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A GAMING SYSTEM, A METHOD OF GAMING AND AN AWARD CONTROLLER

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ABSTRACT

A method of gaming comprising: keeping a score of at least one award for each participating gaming device of a plurality of gaming devices; updating the respective scores based on play of the respective gaming devices; keeping an aggregate score of each at least one award; updating the aggregate score in response to score aggregation events associated with the respective gaming devices, each update based at least on a current score of the individual gaming device with which the respective aggregation event is associated; determining, in response to each aggregation event, whether to make a prize award based on a current aggregate score and a prize award score to the player of the gaming device with which the aggregation event is associated.

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Title

A GAMING SYSTEM, A METHOD OF GAMING AND AN AWARD CONTROLLER

Related Application

This application is a divisional application of Australian application no. 2012244267, the disclosure of which is incorporated herein by reference.

Field

The present invention relates to a gaming system, a method of gaming and an award controller.

Background

In some gaming systems, a jackpot controller is used to make an additional award to a player of an individual gaming machine. Depending on the implementation the decision to make the jackpot award can be made at the gaming machine or at the jackpot controller. In one type of jackpot controller known as a mystery jackpot controller, each gaming machine makes a contribution of part of the amount wagered to a jackpot pool each time it is played and a jackpot award is made to the gaming machine which causes the jackpot value to reach a designated, hidden value.

While such gaming systems provide players with enjoyment, a need exists for alternative gaming systems in order to maintain or increase player enjoyment.

Summary of the Invention

In a first aspect, the invention provides a method of gaming in a gaming system comprising an award controller having an award controller memory and a plurality of

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participating gaming devices each having a respective gaming device memory, the method comprising:

keeping a score of at least one award in the respective gaming device memories of each participating gaming device;

updating the respective scores in the respective gaming device memories based on play of the respective gaming devices;

keeping an aggregate score in respect of each at least one award in the award controller memory of the award controller, the aggregate score being an overall count of scores which have already been sent to the award controller from the plurality of gaming devices;

updating the aggregate score at the award controller only in response to a random occurrence of at least one predefined score aggregation event at one of the plurality of gaming devices, each update based at least on a current score of the individual gaming device with which the respective aggregation event is associated, wherein data for updating the aggregate score is communicated to the award controller in response to the respective aggregation event; and

determining, at the award controller, in response to each aggregation event, whether to make a prize award based on a current aggregate score and a prize award score, wherein any determined prize award is made to the gaming device with which the aggregation event is associated.

In an embodiment, each award comprises a symbol, and the score for each gaming device comprises a current total of awarded symbols for the respective gaming device.

In an embodiment, the method comprises keeping separate scores for a plurality of different symbols for each gaming device.

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In an embodiment, the method comprises resetting each score communicated to the award controller to an initial value upon the aggregate score being updated.

In an embodiment, the method comprises determining during each play of each gaming device, whether to make the at least one award for which the score is kept.

In an embodiment, the determination comprises conducting at least one random trial for the award.

In an embodiment, the determination comprises evaluating a game outcome generated during play of the gaming device to determine whether it corresponds to the at least one award.

In an embodiment, each award is of points, and the score comprises a total of awarded points.

In an embodiment, each score aggregation event comprises an occurrence of an aggregation symbol during play of the respective gaming devices.

In an embodiment, determining whether to make an award includes determining whether the current aggregate score is or exceeds a prize award score.

In an embodiment, there are a plurality of prize awards associated with respective ones of the awards, and wherein only one of the awards may be made in response to an aggregation event such that if an aggregation event results in two or more aggregate scores reaching or exceeding a prize award score, only one of the prize awards is made, whereby the next aggregation event may result in the award of another prize award without the aggregate score associated with that prize award increasing.

In a second aspect, the invention provides a gaming system

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comprising:

a plurality of participating gaming devices, each individual gaming device arranged to keep a score of at least one award in a gaming device memory of the respective gaming device and to update the score in the respective gaming device memory based on play of the respective gaming device; and

an award controller having an award controller memory in data communication with the gaming devices, arranged to:

keep an aggregate score in respect of each at least one award in the award controller memory, the aggregate score being an overall count of scores which have already been sent to the award controller from the plurality of participating gaming devices;

update the aggregate score in the award controller memory only in response to a random occurrence of at least one predefined score aggregation event at one of the plurality of gaming devices, each update based on at least a current score of the individual gaming device with which the respective aggregation event is associated, and wherein data for updating the aggregate score is communicated to the award controller in response to the respective aggregation event and

determine, in response to each aggregation event, whether to make a prize award based on a current aggregate score and a prize award score, wherein any determined prize award is made to the gaming device with which the aggregation event is associated.

In an embodiment, each award comprises a symbol, and the score for each gaming device comprises a current total of awarded symbols for the respective gaming device.

In an embodiment, each gaming device is arranged to keep separate scores for a plurality of different symbols and the award controller keeps an aggregated score for each

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different symbol.

In an embodiment, each game device is arranged to update the score, by resetting each score communicated to the award controller to an initial value upon the aggregate score being updated.

In an embodiment, each gaming device is arranged to determine during each play of the respective gaming device, whether to make the at least one award for which the score is kept.

In an embodiment, the determination comprises conducting at least one random trial for the award.

In an embodiment, the determination comprises evaluating a game outcome generated during play of the gaming device to determine whether it corresponds to the at least one award.

In an embodiment, each award is of points, and the score and aggregate score comprise a total of points.

In an embodiment, each score aggregation event comprises an occurrence of an aggregation symbol during play of the respective gaming devices.

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In an embodiment, the award controller determines whether to make an award by determining whether the current aggregate score is or exceeds a prize award score.

In an embodiment, there are a plurality of prize awards associated with respective ones of the awards, and the award controller is arranged to make only one of the awards in response to a specific aggregation event such that if an aggregation event results in two or more aggregate scores reaching or exceeding a prize award score, whereby the next aggregation event may result in

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the award of another prize award without the aggregate score associated with that prize award increasing.

In an embodiment, the award controller is a jackpot controller.

In a third aspect, the invention provides computer program code which when executed implements the above method.

In a fourth aspect, the invention provides a tangible computer readable medium comprising the above program code.

Brief Description of Drawings

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings in which:

Figure 1 is a block diagram of a gaming system with an award controller;

Figure 2 is a perspective view of a stand alone gaming machine;

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

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

Figure 5 is a schematic diagram of a network gaming system;

Figure 6 is a block diagram of an award controller;

Figure 7 is a functional block diagram of an award controller;

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Figure 8 is a flow chart of an embodiment; and

Figure 9 is a functional block diagram of a gaming device in the form of a standalone gaming machine.

Detailed Description

Overview of gaming system of one embodiment

Figure 1 shows a gaming system 1 of one embodiment where an award controller 150 is in data communication over a network 2, such as an Ethernet, with a bank of five gaming devices in the form of standalone gaming machines 10. Each of the gaming machines 10 is arranged to make an award, such as at least one designated symbol during normal game play. A local score of awards, such as a total of awarded symbols, is kept at the gaming machines. When an aggregation event, occurs, such as a special symbol occurring at the gaming machine 10, the local score of a gaming machine is sent to the award controller 150 which keeps an aggregate score such as an aggregate count of the designated symbol. In one embodiment, the award controller 150 keeps aggregate scores for a plurality of different symbols. In an embodiment, the award controller 10 makes an award when the local score sent to the controller causes the aggregate score to reach or exceed a prize award score.

Gaming devices

Gaming devices capable of participating in the method of gaming of the embodiment can take any suitable form including stand alone gaming machines and server based gaming terminals.

A gaming device in the form of a stand alone gaming

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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 ticker. 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.

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.

The display 14 shown in Figure 2 is in the form of a video display unit, particularly a cathode ray tube screen

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device. Alternatively, the display 14 may be a liquid crystal display, plasma screen, any other suitable video display unit, or the visible portion of an electromechanical device. 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.

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.

The gaming machine 100 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 100 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.

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.

In the example shown in Figure 3, a player interface 120 includes peripheral devices that communicate with the game

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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.

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.

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.

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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.

In a client server architecture a gaming device is provided by a gaming client and game server (and optionally other gaming network components). A gaming client has a similar outward appearance to gaming machine 10 but the game server implements most or all of the game and as such acts as the game controller while the terminal operated by the player essentially provides only the player interface. The gaming terminal receives player instructions, pass these to the game server which will process them and return game play outcomes to the gaming machine for display. Further details of a client/server architecture can be found in Further details of a server gaming architecture can be found in WO 2006/052213 and PCT/SE2006/000559, the disclosures of which are incorporated herein by reference. In such an embodiment, an award controller can be provided, for example, by a dedicated server in data communication with the game server.

Figure 5 shows that a gaming device may be connected within a gaming network 200 which provides additional and/or enhanced functionality. The gaming network 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. While banks 203 of two gaming machines are illustrated in Figure 5, banks of one, three or more gaming machines are also envisaged.

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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.

An award controller can be provided within such a network 200 by linked game server 205, such that the linked game server may implement a linked game for a plurality of different banks of gaming machines rather than a specific controller being provided for each bank of gaming machines.

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 system 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.

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.

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

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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.

Figure 9 is a functional block diagram of a gaming device in the form of a stand alone gaming machine. The gaming device 900 may be the same or different to gaming machine 10,100 described above. In Figure 9, the processor 930 of game controller 920 is shown implementing a number of modules based on program code and data stored in memory 940. 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.

The gaming device 900 includes a player interface 910 having a display 911 for displaying game outcomes to a player and a game play mechanism 912 including input devices such as touch screen or buttons to enable the player to interact with the game by placing wagers and entering any other instructions required to play the game. Game play mechanism 912 also enables the player to interact with the game to learn game rules etc. The player interface 910 includes a credit mechanism 913 allowing the player to input credit into the gaming device 900 and/or be paid out any winnings or remaining credit. A person skilled in the art will appreciate that other components will be present in a gaming device 900 such as

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those described in relation to Figures 2 to 4 above. The memory 940 includes program code for implementing a game including base game rule data 941 for implementing the rules of a base game.

The processor 930 when executing the program code stored in memory 940 is arranged to generate outcomes of the game in response to the operation of the game play mechanism 912. The outcomes are generated with the outcome generator 931.

The embodiment is described in relation to the evaluation of games where symbols are selected for display in a manner equivalent to a conventional spinning reel type game. In such embodiments, the evaluation entitlement may be based on how many lines are played in each game. 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.

In many games, the win entitlement is not strictly limited to the selected win lines for example, "scatter" pays are awarded independently of a player's selection of pay lines and are an inherent part of the evaluation entitlement.

Persons skilled in the art, will appreciate that in other embodiments, an evaluation entitlement may be based on a number of reels to play such as in 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.

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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 centre 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.

Accordingly, the game controller 60 establishes the evaluation entitlement to be applied based on the wager made by the player using the game play mechanism. The outcome generator 931 generates a game outcome to be evaluated which is displayed on display 911. In this example, by selecting symbols with a symbol selector 931A. One example of selecting symbols is for the symbol selector 931A to select symbols for display from a plurality of symbol sets corresponding to respective ones of a plurality of spinning reels. The symbol sets 943 can specify a sequence of symbols for each reel such that the symbol selector 931A can select all of the symbols by selecting a stopping position in the sequence using random number generator 934. In one example, three symbols of each of five reels may be displayed such that symbols are displayed at fifteen display positions on display 911 under control of display controller 936. It is known to use a probability table stored in memory 940 to vary the odds of a particular stop position being selected. Other techniques can be used to control the odds of particular outcomes occurring to thereby control the return to player of the game.

Accordingly, as described above, at the completion of the outcome generation process controlled by the outcome

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generator 9311 a plurality of symbols are displayed at display positions on display 911.

The outcome evaluator 932 evaluates the game outcomes that are generated based on the wager specified with the game play mechanism 912 and updates credit data 942 which stores a credit meter and a win meter for the game. The previously determined evaluation entitlement is applied by the award evaluator 932. It is determined whether any base game awards should be made based on game rule data 941 - for example whether the symbols of the display positions of an active win line or in an active way to win correspond to designated symbol combinations in a pay table. Any base game awards are then made.

In addition to the above, awards may be made toward a linked game. In this embodiment, the awards are symbols and the linked game may be won by a player who causes an aggregate total of symbols to reach or exceed a prize award total. More generally, each gaming machine keeps a local score of awards (in this embodiment awarded symbols) and the linked game can be won if the aggregate score reaches a designated prize award score.

Awards of symbols to be accumulated towards to local score can be made in a number of different ways. For example, the outcome generator 931 conduct a random trial having a specified probability of success to determine whether symbols should be awarded. In the illustrated embodiment, the local score module 935 monitors displayed symbols of the game outcome to determine whether it includes any symbols which are to be accumulated towards the local score. There may be, for example, a plurality of different symbols which are accumulated. If symbols are accumulated, the symbol accumulator 935 updates the current total of accumulated symbols stored as part of score data 943 in memory 944. In another embodiment, rather than symbols

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being accumulated directly from the displayed outcome, they may be awarded based on game rules 841 - e.g. a certain game outcome such as a symbol combination results in the award of a particular symbol, a time elapses, a turnover occurs etc.

In the embodiment, a total of symbols is accumulated by the local score module 935 until an aggregation event occurs. The game controller 920 comprises an aggregation event monitor 937 which monitors for the aggregation event. In the embodiment, the aggregation event is also derived from the game outcome, for example, the occurrence of an aggregation symbol. However, persons skilled in the art will appreciate that other aggregation events may be employed in other embodiments such as a certain number of games being played, a certain turnover being achieved, a random trial being carried out to determine whether to aggregate symbols or an aggregation signal being received from the award controller. Persons skilled in the art can derive other accumulation events from trigger events used to trigger a feature or secondary game. When the aggregation event occurs, the local score module 937, advises the communication module 933 which communicates data representing the local score for each symbol via communication interface 950 to the award controller 150. The aggregation event monitor 937 also causes local score module 935 to update the stored data to reflect that the symbols have been communicated, for example by resetting the totals stored in memory 940 to zero.

Award controller and its operation within the gaming system

Referring to Figure 6 there is shown further detail of the award controller 150. From Figure 6 it will be apparent that award controller 150 is in data communication with a communal display 160 on which the aggregate score in the

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form current symbol totals, and optionally the designated number of symbols required for a linked game prize award to be made, can be displayed to the players playing the bank of gaming machines 10 shown in Figure 1. In other embodiments, the totals could be displayed on the respective top boxes 26 of the individual gaming machines 10, rather than being displayed on a communal display 160, or in addition to such a display.

Referring to Figure 6, the constitution of the award controller 150 is similar to that of the gaming device illustrated in relation to Figures 2 to 4 and 9 in that it has a processor 151 arranged to implement award controller based on program code stored in memory 152 and a display driver 154 for driving the display 160. The award controller 150 also includes a communication interface 153 which is designed to enable the processor 151 to communicate with each of the gaming devices 10.

Persons skilled in the art will appreciate the above components are the core components for implementing a linked game but other components may be present in an award controller. Persons skilled in the art will appreciate that the implementation of the award controller is analogous to the implementation of bonus and/or controllers in existing gaming systems and reference may be made to such bonus controllers for further details of implementation. Indeed, in one embodiment, the award controller may be a modified jackpot controller.

Figure 7 is a functional block diagram of the award controller 150 which shows that the processor 151 implements a number of modules in a similar manner to the processor of the gaming device shown in Figure 9 by executing program code stored in memory 152. Data communications interface 153 receives communications from individual ones of gaming machines 10 including data

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identifying the gaming machine and local score data representing the symbols that gaming machine has accumulated and is communicating in response to an aggregation event. In this embodiment, individual machines communicate local score data to the award controller in response to individual aggregation events occurring - i.e. the aggregation events are associated with individual machines 10 because they occur at those machines 10. In other embodiments, a single event may correspond to aggregation events associated with each participating gaming machines 10.

After receiving the local score data, aggregate score module 701 updates score data 711 and updates the display (via display controller 704) to show the new aggregate score. Award evaluator 702 determines based on game rule data 710 whether the accumulated score for any of the symbols (there may be one or more symbol totals) corresponds to a prize award. For example, the totals corresponding to awards may be present in memory 152. In another embodiment, the totals may be set (for example, by being randomly determined within allowable ranges) when the game is initiated and after an award has been made. When award evaluator 702 determines that an award is to be made, the award is advertised on display 160 under control of display controller 704 and the award module 703 is initiated to make the award to the relevant gaming machine, for example, by communicating an amount of credits to be added to the credit meter of the gaming machine. The relevant aggregate symbol score is also reset.

The method of the embodiment is summarised in Figure 8 which shows that the method 800 involves generating 810 game outcomes at individual gaming devices, making an awarding 820, such as of one or more symbols, if the relevant game rules are satisfied. Keeping 830 a score of

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any awarded symbols at individual gaming devices. It is determined 840 whether an aggregation event 840 has occurred. If so, data representing the score of awarded symbols is sent 850 to the award controller which determines 860 whether a designated aggregate score has been reached and makes 870 an award if necessary.

Further aspects of the method will be apparent from the above description of the gaming system. Persons skilled in the art will also appreciate that the method could be embodied in program code. The program code could be supplied in a number of ways, for example on a tangible computer readable medium, such as a magnetic or optical disc or a memory. The program code could also be transmitted, e.g. from a server computer.

Persons skilled in the art will appreciate that there may be variation on the above embodiments. For example, in some embodiments, symbol data may be sent periodically to the award controller 150, for example after, or near the end of, every game, such that the aggregation event is the end of the game. As discussed above, in some embodiments, aggregation events may be used to cause all participating gaming machines 10 to communicate accumulated symbol data. For example, after receiving accumulated symbol data from one gaming machine, the award controller may request accumulated symbol data from each other machine. In another example, the award controller may initiate the accumulation of symbol data and request each gaming machine to supply their accumulated symbol data, for example it may randomly determine that the data is to be aggregated, thereby creating aggregation events for each gaming machine. The total(s) for the relevant gaming machine(s) are reset to an initial value (e.g. zero) once the symbols have been accumulated into the aggregate total for the symbol.

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The number and type of symbols to be awarded at each step can also follow any suitable rule, for example:

the number is determined by the triggering event (e.g. 3 hats on a pay line accumulates 1 hat),

the number is related to the amount bet at the time of the trigger (e.g. player bets a total of 10 credits and the trigger is 3 hats anywhere in the window, the accumulated number is 10 hats), and

the number is random (e.g. when there are 3 hats on a pay line, the gaming device uses the RNG to determine that 5 hats will be accumulated).

Eligibility for participating in the linked game and receiving the awards can follow the usual rules for eligibility - e.g. a player is eligible when they have placed a qualifying bet, have an outcome on a machine, etc. The awards may be fixed or accumulate in response to play of the gaming machine. In one embodiment, the awards are a plurality of jackpot pools and each jackpot pool has specific symbol(s) associated with it.

In another embodiment, points are awarded instead of symbols. Such points may be awarded in multiple categories.

<u>Example 1 - predefined symbols to be accumulated at controller</u>

Three gaming machines 10 are connected to an award controller 150. The machines 10 are identified as machines A, B, C. All machines contribute 5% of turnover to a prize pool which is accounted for by the controller. The prize pool is allocated to three distinct prize levels.

To win a prize level, a machine needs to send information to the controller 150 which meets predefined rules to award the prize.

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If the information sent to the award controller does not meet the predefined rules, the information sent to the controller is retained and is used to evaluate the next prize entitlement.

For each machine a plurality of symbols can be awarded by the outcome generator 931 conducting random trials using the random number generator 934:

a hat symbol is awarded with probability 1 in 100 for every credit played,

a star symbol is awarded with probability 1 in 500 for every credit played, and

a smile symbol is awarded with probability 1 in 1000 for every credit played.

In this example, the awarding of the symbols is accumulated on the screen and displayed to the player.

In addition, for each machine at each spin, there is a 1 in 100 chance that a key symbol will be awarded by the outcome generator 931 – i.e. this probability based on games played not turnover.

When the key symbol is awarded and when the game currently being played has completed, the machine 10 plays an animation and a tune and sends the information about the accumulated symbols to the controller 150. This helps build a sense of suspense for a player that a group of symbols has been aggregated and then the player has a "shot" at the prize. Hopefully, a player will have a shot at a prize before another player.

The controller 150 has an aggregate score in the form of count of the number of symbols which have already been sent to the controller. When the number of hats accumulated in the controller equals 10, the minor jackpot

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is won, when the number of stars accumulated in the controller equals 5, the major jackpot is won and when the number of smiles accumulated in the controller equals 5 the maxi jackpot is won. In this case, the accumulated symbols are displayed on display 160 so that they can be seen by players on all the machines 10 connected to the controller 150.

When a gaming machine sends data to the controller, the visual display of the score is updated and the controller determines if the number of displayed symbols has reached the required number to award a prize. If the target number is reached, the display of the total stops accumulating and the prize is paid. Then any remaining symbols are added to the display which will start the score again. If the target number is not reached, then the display retains the display of the accumulated symbols.

Assume the controller has already accumulated 5 hats, 2 stars and 1 smile symbol. Player A at machine A plays the machine and has accumulated a local score at the machine of 3 hats and 2 stars when the key is won. The machine sends the information to the controller and the display at the controller increments to 8 hats, 4 stars and 1 smile. No prize is awarded.

Player B is playing machine B and when the key is won, the machine V sends 1 hat, 2 stars and 1 smile symbol to the controller. The controller 150 updates the number of hats to 9, the number of stars to 5 and the major jackpot is awarded. The score of stars is then reduced to 0 to show the prize being awarded and then incremented to 1 because there is a left over star, and the number of smile symbols is incremented to 2.

<u>Example 2 - mystery number of symbols to be accumulated at controller</u>

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As per the above example, however the number of symbols to be accumulated to win a prize is not known and not advertised to the player.

The controller 150 randomly selects the number and/or combination of symbols required to win a jackpot with RNG 705 based on game rules 710. When a machine 10 sends data related to a local score of symbols to the controller 150, the controller 150 adds this score to the aggregate score and compares the totals with the randomly selected number/combination. After a jackpot is awarded, the controller resets the number/combination required to win the jackpot.

The game rules 710 set the conditions for random selection 705 of the number/combination of symbols which will provide the winning combination. In this example, minor jackpots require only hats, major jackpots require a combination from 2 of hats, stars and smiles, maxi jackpots require combinations from all 3 symbols.

The award controller 150 determines (using RNG 705):
Minor jackpot is won with 10 hats, Major jackpot is won with 15 hats and 2 stars
Maxi jackpot is won with 10 hats, 5 stars and 1 smile

Time T1 - As above, machine A accumulates symbols and then hits the key trigger. Machine A sends data to the controller 150. The controller 150 has no display of accumulated symbols but stores the current count if symbols as aggregate score data 711 in memory 152. After machine A has communicated data, the aggregate score is that 8 hats, 4 stars and 1 smile have been accumulated.

The award evaluator 702 of controller 150 compares the count with the previously randomly determined winning

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conditions and determines that no win is payable.

Time T2 - Machine B accumulates symbols and then hits the key trigger. Machine B sends data to the controller. The count now stands at 9 hats, 6 stars, 2 smiles. The award evaluator 702 of controller 150 compares the count with the winning conditions and determines that no win is payable.

Time T3 - Machine A accumulates symbols of 1 hat and 1 star and hits the key symbol. Machine A sends data to the controller 150. The count now stands at 10 hats, 7 stars, 2 smiles. The jackpot controller compares the count with the winning conditions and determines that a minor jackpot is payable. The prize is awarded with appropriate visual and auditory rewards. The aggregate score of symbols is now reduced to 0 hats, 7 stars and 2 smiles. The controller 150 now randomly selects a new condition for winning the minor jackpot. This is now set at 15 hats.

Time T4 - Machine C accumulates 5 hats and 1 smile, and the key is won. Machine C sends data to the controller. The count now stands at 5 hats, 7 stars and 3 smiles. The controller compares this to the winning condition and no prize is paid.

Time T5 - machine B accumulates 10 hats, 2 stars and 1 smile. The key is won and machine B sends data to the controller 150. The count is updated to 15 hats, 9 stars and 4 smiles. The controller compares the count to the award conditions. This meets the conditions for 2 of the awards. The controller 150 pays the larger prize so the major jackpot is paid. The count is reset to 0 hats, 7 stars and 4 smiles. The controller 150 determines the new trigger point for the maxi jackpot as 5 stars and 2 smiles. It will be noted that the accumulated count already meets that requirement, so that jackpot will be

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won by the next machine to send data to the controller 150 (unless a higher valued jackpot is won).

An advantage of this example, is that if a machine 10 gets the trigger symbol (aggregation event) with no symbols accumulated, the player still win a prize- i.e. it is not necessary to have accumulated symbols on the local machine in order to that the aggregation event provide a chance of winning. The final example shows why that condition is desirable.

It will be understood to persons skilled in the art of the invention that many modifications may be made without departing from the spirit and scope of the invention, in particular it will be apparent that certain features of embodiments of the invention can be employed to form further embodiments.

For example, the award controller 150 is shown in Figure 1 as a separate entity to the gaming devices 10. In an alternative embodiment, it could be provided by one of the gaming devices incorporating a server module arranged to implement the award controller in the manner described in Australian patent application 2008205413 filed 13 August 2008.

In some embodiments, it may be desirable to have player interaction to send the symbols to the controller 150. In such embodiments, the player may be allowed to hold their local score until such time as they believe it likely that it will contribute to a win. Alternately, the player may not have a choice as to whether to communicate their symbols and is required to press the button to increase their involvement.

In some cases, where the player can see how many symbols are accumulated on their machine and how many are

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required, the player may be able to determine how many symbols are sent to the controller so that they win but do not leave the controller with added symbols. In other examples, there may be limits on the number of symbols which can be communicated from a local machine at one time, for example a player may accrue 12 star symbols but only communicate 10. This may be advantageous in cases where the number and/or combination of symbols required for a prize award is advertised. In such an example, individual gaming machines can be configured to communicate no more than a number of symbols required to win the prize.

It will be appreciated that other techniques can be used to keep score, for example points may be awarded and the awarded score can be represented in a number of different ways, for example, graphically by a gauge. In another embodiment, the number of symbols awarded on local machines may not be an integer, for example, the total may stand at 1.53 star symbols. In such an example, the gaming machine may be arranged to only communicate whole symbols to the controller - e.g. such that if 1.53 symbols are accumulated 1 symbol is communicated and a balance of 0.53 symbols remains.

It will also be appreciated that the local scores for individual gaming devices need not be stored at the gaming devices. This is particularly applicable to a server based gaming arrangement, where the award controller may be implemented by a server within the gaming system and may maintain individual scores for each gaming device as well as an aggregate score.

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.

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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.

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THE CLAIMS DEFINING THE INVENTION IS AS FOLLOWS:

1. A method of gaming in a gaming system comprising an award controller having an award controller memory and a plurality of participating gaming devices each having a respective gaming device memory, the method comprising:

keeping a score of at least one award in the respective gaming device memories of each participating gaming device;

updating the respective scores in the respective gaming device memories based on play of the respective gaming devices;

keeping an aggregate score in respect of each at least one award in the award controller memory of the award controller, the aggregate score being an overall count of scores which have already been sent to the award controller from the plurality of gaming devices;

updating the aggregate score at the award controller only in response to a random occurrence of at least one predefined score aggregation event at one of the plurality of gaming devices, each update based at least on a current score of the individual gaming device with which the respective aggregation event is associated, wherein data for updating the aggregate score is communicated to the award controller in response to the respective aggregation event; and

determining, at the award controller, in response to each aggregation event, whether to make a prize award based on a current aggregate score and a prize award score, wherein any determined prize award is made to the gaming device with which the aggregation event is associated.

2. A method as claimed in claim 1, wherein each award comprises a symbol, and the score for each gaming device comprises a current total of awarded symbols for the respective gaming device.

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3. A method as claimed in claim 2, comprising keeping separate scores for a plurality of different symbols for each gaming device.

4. A method as claimed in any one of claims 1 to 3, comprises resetting each score communicated to the award controller to an initial value upon the aggregate score being updated.

5. A method as claimed in any one of claims 1 to 4, comprising determining during each play of each gaming device, whether to make the at least one award for which the score is kept.

6. A method as claimed in claim 5, wherein the determination comprises conducting at least one random trial for the award.

7. A method as claimed in claim 5, wherein the determination comprises evaluating a game outcome generated during play of the gaming device to determine whether it corresponds to the at least one award.

8. A method as claimed in claim 1, wherein each award is of points, and the score comprises a total of awarded points.

9. A method as claimed in any one of claims 1 to 8, wherein each score aggregation event comprises an occurrence of an aggregation symbol during play of the respective gaming devices.

10. A method as claimed in any one of claims 1 to 9, wherein determining whether to make an award includes determining whether the current aggregate score is or exceeds a prize award score.

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11. A method as claimed in claim 10, wherein there are a plurality of prize awards associated with respective ones of the awards, and wherein only one of the awards may be made in response to an aggregation event such that if an aggregation event results in two or more aggregate scores reaching or exceeding a prize award score, only one of the prize awards is made, whereby the next aggregation event may result in the award of another prize award without the aggregate score associated with that prize award increasing.

12. A gaming system comprising:

a plurality of participating gaming devices, each individual gaming device arranged to keep a score of at least one award in a gaming device memory of the respective gaming device and to update the score in the respective gaming device memory based on play of the respective gaming device; and

an award controller having an award controller memory in data communication with the gaming devices, arranged to:

keep an aggregate score in respect of each at least one award in the award controller memory, the aggregate score being an overall count of scores which have already been sent to the award controller from the plurality of participating gaming devices;

update the aggregate score in the award controller memory only in response to a random occurrence of at least one predefined score aggregation event at one of the plurality of gaming devices, each update based on at least a current score of the individual gaming device with which the respective aggregation event is associated, and wherein data for updating the aggregate score is communicated to the award controller in response to the respective aggregation event and

determine, in response to each aggregation event,

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whether to make a prize award based on a current aggregate score and a prize award score, wherein any determined prize award is made to the gaming device with which the aggregation event is associated.

13. A gaming system as claimed in claim 12, wherein each award comprises a symbol, and the score for each gaming device comprises a current total of awarded symbols for the respective gaming device.

14. A gaming system as claimed in claim 13, wherein each gaming device is arranged to keep separate scores for a plurality of different symbols and the award controller keeps an aggregated score for each different symbol.

15. A gaming system as claimed in any one of claims 12 to 14, wherein each game device is arranged to update the score by resetting each score communicated to the award controller to an initial value upon the aggregate score being updated.

16. A gaming system as claimed in any one of claims 12 to 15, where each gaming device is arranged to determine during each play of the respective gaming device, whether to make the at least one award for which the score is kept.

17. A gaming system as claimed in claim 16, wherein the determination comprises conducting at least one random trial for the award.

18. A gaming system as claimed in claim 16, wherein the determination comprises evaluating a game outcome generated during play of the gaming device to determine whether it corresponds to the at least one award.

19. A gaming system as claimed in claim 12, wherein each

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award is of points, and the score and aggregate score comprise a total of points.

20. A gaming system as claimed in any one of claims 12 to 19, wherein each score aggregation event comprises an occurrence of an aggregation symbol during play of the gaming devices.

21. A gaming system as claimed in any one of claims 12 to 19, wherein the award controller determines whether to make an award by determining whether the current aggregate score is or exceeds a prize award score.

22. A gaming system as claimed in claim 21, wherein there are a plurality of prize awards associated with respective ones of the awards, and the award controller is arranged to make only one of the awards in response to a specific aggregation event such that if an aggregation event results in two or more aggregate scores reaching or exceeding a prize award score, whereby the next aggregation event may result in the award of another prize award without the aggregate score associated with that prize award increasing.

23. A gaming system as claimed in any one of claims 12 to 22, wherein the award controller is a jackpot controller.

24. Computer program code which when executed implements the method of any one of claims 1 to 11.

25. A tangible computer readable mediums comprising the program code of claim 24.

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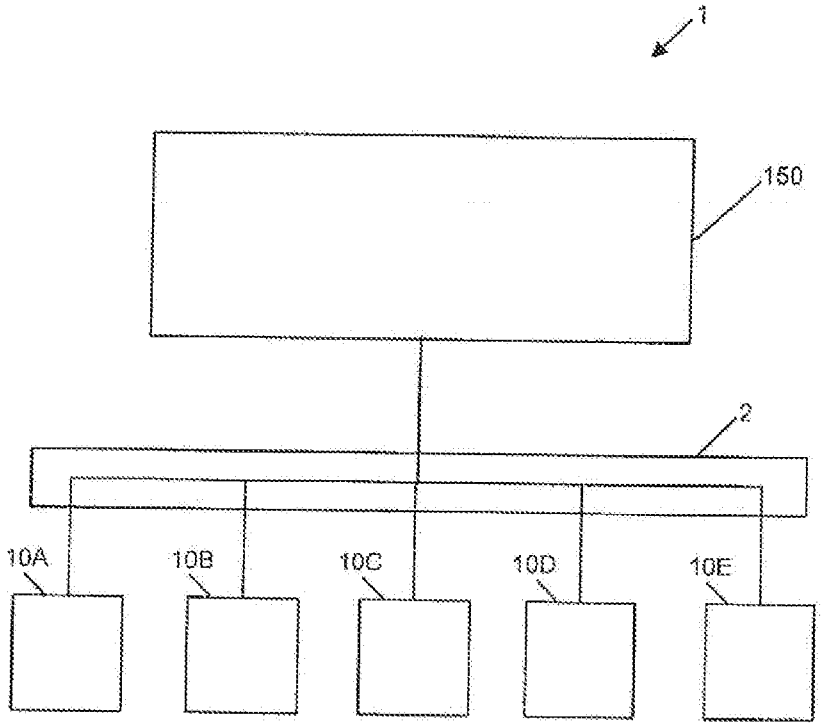

Figure 1

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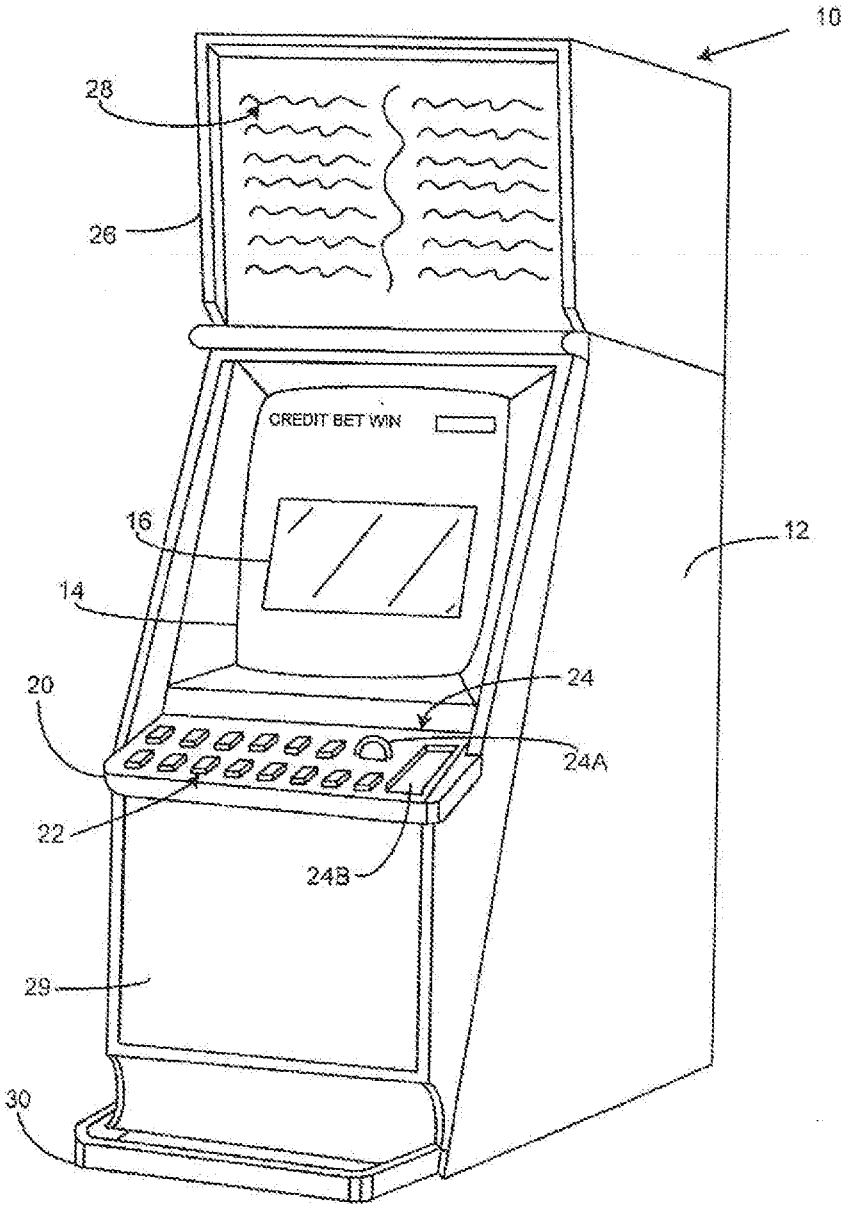

Figure 2

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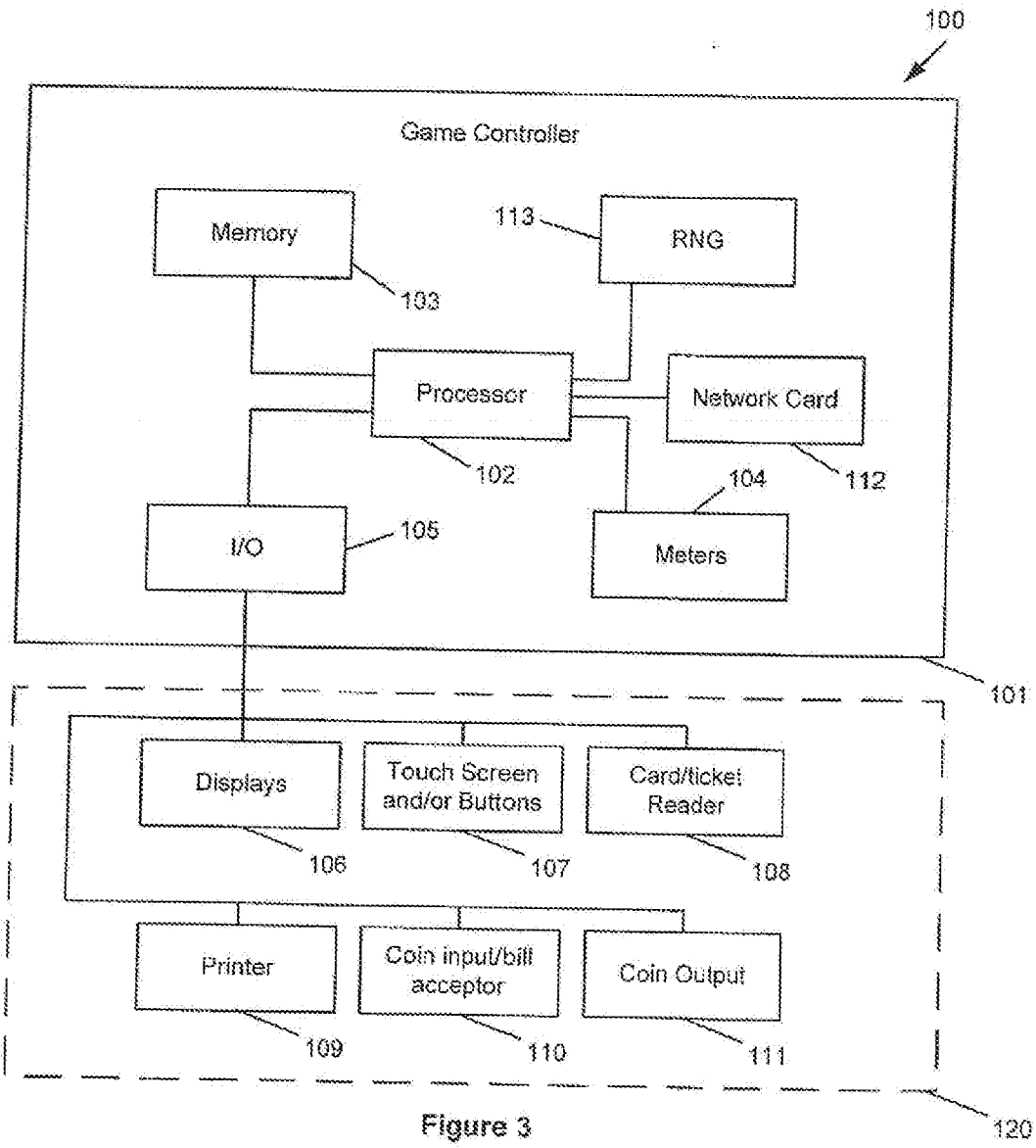

Figure 3

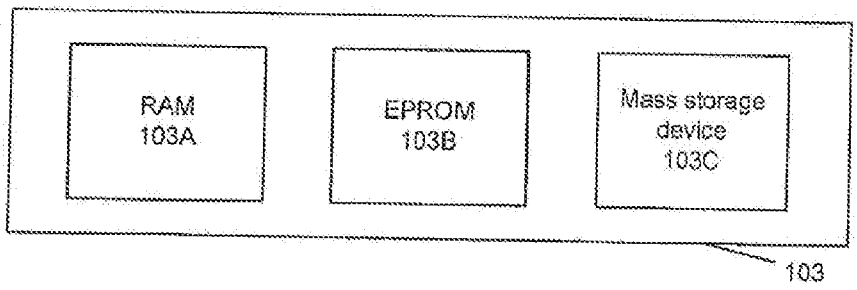

Figure 4

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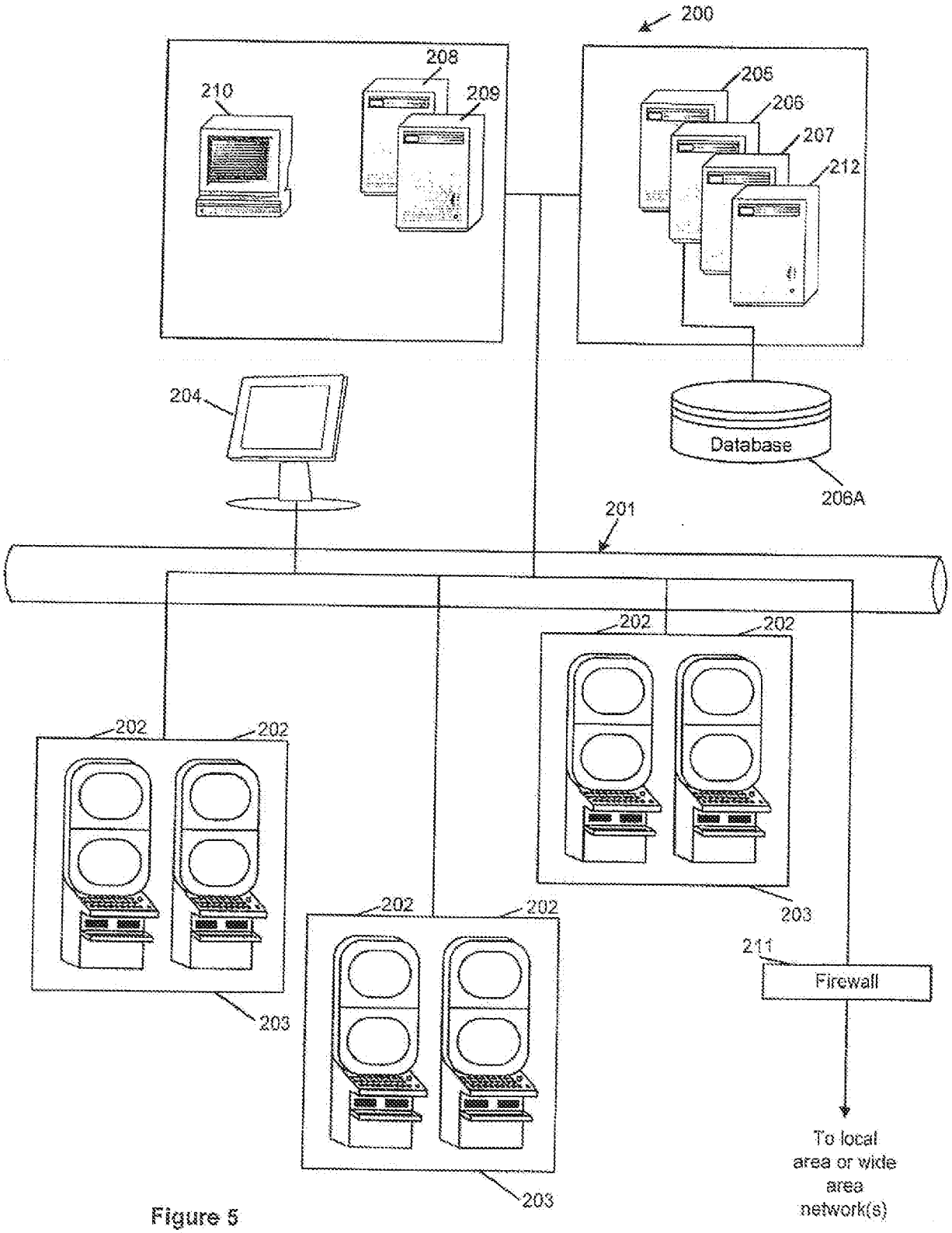

Figure 5

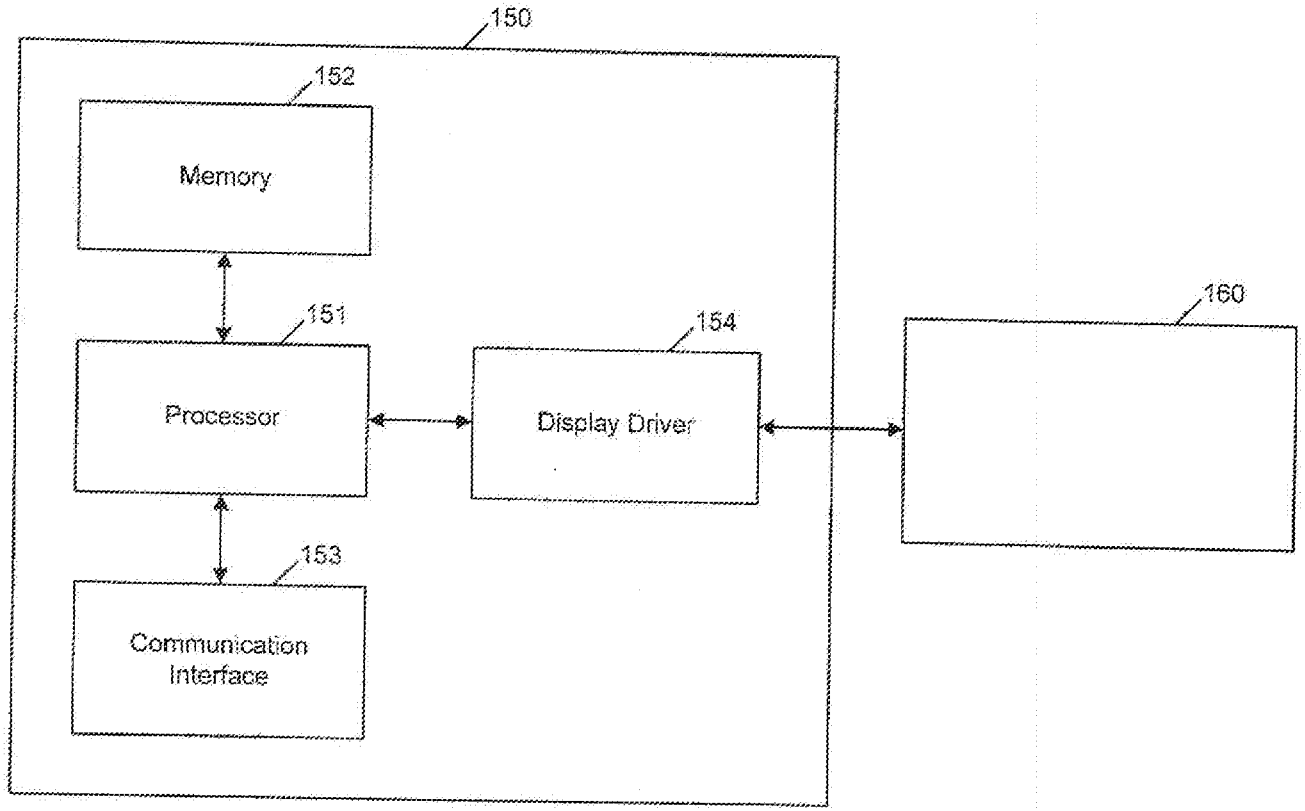
150
152
Memory
151
Processor
153
Communication Interface
154
Display Driver
160

Figure 6

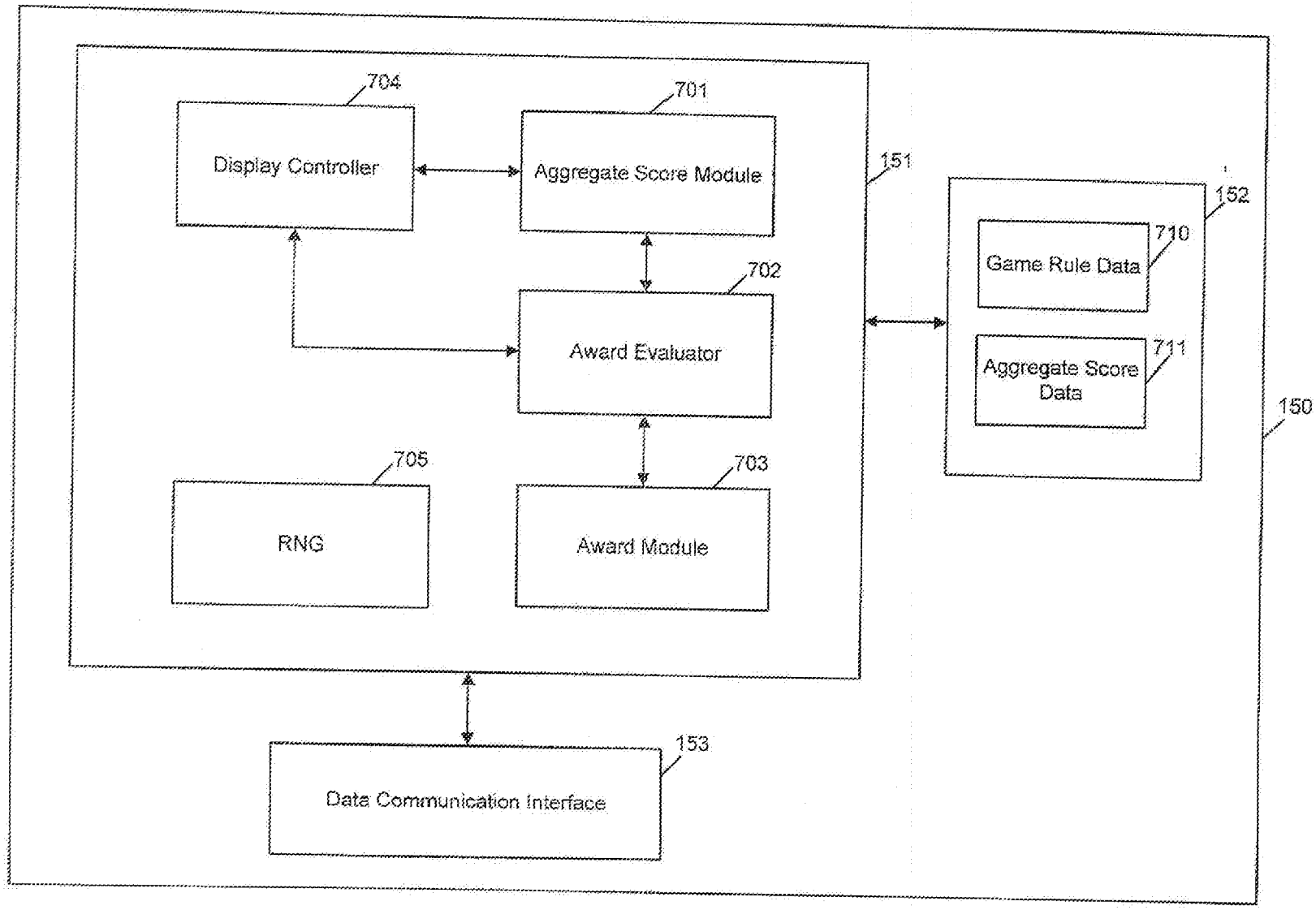
704
Display Controller
701
Aggregate Score Module
151
152
710
Game Rule Data
702
Award Evaluator
711
Aggregate Score Data
150
705
RNG
703
Award Module
153
Data Communication Interface

Figure 7

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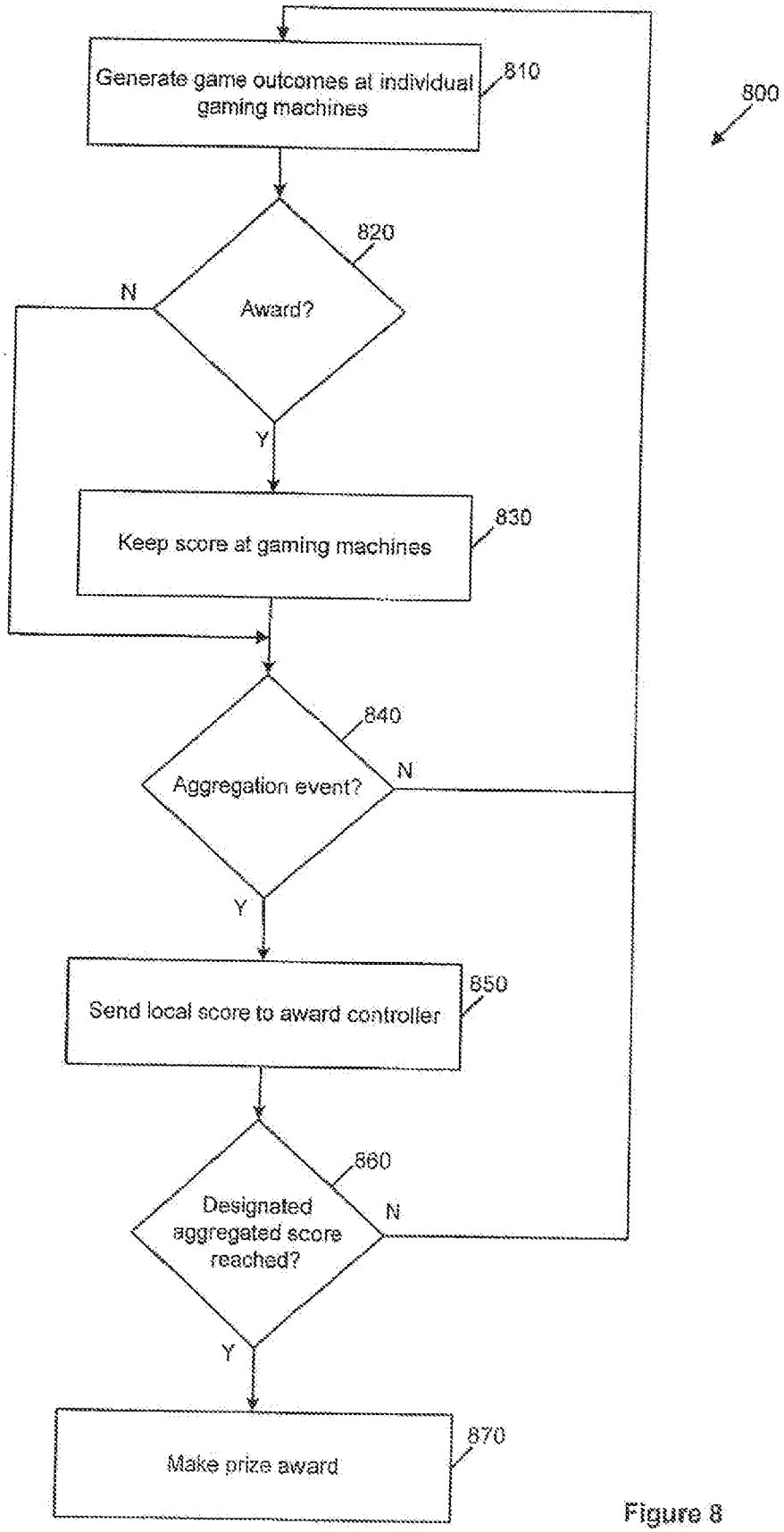

Figure 8

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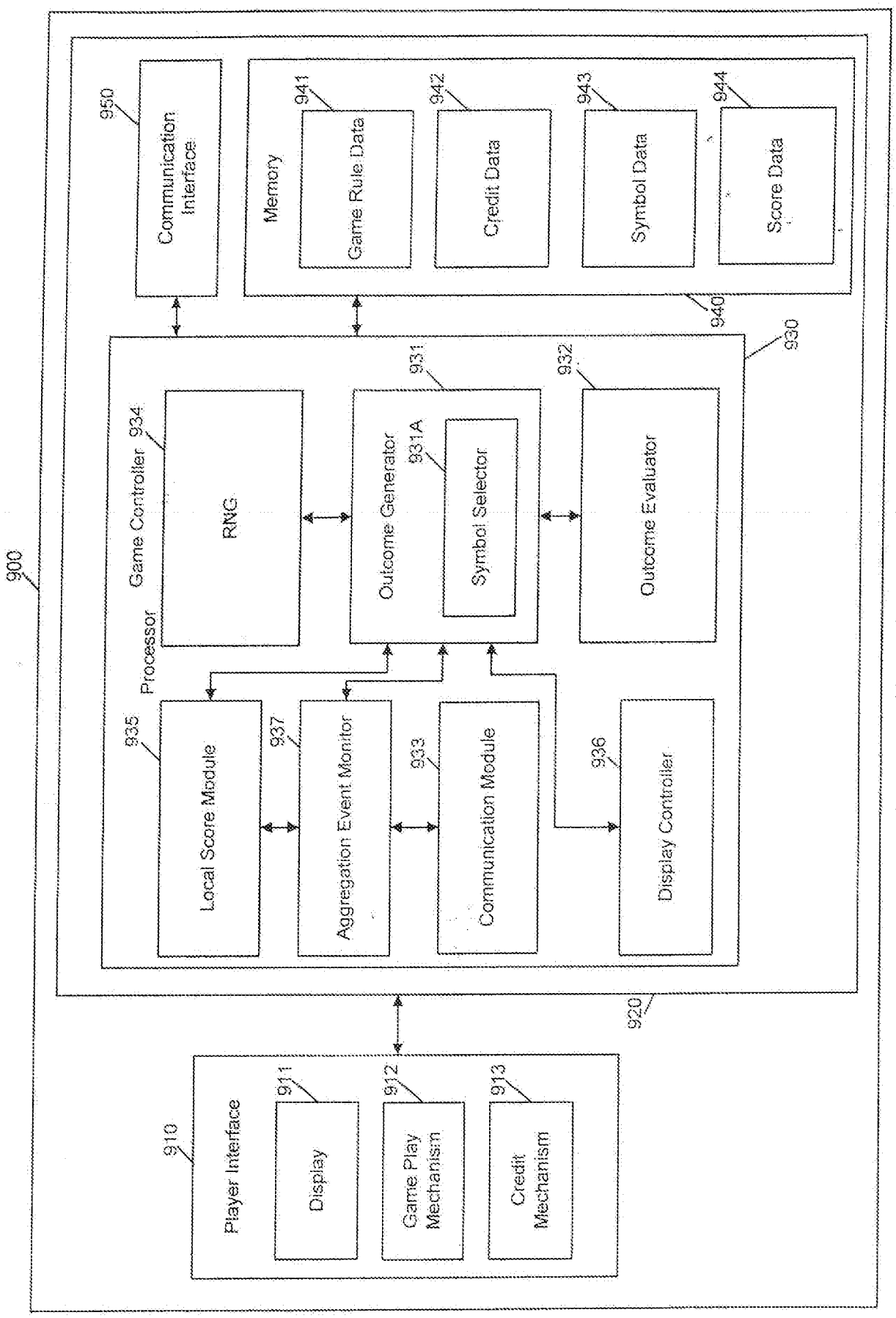

Figure 9