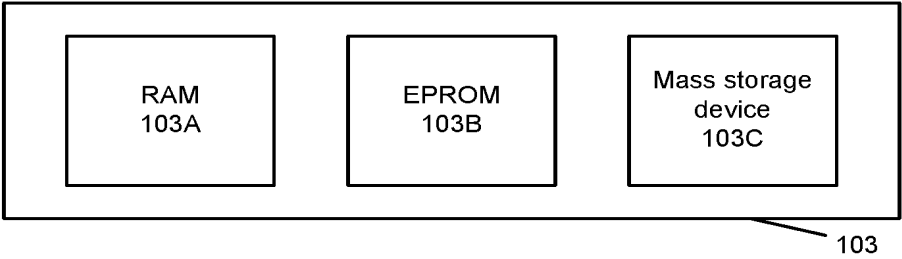


Figure 4

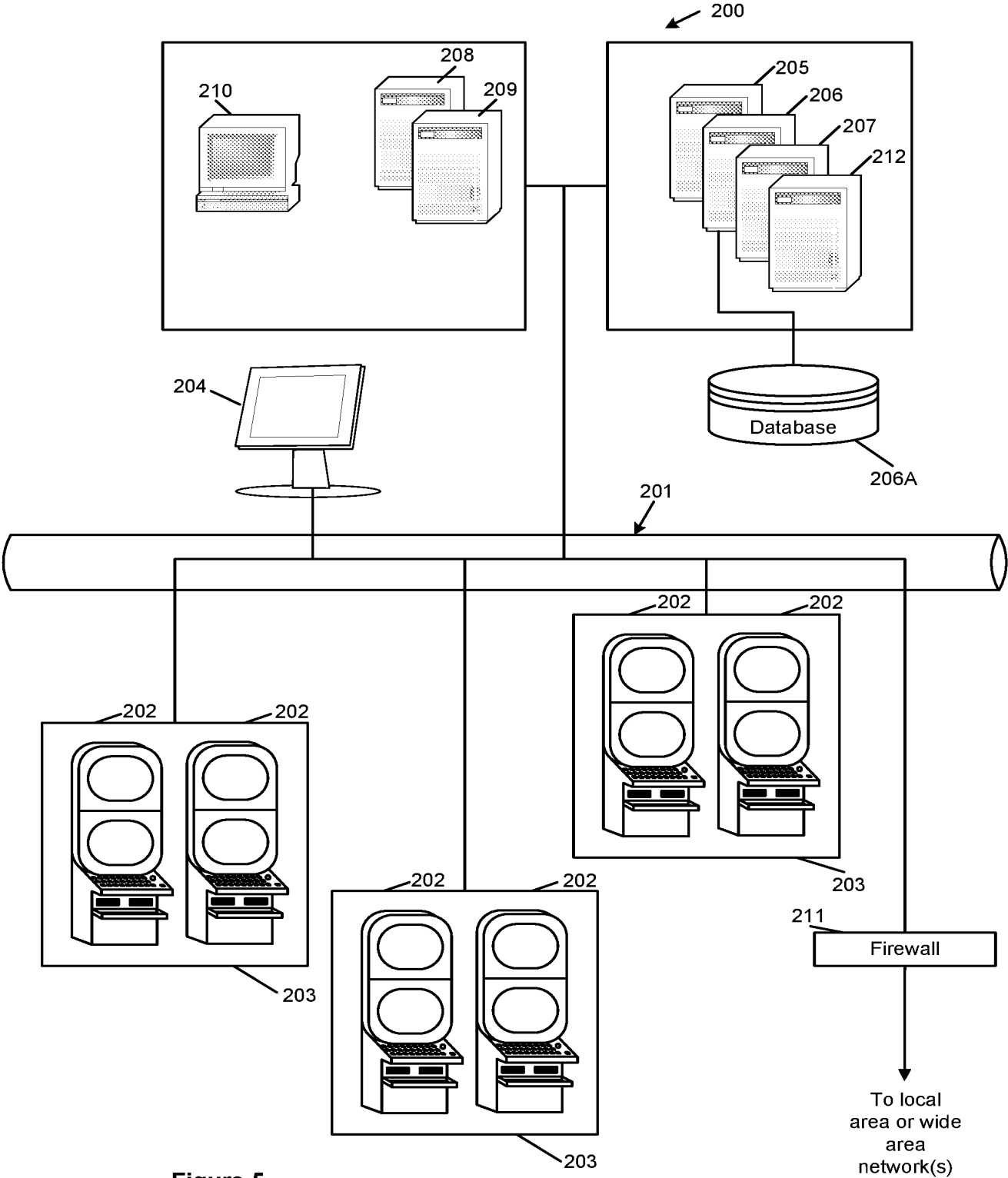


Figure 5

1 →

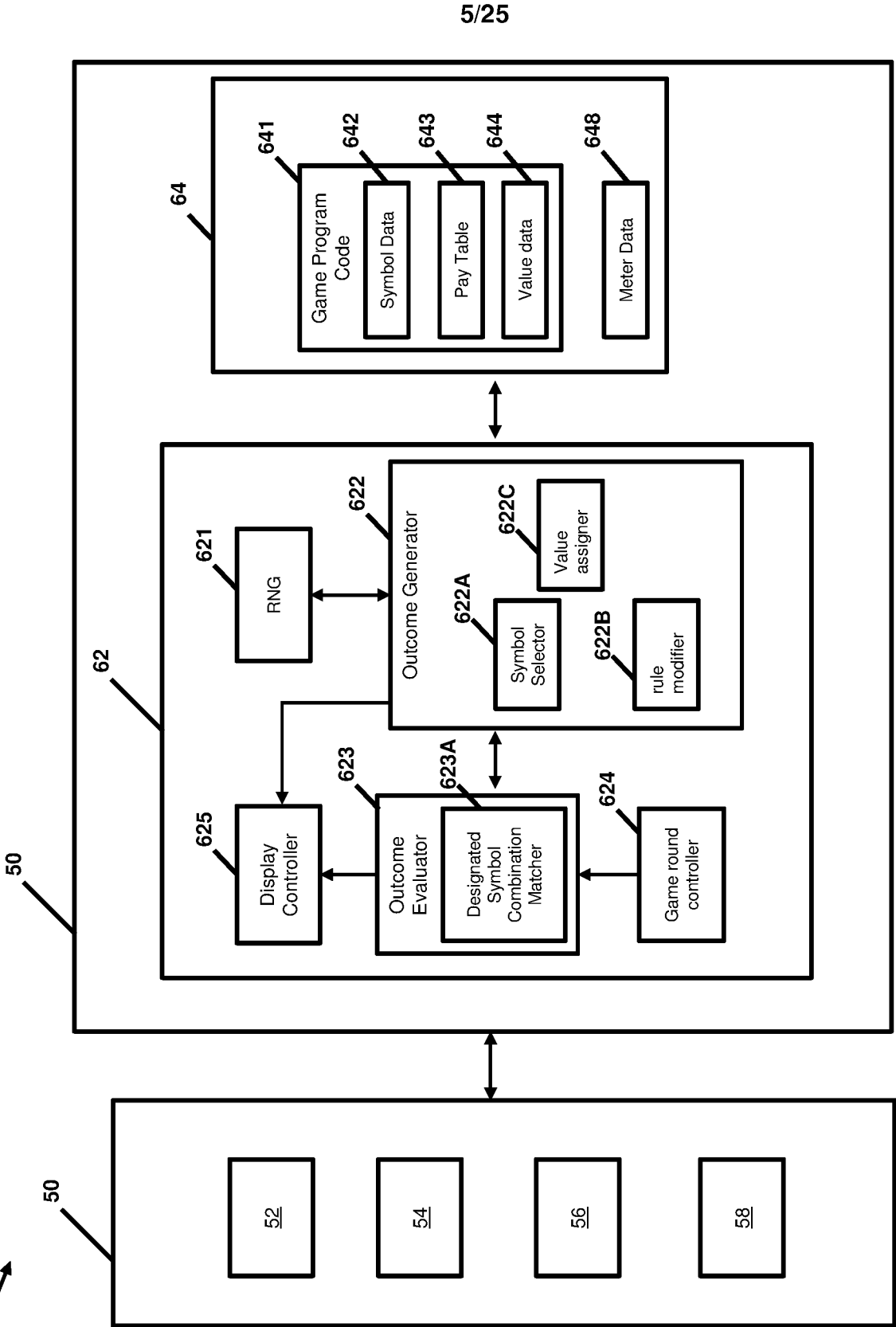


Figure 6

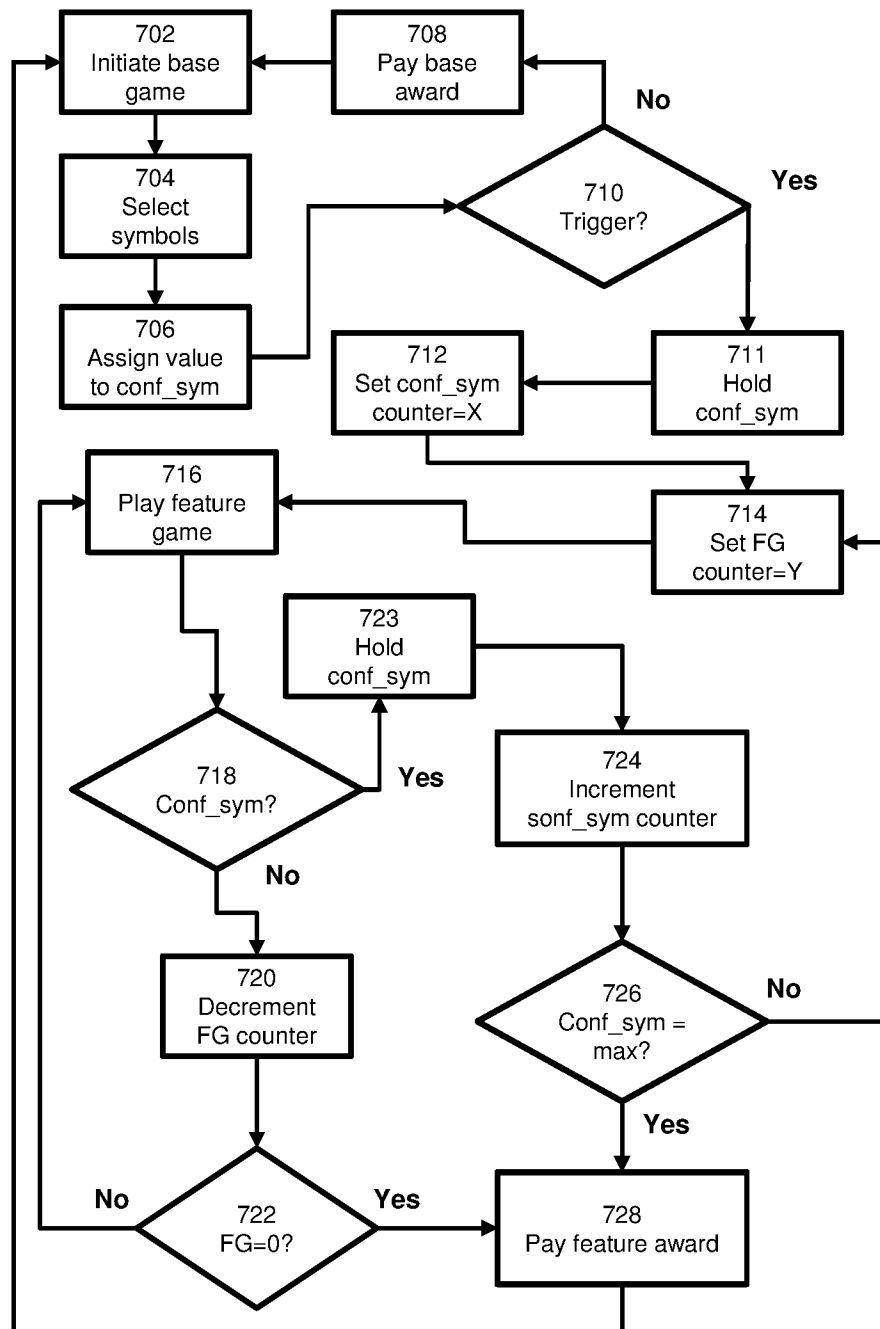


Figure 7

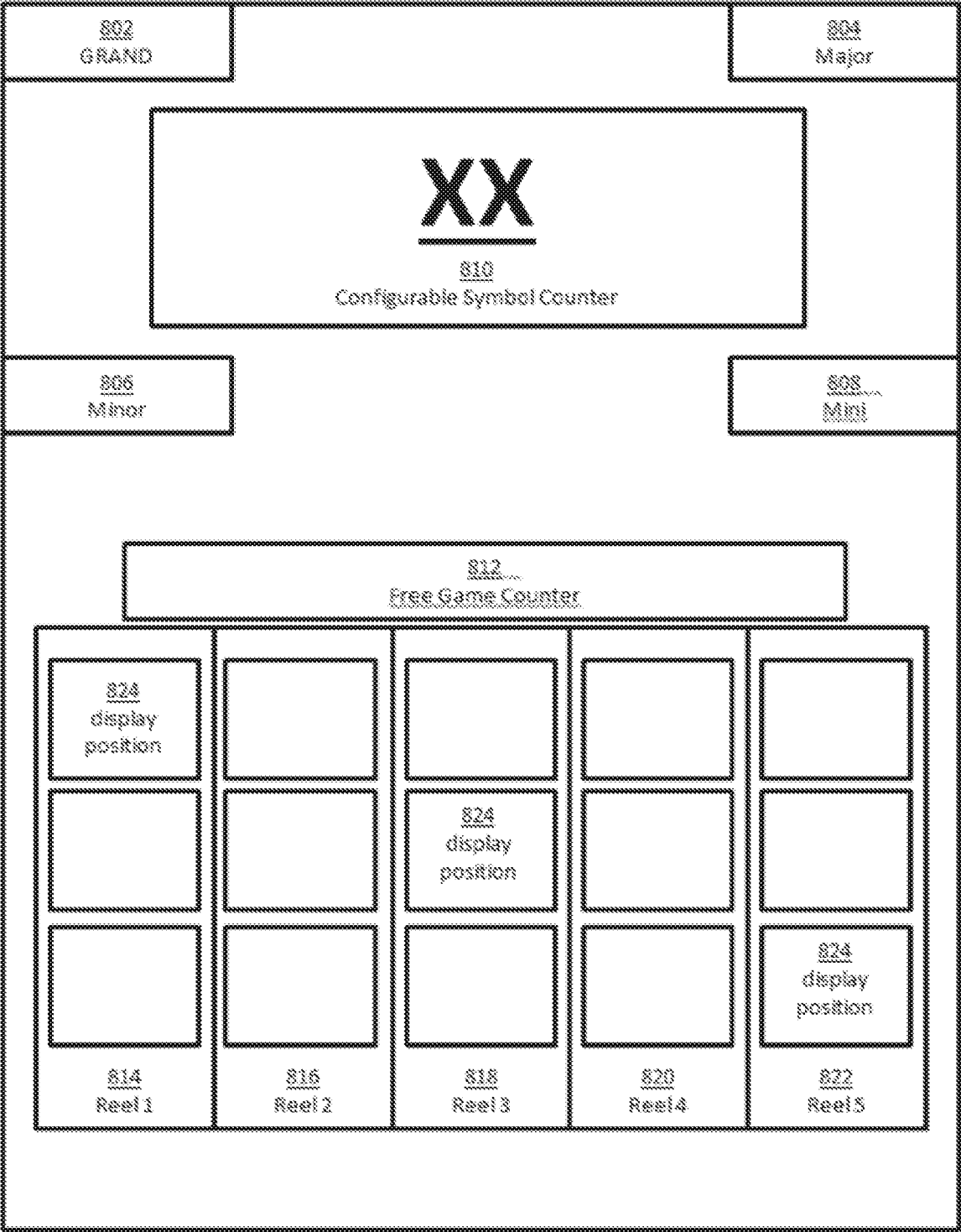
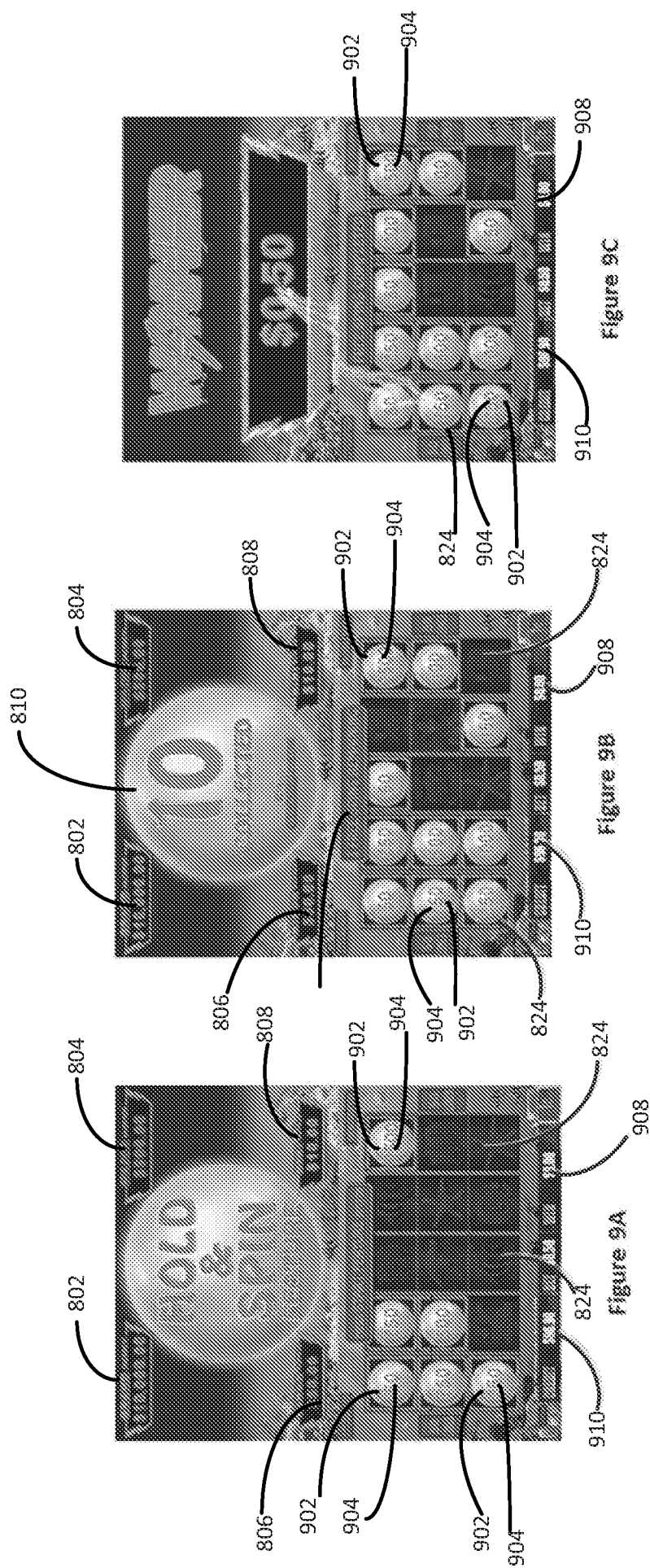
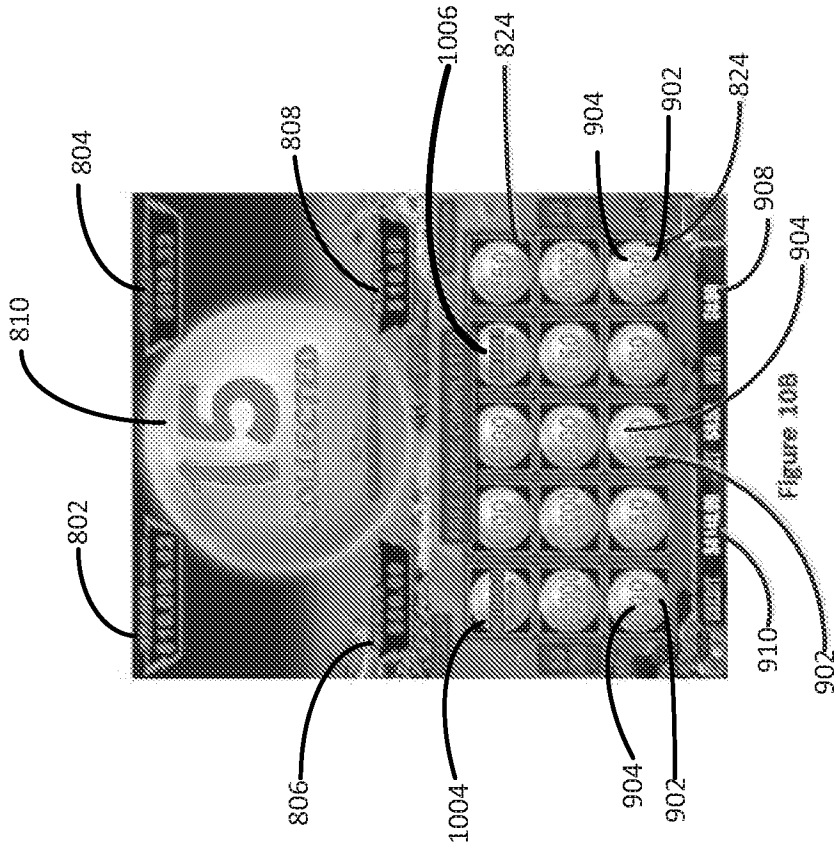
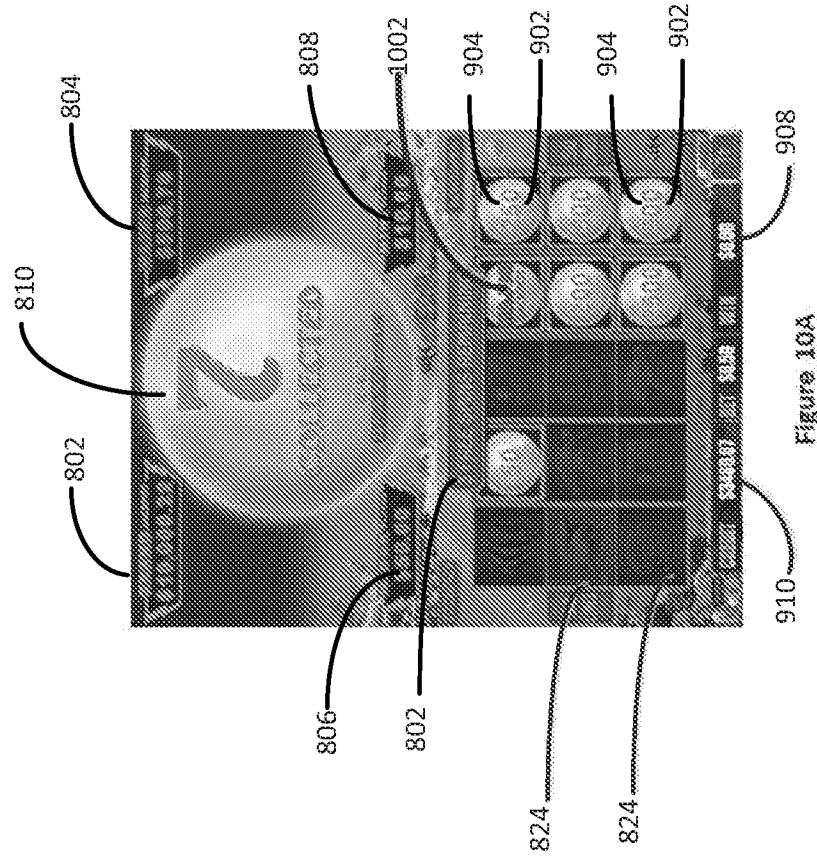


Figure 8

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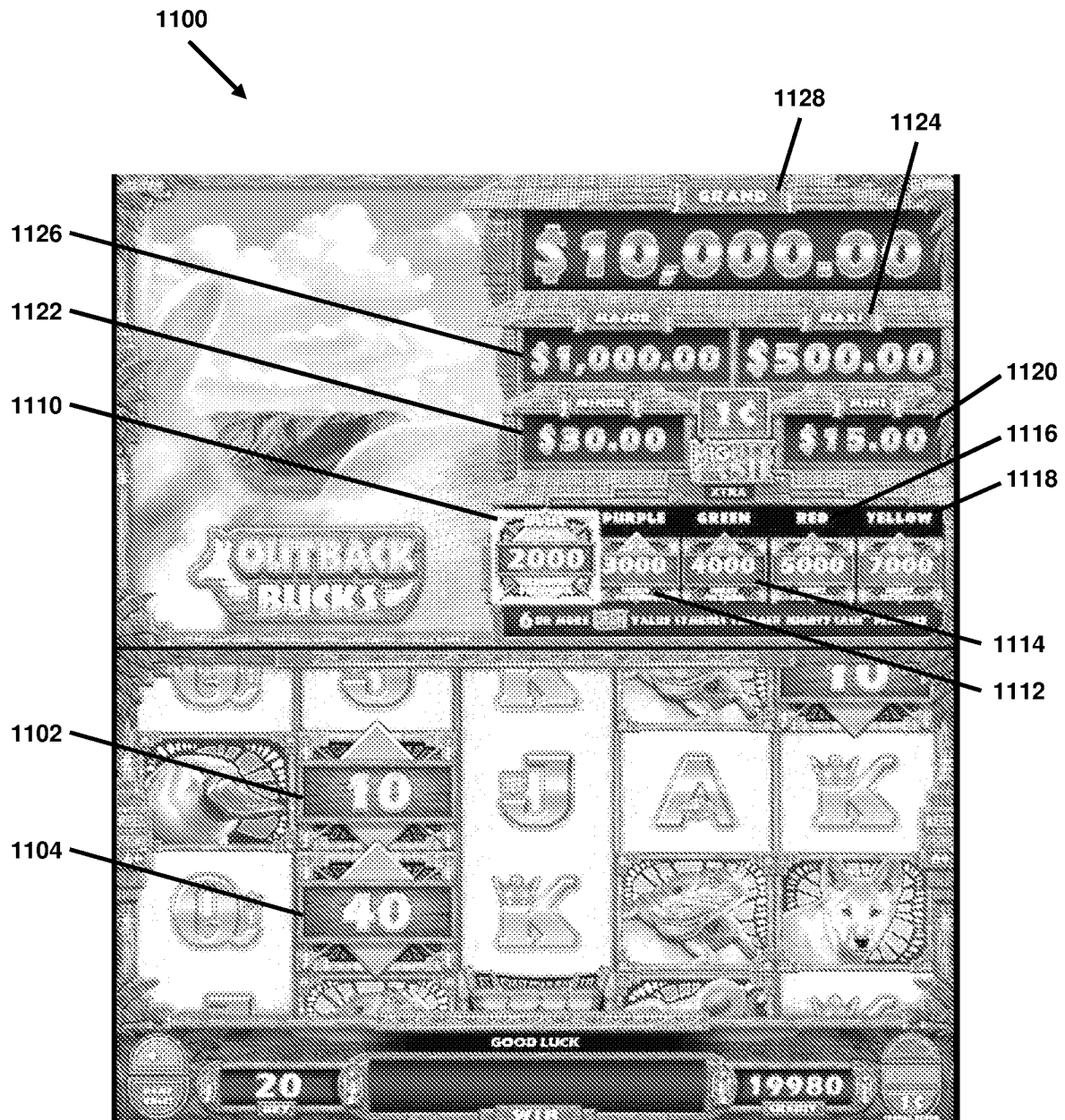


Figure 11A

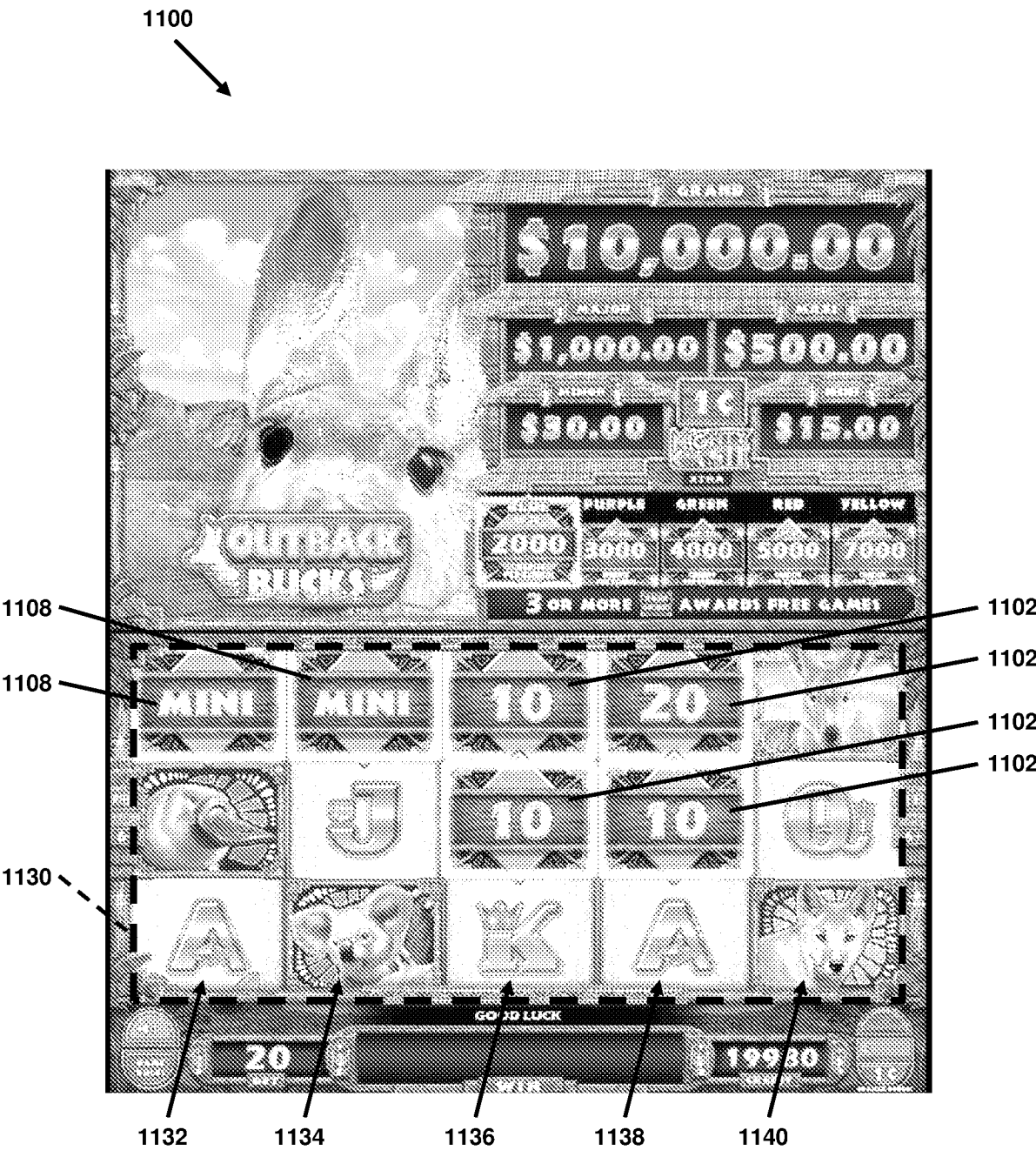


Figure 11B

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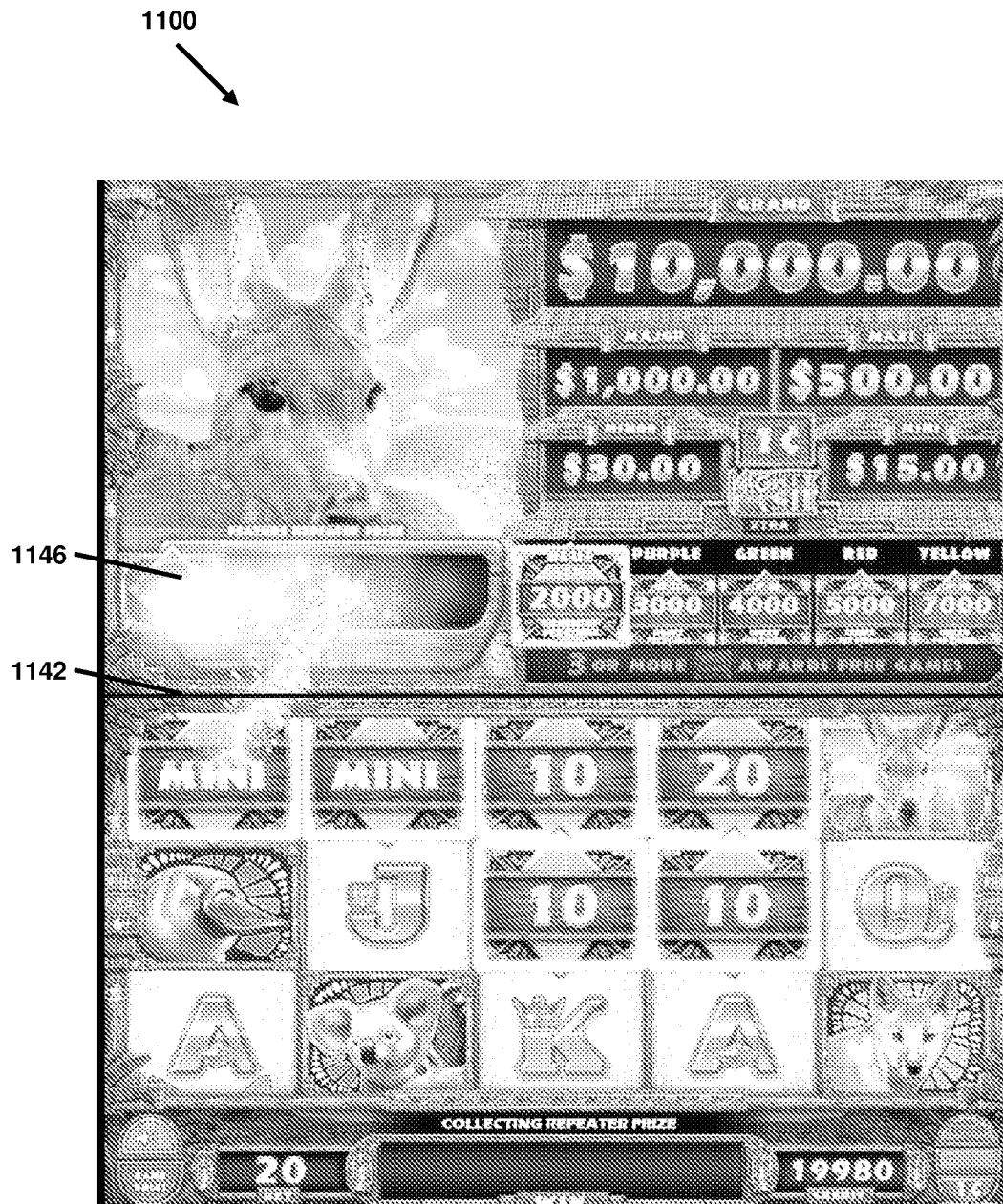


Figure 11C

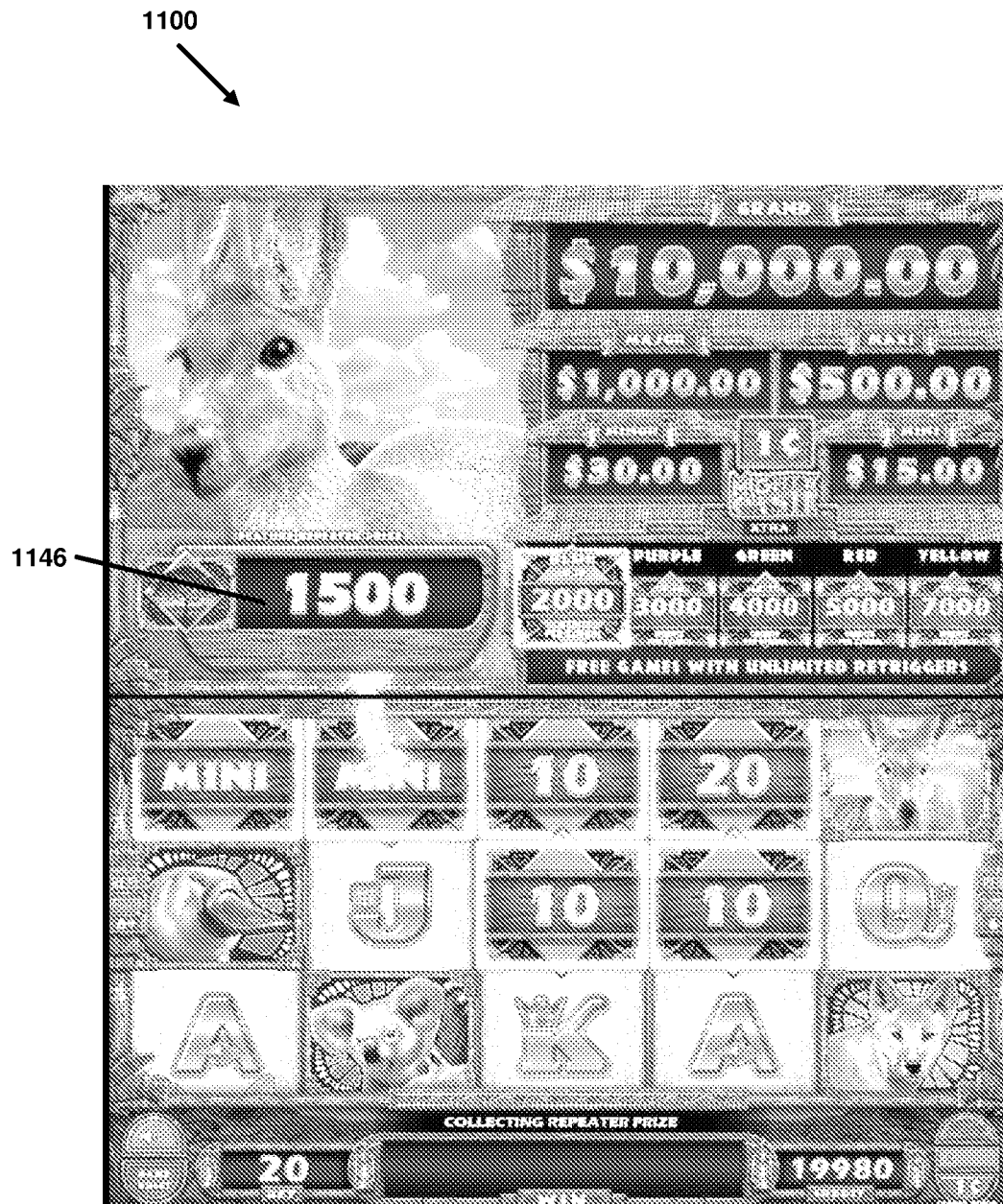
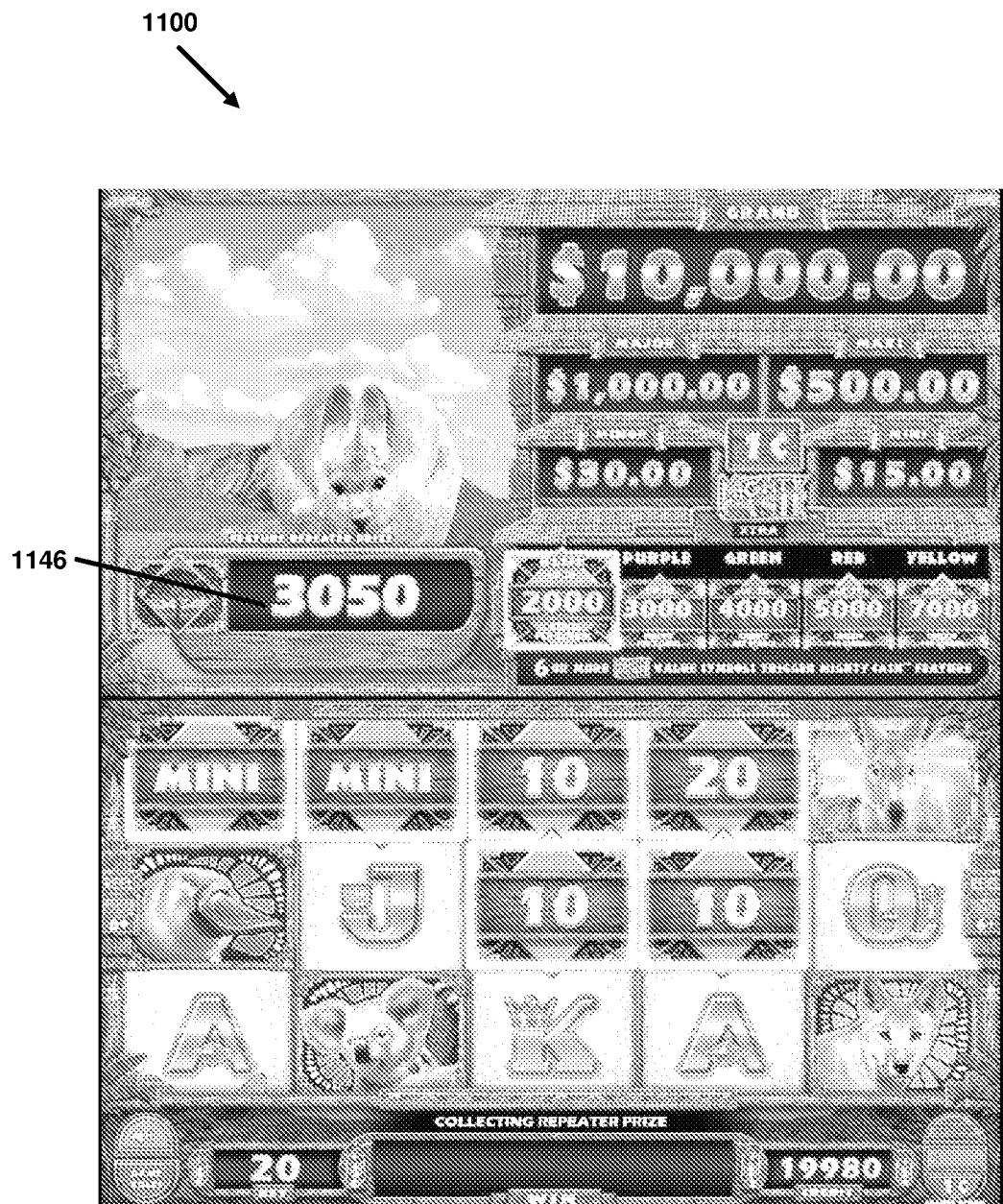


Figure 11D



1100



Figure 11F

1100



Figure 11G

1100



Figure 11H

1100



1104

Figure 11I



Figure 11J



Figure 11K

1100



Figure 11L

1100



Figure 11N

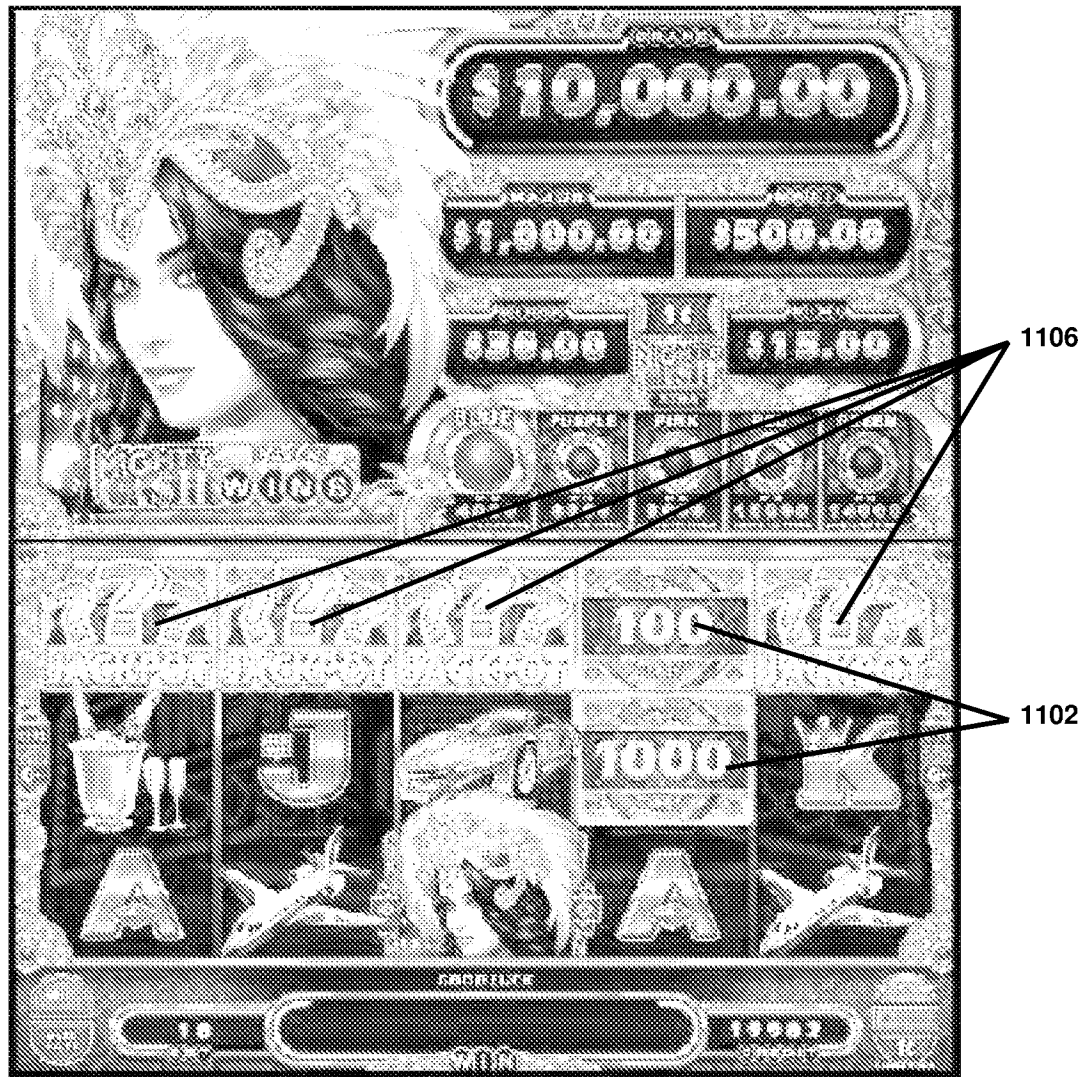


Figure 12A

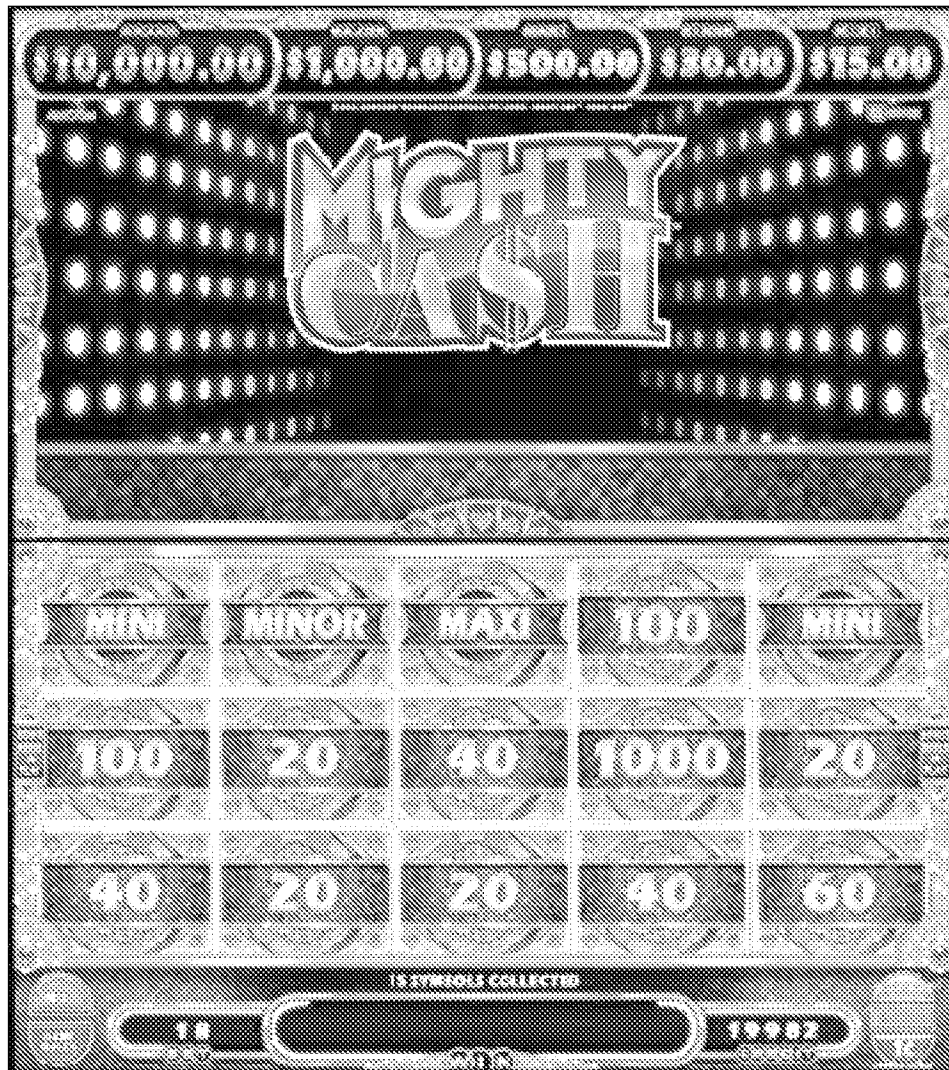


Figure 12B