

A Gaming Apparatus

5 TECHNICAL FIELD

The present disclosure relates broadly to a gaming apparatus.

10 BACKGROUND

For current gaming machines and apparati, games installed in the machines and apparati are typically fixed in terms of games output. Games designers typically lack options available to make changes or add new game variations to such installed games
15 without a substantial re-design and re-installation of the games.

In addition, in the gaming industry, stakeholders are typically finding ways to award game features within gaming machines, such game features may include special bonuses, win multipliers, free games etc. The stakeholders typically need to maintain
20 and even enhance the interest, involvement and levels of enjoyments of players.

In view of the above, there exists a need for a gaming apparatus that seeks to address at least the above problems.

25

SUMMARY

In accordance with an aspect of the present disclosure, there is provided a gaming apparatus, the gaming apparatus comprising a player input module arranged to
30 accept a player input; a random number generator arranged for output of a game output result; a processing module arranged to combine the player input and a value associated with the game output result as a player condition group, the processing module further arranged to match the player condition group to a set of one or more pre-determined

condition groups; wherein if the player condition group is a match to at least one pre-determined condition group from said set of one or more pre-determined condition groups, the processing module is further arranged to retrieve an instruction set associated with the matched at least one pre-determined condition group from a storage device; and further
5 wherein the processing module is arranged to use the retrieved instruction set for instructing the random number generator to output an additional game result.

The value associated with the game output result may be a portion of a total game output result value.
10

The portion of a total game output result value may be based on a subset of the game output result.

The value associated with the game output result may be a total game output result value,
15

The instruction set may comprise an instruction to the random number generator to restrict a range of numbers during generation of one or more randomly generated numbers.

20

BRIEF DESCRIPTION OF THE DRAWINGS

Example embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:
25

Fig. 1(a) is a schematic front view diagram of a front panel of a gaming apparatus/machine in an example embodiment.

30 Fig. 1(b) is a schematic front view diagram of the gaming apparatus/machine with the front panel opened in part from the gaming machine in the example embodiment.

Fig. 2 is a schematic block diagram illustrating a gaming machine/apparatus in an example embodiment.

Fig. 3(a) is a schematic drawing illustrating a screenshot of an example main game output result in an example embodiment.

5 Fig. 3(b) is a schematic drawing illustrating a screenshot of another example main game output result in the example embodiment.

Fig. 3(c) is a schematic drawing illustrating a screenshot of another example main game output result in the example embodiment.

10

Fig. 4(a) is a schematic drawing illustrating a screenshot of an example main game output result in an example embodiment.

15 Figs. 4(b)(i) and (ii) show respective win tables for the diamond and the oval shaded symbols.

Fig. 5 is a schematic flowchart for illustrating a method of executing an instruction set based on matching of a player condition group in an example embodiment.

20 Fig. 6 is a schematic flowchart for illustrating a method of creating one or more pre-determined condition groups in an example embodiment.

25 Fig. 7 is a schematic flowchart for illustrating a process of retrieval of an instruction set and changing the state of a gaming apparatus in an example embodiment.

Fig. 8 is a schematic diagram illustrating a plurality of gaming apparatus in a network in an example embodiment.

30 Fig. 9 shows a schematic drawing of a game system according to an example embodiment.

Fig. 10 is a schematic drawing of a computer system suitable for implementing an example embodiment.

Fig. 11 is a schematic drawing of a wireless communication device suitable for implementing an example embodiment.

5

DETAILED DESCRIPTION

In an example embodiment, a gaming apparatus may be provided that changes its state based on a player input and a value associated with a game output result. The player
10 input is in relation to a game implemented on the gaming apparatus and the game output result may provide a game win value for the player. Thus, the changing of the state of the gaming apparatus is not merely a game win for the player. Further, the game output result may be a random number generator output. The game output result may provide a game win value for the player based on a points or wins table. For example, for a particular game
15 result, an associated number of points as a value are awarded to the player. The value may be a total win value or a portion (or subset) of the total win value.

To change the state of the gaming apparatus, a processing module of the gaming apparatus is arranged to combine the player input and the value associated with the game
20 output result value into a player technical group as a basis for comparison to a pre-determined set of one or more technical groups. In example embodiments herein, the technical groups may also be termed as a condition group.

In the example embodiment, the pre-determined set of one or more technical groups
25 may be stored in a storage device of the gaming apparatus. Alternatively, the pre-determined set of one or more technical groups may be stored in a storage device external of the gaming apparatus e.g. accessible by wireless, wired connections etc. In the example embodiment, the processing module of the gaming apparatus is arranged to compare/match the player technical group or player condition group against the set of one or more pre-
30 determined technical groups or condition groups. If the player condition group matches a pre-determined condition group, the processing module retrieves an instruction set linked or associated with the matched pre-determined condition group from the storage device. The retrieved instruction set is used to change the state of the gaming apparatus.

For example, the retrieved instruction set may comprise a list of technical instructions to instruct the processing module to execute processing in order to change the state of the gaming apparatus. For example, the retrieved instruction set may comprise one or more weights to instruct the processing module to in turn instruct a random number generator to
5 use the one or more weights to output an additional game result. The one or more weights affect the chances or probability of activation of further execution.

In example embodiments herein, a RNG (Random Number Generator) may be used for RNG processes. A RNG may provide randomly generated numbers from which, for
10 example, the outcomes of games are based upon. For example, the randomly generated numbers may be matched to a list of pre-determined numbers to determine whether the randomly generated numbers are a match. For example, if there is a match, a successful outcome is provided. The RNG is preferably independent of external factors. The RNG may generate random numbers without any input or preferably, with a preceding/previous random
15 number as an input to generate a subsequent random number.

In an example implementation, the RNG may be in the form of a crystal oscillator that instructs a number generator processor to periodically generate new random numbers. If there is a seed (or preceding/previous random number) available, the number generator may
20 use that seed as an input for the number generation.

In an example implementation, a weight may be provided to the number generator such that chances of a successful outcome are enhanced. For example, a weight may limit the range in which a random number may be generated from. For example, for a "1 in 18"
25 instruction, the random number generator is restricted or weighted to a range of 18 numbers. Firstly, a pre-determined number from the range of 18 numbers is designated as the activation number. The random number generator then randomly generates a number from the range of 18 numbers to determine if the randomly generated number matches the activation number.

30

For another example, for a "1 in 55" instruction, the random number generator is restricted or weighted to a range of 55 numbers. Firstly, a pre-determined number from the range of 55 numbers is designated as the activation number. The random number generator

then randomly generates a number from the range of 55 numbers to determine if the randomly generated number matches the activation number.

As such, due to the range of available numbers, a "1 in 55" instruction has a lower
5 chance of success or activation, as compared to a "1 in 18" instruction.

Fig. 1(a) is a schematic front view diagram of a front panel of a gaming apparatus/machine in an example embodiment. The gaming machine 100 comprises the front panel 101 that in turn comprises a top screen 102, a main screen 104, a player
10 transactions panel 106 and a player interaction panel 108. The gaming machine 100 may optionally comprise a printer outlet 110, a tower light 112 and a poster display portion 114. The gaming machine 100 allows a player to play one or more games installed or network-implemented by the gaming machine 100.

15 In the example embodiment, the top screen 102 may be used to display game celebrations, promotional/advertising information or other information that is typically not primarily related to progression of the games of the gaming machine. The main screen 104 is used to display the games of the gaming machine 100, for the player's attention. Typically, the main screen 104 is the screen that the player focuses on for playing the
20 games.

In the example embodiment, the player transactions panel 106 is provided for the player to transact with the gaming machine 100. The term "transactions" is taken to mean extraction of remaining points that the player possesses or insertion of points that the player
25 possesses, for example, in a magnetic identification card or a radio frequency identification (RFID) card or any stored-value card. The term should not be limited to monetary transactions. The player transactions panel 106 comprises a liquid crystal display (LCD) information screen 116 and a card insert slot 118. The card insert slot 118 is used for receiving, in the case of a card insert slot, an identification card containing the points and/or
30 identification belonging to the player. The points may be extracted from the card into the gaming machine 100 for playing the games installed in the gaming machine 100. Upon the player deciding to end play at the gaming machine 100, the player transactions panel 106 may store the latest/updated points information in the stored-value card. For example embodiments relating to using player identification cards, the player transactions panel 106

may retrieve points information of the player from an external server or database based on player identification. The retrieved information may then be used at the gaming machine 100 for playing the games. For such embodiments, upon the player deciding to end play at the gaming machine 100, the player transactions panel 106 may transmit the latest/updated points information to be stored on the external server or database based on the player identification. It will be appreciated that the card insert slot 118 may be in other forms depending on the type of identification card used by the player. For example, if the player is using a RFID card, the transactions module 118 may be a RFID reader/writer. The LCD information screen 116 is used to display e.g. the points information contained in the card.

The player interaction panel 108 comprises push buttons e.g. 120 provided to allow the player to actuate the buttons e.g. 120 for interacting with the games being played on the gaming machine 100. For example, the player may use the buttons e.g. 120 to make player selections being displayed on the main screen 104. For example, the player may use the buttons e.g. 120 to make a player input. In an alternative embodiment, the push buttons e.g. 120 may be replaced by a touch-sensitive screen that corresponds to the display on the main screen 104 to allow the player to interact with the games using touch commands. This may be in the form of a touch sensitive membrane with switch panels each corresponding to a display position of a display on the main screen 104.

A bill validator 122 may be provided for a player to use paper money to buy points for playing the games of the gaming machine 100. This is similar to, for example, using paper money at a vending machine to buy drinks/food.

It will be appreciated that although a card-in (using the card insert slot 118) and bill-in (using the bill validator 122) has been discussed above, the gaming machine is not limited as such and may comprise mechanisms to allow coin-in, key-in, ticket-in etc. for playing the games in the gaming machine.

It will be appreciated that the main screen 104 may be in the form of a touch-sensitive screen that may complement or replace the player interaction panel 108. The touch-sensitive screen may be a capacitive-type sensing screen, pressure-type sensing screen or the like. That is, the main screen 104 may be a touch-sensitive screen that

allows the player to interact with the gaming machine 100 using touch commands. For example, the player may use touch commands to make a player input.

In the example embodiment, the printer outlet 110 may be provided for the gaming machine 100 to output information in printed form to the player. For example, the gaming machine 100 may print a sticker for the player. The gaming machine 100 may also print a receipt or record of the points transaction for the player. The tower light 112 may be provided to light up during game celebrations. This may attract the attention of spectators or the player. The tower light 112 may also be used for highlighting technical issues, requesting assistance or service etc. The poster display portion 114 may be provided for e.g. game information to be displayed.

In the example embodiment, the front panel 101 may be opened or detached in whole or in part from the gaming machine 100 body to allow, for example, maintenance on the circuits or components encased in the gaming machine 100.

Fig. 1(b) is a schematic front view diagram of the gaming apparatus/machine with the front panel opened in part from the gaming machine in the example embodiment. As shown, the front panel 101 is opened from the gaming machine 100, and opened in part containing the main screen 104 and the player transactions panel 106, to reveal the internal portion of the gaming machine 100.

The gaming machine 100 comprises a power supply unit 124 for powering the various components of the gaming machine 200. The power supply unit 124 is coupled to a main board circuits cage 126. The main board circuits cage 126 is used to contain and protect a game processing module 128. The game processing module 128 implements the games on the gaming machine and also implements game functions such as points/awards calculations. The game processing module 128 also drives visual contents, for example of the games, on the main screen 104 and, for example, audio content from the gaming machine 100. Speakers (not shown) are provided to output audio. Thus, the game processing module 128 may be a processor or a processing module/unit of the gaming machine 100.

In the example embodiment, the game processing module 128 is coupled to a random number generator 130 and a storage device 132. In an alternative example embodiment, the storage device 132 may be external to the gaming machine 100. In such an instance, the connection between the game processing module 128 and the storage device 132 may be by wired and/or wireless connections.

In the example embodiment, the storage device 132 is arranged to store a set of one or more pre-determined condition groups. Each pre-determined condition group is associated with an instruction set for instructing the game processing module 128 to perform a further action, for changing the state of the gaming machine 100.

In addition, the game processing module 128 is coupled to a player input module 134. The player input module 134 is coupled to one or more input actuators or members such as buttons e.g. 120 of a player interaction panel 108, or a touch screen input member of the main screen 104 etc.

The modules 128, 130, 132, 134 may be in the form of printed circuit boards comprising application-specific integrated circuits (ASIC) that may perform specific functions with inputs from components coupled to these modules.

In the example embodiment, the game processing module 128 facilitates implementation of one or more main/side games of the gaming machine 100 and facilitates the display of the one or more games on a display means of the gaming machine 100 such as the main screen 104. The game processing module 128 is configured to generate/operate a game display area showing the game in play. The generation/operation may be graphical such as a game display area generated/operated based on computer code or may be mechanical such as controlling mechanically rotatable reels, depending on implementation.

In the example embodiment, the player input module 134 is arranged to accept a player input for a game of the gaming machine 100. For example, the player input may be a player points input for playing a game. Thus, when the player input is a player points input, there is a value being input by the player, termed as player input value. Upon receipt of the player input, the game processing module 128 is arranged to instruct

the random number generator 130 to perform various functions, such as obtaining/outputting a game output result. If the game output result is a win for the player, a points win amount is an example of a value associated with a game output result for the player. It may also be provided that the value is not from a win of the game. In such an instance, even without a win of the game i.e. from the game output result, some points are still resultant from the game output result and awarded to the player as the value associated with the game output result.

In the example embodiment, the game processing module 128 is arranged to extract the player input and the value associated with the game output result. In the example embodiment, the game processing module 128 is arranged to combine the player input and the value associated with the game output result as a player condition group. For example, a player input value and a value associated with a game output result are a pair of values termed as a player condition group that is associated with the player.

In the example embodiment, the game processing module 128 is arranged to derive the player condition group if the game output result is positive such as a win for the game. For example, if the player wins the game after providing a player input value, a trigger signal is sent to the game processing module 128 to extract the value of the game win (game output result) for combination with the player input value such that the pair of values is grouped as the player condition group.

In the example embodiment, the game processing module 128 is arranged to compare the player condition group against the set of one or more pre-determined condition groups stored in the storage device 132. If it is determined that there is a match between the player condition group and at least one of the pre-determined condition groups, the game processing module 128 is arranged to retrieve the instruction set associated with each matched pre-determined condition group from the storage device 132. Subsequently, the game processing module 128 is arranged to access the retrieved instruction set to perform further processing.

In the example embodiment, the game processing module 128 is arranged to use the retrieved instruction set to instruct the random number generator 130 to output an additional game result.

In the example embodiment, the game processing module 128 may be triggered to perform additional game functions to change the state of the gaming machine 100 such as comprising, for example but not limited to, beginning an additional bonus game round for the player, providing a multiplier to the value of the game win, displaying media such as an attractive animation sequence etc.

That is, the additional game result is an extended game event upon a change in the state of the gaming machine 100.

10

The gaming machine 100 may optionally further comprise an interface circuit board 138 coupled to the game module 128, and a bill validator module 140 coupled to the game module 128. The bill validator module 140 comprises circuitry for implementing bill validation and counting. In the example embodiment, if a printer outlet 110 is provided, a printer 142 is also comprised in the gaming machine 100 for performing the printing functions.

15

It will be appreciated that the gaming machine 100 may further comprise other components that are not described here for clarity of illustration of the example embodiments.

20

The interface circuit board 138 may be optionally provided to communicate with a game control server (not shown) that may e.g. monitor the results of the games of the gaming machine 100, for example for logging results of main and/or side games of the gaming machine 100.

25

In such an example embodiment, a main or side game win that is awarded may trigger the game module 128 to instruct or inform the interface circuit board 138 that a favourable result has been obtained. The game control server may be informed via the interface circuit board 138.

30

In some example embodiments, the game control server (not shown) may e.g. communicate with the gaming machine 100, for example for informing of a winning instance of pool prize corresponding to a multiplied game win at the gaming machine 100. The communication with the game control server may be over a wired or wireless network.

Fig. 2 is a schematic block diagram illustrating a gaming machine/apparatus in an example embodiment. The gaming apparatus 200 comprises a game processing module 202. The processing module 202 is coupled to a player input module 204 for accepting a player input to play a game implemented on the gaming apparatus 200. The processing module 202 is further coupled to a random number generator 206. The processing module 202 is arranged to instruct the random number generator 206 to generate one or more random numbers. The processing module 202 is arranged to provide a game output result via a display component 208 to the player. In some examples, the game output result may be the final symbols and/or positions of a reel game.

In addition, the processing module 202 is coupled to a storage device 210. The storage device may store a set of one or more pre-determined condition groups. Each pre-determined condition group is associated with an instruction set. In some example embodiments, the storage device 210 may be external the gaming apparatus 200. In the example embodiment, the processing module 202 is further coupled to a comparator module 212.

In the example embodiment, the processing module 202 is capable of obtaining a value associated with the game output result. The value may be the total points awarded or total win amount for a game output result. For example, for a reel game, the total points awarded may be the total points that is a summation of all possible winning combinations. Alternatively or in addition, the value may be the points awarded or win amount for a specified subset of the game output result. For example, for a reel game, the points awarded for a specified subset of the game output result may be the points awarded for one symbol combination, notwithstanding that there may be other symbol combinations available from the game output result.

In the example embodiment, the processing module 202 is arranged to combine the player input and the value associated with the game output result as a player condition group. The processing module 202 may also use the comparator module 212 to compare or match the player condition group to the set of one or more pre-determined condition groups.

In the example embodiment, if the processing module 202 determines, via the comparator module 212, that the player condition group is a match to at least one pre-determined condition group from the set of one or more pre-determined condition groups, the processing module 202 retrieves from the storage device 210 the instruction set associated with each matched pre-determined condition group. In the example embodiment, the processing module 202 then reads and uses the retrieved instruction set. Based on the retrieved instruction set, the processing module 202 instructs the random number generator to generate one or more random numbers. By using the generated random numbers with the instruction set, the processing module 202 then outputs an additional game result via the display component 208. In the example embodiment, the state of the gaming apparatus is changed upon the usage of the retrieved instruction set. For example, the state may be changed from a gaming state to an animation state.

Some example embodiments are described illustratively with the following examples. For the purposes of the first three examples with reference to Figs. 3(a) to (c), an exemplary table (Table 1) is provided below to list out pre-determined condition groups or win classes associated with a game. In the table, a win class is categorised by the magnitude or value of a game win and the possible player input amounts or values for playing the game.

	<i>Win Class</i>	<i>Special Game Bonus Round Chance [A]</i>	<i>Magnification Chance [B]</i>	<i>Special Attract Animation Sequence Chance [C]</i>
WC1	Win amount 50->99 points & player input amount A	Nil	1 in 60.0	1 in 15.0
WC2	Win amount 100->349 points & player input amount A	1 in 3,000.0	1 in 55.0	1 in 18.0
WC3	Win amount 350->749 points & player input amount A	1 in 8,000.0	1 in 40.0	1 in 22.5
WC4	Win amount 750->1499 points & player input amount A	1 in 10,000.0	1 in 20.0	1 in 30.0
WC5	Win amount 50->99 points & player input amount B	1 in 1,000.0	1 in 20.0	1 in 10.0
WC6	Win amount 100->349 points & player input amount B	1 in 500.0	1 in 25.0	1 in 12.0
WC7	Win amount 350->749 points & player input amount B	1 in 800.0	1 in 30.0	1 in 15.0
WC8	Win amount 750->1499 points & player input amount B	1 in 1,500.0	1 in 30.0	1 in 20.0

Table 1

For Table 1, "Win amount 50-99 points" refers to a game win (or game output result value) from a game output result, and the game output result value is greater than or equals to 50 points but less than or equals to 99 points. For Table 1, if a game win is w and
 5 determined to fall within "Win Amount $M \rightarrow N$ ", then $M \leq w \leq N$.

For Table 1, depending on the game implemented on the gaming machine, a player input amount A may be, for example, equal to 50 player game points and a player input amount B may be, for example, equal to 100 player game points. Preferably, a player input
 10 amount is one of a plurality of pre-determined total player input amounts provided and associated with a game. Alternatively, it is possible that the player input amounts provided in the win classes may be pre-determined as ranges, similar to the win amounts.

The exemplary columns [A], [B] and [C] contain an instruction set associated with
 15 each win class (or pre-determined condition group). For example, the instruction set comprises weights for a random number generator to determine activation of extended game events. For example, for win class 2, column [A] provides a "1 in 3,000" chance of activating a Special Game Bonus Round event, column [B] provides a "1 in 55" chance of activating a Magnification of the main game win event and column [C] provides a "1 in 18" chance of
 20 activating a Special Attract Animation Sequence event.

In a particular example, the weights in all columns [A] to [C] are provided as instructions to a random number generator to determine whether any of the events are activated. It will be appreciated that in another example, not all columns [A] to [C] are used.
 25 For example, only the weight from one column may be used to provide as instructions to the random number generator. Once activated, the processing module of the gaming machine instructs the processing for each activated event. For example, for a "1 in 18" instruction, the random number generator is restricted or weighted to a range of 18 numbers and a pre-determined number from the range is designated as the activation number. The random
 30 number generator then randomly generates a number to determine if the randomly generated number matches the activation number.

For example, Table 1 may produce a special attract animation sequence (column [C]) with different theoretical frequencies depending on different win classes. For example, Table

1 may provide a magnification factor to standard win table win amounts with different theoretical frequencies depending on different win classes. The magnification (column [B]) may take the form of a common multiplier, e.g. all wins on screen are doubled, or all wins on screen are multiplied by a factor of 5 etc. The magnification may also be a fixed bonus
 5 award/prize of 100 or 200 points. The bonus award may be a random multiple of the player input amount. For example, Table 1 may also change the rate of special game bonus rounds appearing to a player based on different win classes. The special game bonus round (column [A]) may be designed to have low probability, compared to other events. It will be appreciated that the events under columns [A] to [C], e.g. special attract animation sequence,
 10 magnification, and special game bonus rounds, are some non-limiting examples of an extended game event.

Therefore, with reference to Table 1 for example, chance values or probabilities, for events, e.g. under columns [A], [B], and [C], for an instruction set may be set arbitrarily even
 15 if provided that the overall game return-to-player (RTP) is within established or allowed limits. Changing the chance values under the instructions sets amends the behaviour of a processing algorithm of the gaming machine to determine which events are more or less probable and hence, changing the theoretical RTP of the main game (within the allowed limits). In this way, a game designer may advantageously find it relatively easier to construct
 20 variations to a main game with extended events without changing other aspects of the game play.

Fig. 3(a) is a schematic drawing illustrating a screenshot 300 of an example main game output result in an example embodiment. The main game may be implemented on a
 25 gaming machine substantially identical to the gaming machines 100, 200 respectively of Figs. 1(a), (b) and 2. The main game may utilise Table 1 as exemplarily provided.

In the screenshot 300, the main game output result is displayed at a main game display portion 302. The player's accumulated points is displayed at a player account display
 30 portion 304. The player account may be synchronised to the player's account on a player's identification card or on an electronic database.

In the example embodiment, a player input is displayed at a player input display portion 306. The player may input an amount of points from the player's account to play the

main game. The player input may be input via a player input module (compare e.g. player input module 134 of Fig. 1(b)).

After the main game output result is derived and displayed at the main game display portion 302, in the example embodiment, if the player has a win of the main game, the main game output result value is displayed at game output result value display 308. Determination of the main game output result may be via a game processing module instructing a random number generator (compare e.g. game processing module 128 and random number generator 130 respectively of Fig. 1(b)). The main game output result value may be based on a wins table using the main game output result. In the example embodiment, the main game output result value is a win points amount awarded to the player if the player has a win of the main game.

With reference to Table 1, a win class may be determined. The game processing module combines the player input amount and the main game output result value as a player condition group. In the example embodiment, the player condition group is a pair of values. The game processing module proceeds to match the player condition group to the set of one or more pre-determined condition groups, i.e. the win classes of Table 1. The game processing module may access Table 1 from a storage device. As the player input amount is 50 points, it is determined that the player input amount is player input amount A. The main game output result value is 1000 points. Thus, it is determined that the win amount is greater than or equal to 750 but less than or equal to 1499. Thus, the game processing module determines that there is a valid/matched win class, i.e. WC4.

The game processing module then retrieves an instruction set associated with the matched win class from the storage device. Based on the probability/chance values of WC4 under columns [A], [B] and [C], the game processing module instructs the random number generator to determine which, if any, of the extended game events, for example, Special Game Bonus Round, Magnification, or Special Attract Animation Sequence is executed. The one or more extended game event executed is an additional game result, resulting in an additional transformation of the state of the gaming apparatus/machine. It will be appreciated that it is possible that no extended game event is executed.

Fig. 3(b) is a schematic drawing illustrating a screenshot 312 of another example main game output result in the example embodiment.

In the screenshot 312, the main game output result is displayed at the main game display portion 302. The player's accumulated points is displayed at the player account display portion 304. In the example embodiment, a player input is displayed at a player input display portion 306.

After the main game output result is derived and displayed at the main game display portion 302, in the example embodiment, if the player has a win of the main game, the main game output result value is displayed at game output result value display 308. Determination of the main game output result may be via a game processing module instructing a random number generator (compare e.g. game processing module 128 and random number generator 130 respectively of Fig. 1(b)). The main game output result value may be based on a wins table using the main game output result. In the example embodiment, the main game output result value is a win points amount awarded to the player if the player has a win of the main game.

With reference to Table 1, a win class may be determined. The game processing module combines the player input amount and the main game output result value as a player condition group. In the example embodiment, the player condition group is a pair of values. The game processing module proceeds to match the player condition group to the set of one or more pre-determined condition groups, i.e. the win classes of Table 1. The game processing module may access Table 1 from a storage device. As the player input amount is 50 points, it is determined that the player input amount is player input amount A. The main game output result value is 200 points. Thus, the game processing module determines that there is a valid/matched win class, i.e. WC2.

The game processing module then retrieves an instruction set associated with the matched win class from the storage device. Based on the probability/chance values of WC2 under columns [A], [B] and [C], the game processing module instructs the random number generator to determine which, if any, of the extended game events, for example, Special Game Bonus Round, Magnification, or Special Attract Animation Sequence is executed. The

one or more extended game event executed is an additional game result, resulting in an additional transformation of the state of the gaming apparatus/machine.

Fig. 3(c) is a schematic drawing illustrating a screenshot 316 of another example
5 main game output result in the example embodiment.

In the screenshot 316, the main game output result is displayed at a main game display portion 302. The player's accumulated points is displayed at a player account display portion 304.

10

In the example embodiment, a player input is displayed at a player input display portion 306. The player may input an amount of points from the player's account to play the main game.

15 After the main game output result is derived and displayed at the main game display portion 302, in the example embodiment, if the player has a win of the main game, the main game output result value is displayed at game output result value display 308. Determination of the main game output result may be via a game processing module instructing a random number generator (compare e.g. game processing module 128 and random number
20 generator 130 respectively of Fig. 1(b)). The main game output result value may be based on a wins table using the main game output result. In the example embodiment, the main game output result value is a win points amount awarded to the player if the player has a win of the main game.

25 With reference to Table 1, a win class may be determined. The game processing module combines the player input amount and the main game output result value as a player condition group. In the example embodiment, the player condition group is a pair of values. The game processing module proceeds to match the player condition group to the set of one or more pre-determined condition groups, i.e. the win classes of Table 1. The game
30 processing module may access Table 1 from a storage device.

As the player input amount is 100 points, it is determined that the player input amount is player input amount B. The main game output result value is 200 points. Thus, the game processing module determines that there is a valid/matched win class, i.e. WC6.

In this example, it is noted that even though the win amount (200) is the same as in the example illustrated with Fig. 3(b), the win class is different (or WC6 versus WC2) due to the differing player input.

5

The game processing module then retrieves an instruction set associated with the matched win class from the storage device. Based on the probability/chance values of WC6 under columns [A], [B] and [C], the game processing module instructs the random number generator to determine which, if any, of the extended game events, for example, Special
10 Game Bonus Round, Magnification, or Special Attract Animation Sequence is executed. The one or more extended game event executed is an additional game result, resulting in an additional transformation of the state of the gaming apparatus/machine.

In this example, it is noted that even though the win amount (200) is the same as in
15 the example illustrated with Fig. 3(b), with the different win classes (or WC6 versus WC2) due to the differing player input, the instruction set retrieved is different, i.e. the probability/chances values of columns [A], [B], [C] retrieved for the game processing module to instruct the random number generator are significantly higher for WC6.

In the above examples, illustrated with reference to Figs. 3(a) to (c), the main game
20 output result (as displayed at the main game display portion 302) is not combined as part of the player condition group. In a following example embodiment, a subset value of the main game output result value may be combined with the player input and the main game output result value to form a player condition group.

25

In an example embodiment, the one or more pre-determined condition groups are further associated with particular game conditions arising from game output results.

For example, for a reel game, the total win for a single game is typically the addition
30 of a plurality of individual combination prize values from the game's pay table. Thus, for a reel game example, win classes may be further restricted by particular symbols and respective winning combinations found within the reel game. For example, a win class may have a condition that a part of the total win is formed from a subset of the total winning combinations possible in the reel game.

In the example embodiment, a main game may have winning combinations formed with symbols X, Y, Z, a, b, g as follows in Table 2:

X . X . X . - . - (3 of a kind X)	a . a . a . - . - (3 of a kind a)
X . X . X . X . - (4 of a kind X)	a . a . a . a . - (4 of a kind a)
X . X . X . X . X (5 of a kind X)	a . a . a . a . a (5 of a kind a)
Y . Y . Y . - . - (3 of a kind Y)	b . b . b . - . - (3 of a kind b)
Y . Y . Y . Y . - (4 of a kind Y)	b . b . b . b . - (4 of a kind b)
Y . Y . Y . Y . Y (5 of a kind Y)	b . b . b . b . b (5 of a kind b)
Z . Z . Z . - . - (3 of a kind Z)	g . g . g . - . - (3 of a kind g)
Z . Z . Z . Z . - (4 of a kind Z)	g . g . g . g . - (4 of a kind g)
Z . Z . Z . Z . Z (5 of a kind Z)	g . g . g . g . g (5 of a kind g)

Table 2

For the purposes of the following example, an exemplary table (Table 3) is provided below to list out pre-determined condition groups or win classes associated with the main game. In the table, a win class is categorised by the magnitude or value of a game win combination, the possible player input amounts or values for playing the game, and thirdly, particular winning combinations derived from the main game.

Win Class				
WC1	Win 50->99	from X, Y, and/or Z combinations	+ Player input	amount A
WC2	Win 100->499	from X, Y, and/or Z combinations	+ Player input	amount A
WC3	Win 250->499	from a, b, and/or g combinations	+ Player input	amount A
WC4	Win 500->1499	from X, Y, Z, a, b, and/or g comb's	+ Player input	amount A
WC5	Win 50->99	from X, Y, and/or Z combinations	+ Player input	amount B
WC6	Win 100->499	from X, Y, and/or Z combinations	+ Player input	amount B
WC7	Win 250->499	from a, b, and/or g combinations	+ Player input	amount B
WC8	Win 500->1499	from X, Y, Z, a, b, and/or g comb's	+ Player input	amount B

Table 3

Fig. 4(a) is a schematic drawing illustrating a screenshot 400 of an example main game output result in an example embodiment. The main game may be implemented on a gaming machine substantially identical to the gaming machines 100, 200 respectively of Figs. 1(a), (b) and 2. The main game may utilise Table 3 as exemplarily provided. In the example,
 5 the main game is implemented as a reel game.

In the screenshot 400, the main game output result is displayed at a main game display portion 402. The player's accumulated points is displayed at a player account display portion 404. The player account may be synchronised to the player's account on a player's
 10 identification card or on an electronic database.

In the example embodiment, a player input is displayed at a player input display portion 406. The player may input an amount of points from the player's account to play the main game. The player input may be input via a player input module (compare e.g. player
 15 input module 134 of Fig. 1(b)).

After the main game output result is derived and displayed at the main game display portion 402, in the example embodiment, if the player has a win of the main game, the main game output result value is displayed at game output result value display 408. Determination
 20 of the main game output result may be via a game processing module instructing a random number generator (compare e.g. game processing module 128 and random number generator 130 respectively of Fig. 1(b)). The main game output result value may be based on a wins table using the main game output result. In the example embodiment, the main game output result value is a win points amount awarded to the player if the player has a win
 25 of the main game.

With reference to the main game output result itself, in the example, the result provides three diamond symbols and five oval shaded symbols. For the ease of illustration, the other reel positions are shown empty but it will be appreciated that the other reel
 30 positions may hold other symbols that are not the subject of discussion for this example. Figs. 4(b)(i) and (ii) show respective win tables for the diamond and the oval shaded symbols.

From Fig. 4(b)(i), for a player input of 50 points, three diamond symbols are associated with an award of 200 points. From Fig. 4(b)(ii), for a player input of 50 points, five oval shaded symbols are associated with an award of 100 points. Thus, the total main game output result value displayed at the game output result value display 408 is 300 points.

5

In the example, the game processing module combines the player input amount and the respective awards from the different symbols as different player condition groups. As the player input amount is 50 points, it is determined that the player input amount is player input amount A.

10

With reference to Table 3, a win class may be determined. In the example, oval shaded symbols are designated to be "b" while diamond symbols are designated to be "X". Thus, for example, a first player condition group is an award amount from a "b" combination combined with player input amount A; while a second player condition group is an award amount from a "X" combination combined with player input amount A.

15

Therefore, the example embodiment is different from the examples illustrated with reference to Figs. 3(a) to (c). In the example embodiment, the value associated with the game output result is not the total game output result value but rather, is a subset value of the the total game output result value.

20

In the example embodiment, the game processing module proceeds to match each player condition group to the set of one or more pre-determined condition groups, i.e. the win classes of Table 3. The game processing module may access Table 3 from a storage device.

25

In the example, as it is determined that the player input amount is player input amount A, only WC1, WC2, WC3 and WC4 may be likely matches. Next, for comparing/matching the first player condition group, i.e. an award amount of 100 points for "b" combinations (for the oval shaded symbol), the game processing module determines that there is no match to either WC3 or WC4 as the respective pre-determined conditions are that there is an award of points between 250 to 499 for WC3 and between 500 to 1499 for WC4. WC1 and WC2 do not have pre-determined conditions for "b" combinations. Therefore, it is determined that there are no matches for the first player condition group.

30

For comparing/matching the second player condition group, i.e. an award amount of 200 points for "X" combinations (for the diamond symbol), the game processing module determines that there is no match to WC3 as WC3 does not have pre-determined conditions for "X" combinations. From WC1, WC2 and WC4, the game processing module determines
 5 that there is a match to WC2 as the pre-determined condition of WC2 is that there is an award of points between 100 to 499 for "X" combinations. Therefore, it is determined that there is one match for the second player condition group.

Thus, the game processing module determines that there is a valid/matched win
 10 class, i.e. WC2.

The game processing module then retrieves an instruction set associated with the matched win class from the storage device. For the ease of illustration, the instruction set is not shown in Table 3. It will be appreciated that the instruction set may be similar in form as
 15 described with reference to Table 1. In the example, based on the retrieved probability/chance values associated with WC2, the game processing module instructs the random number generator to determine which, if any, of the extended game events, for example, Special Game Bonus Round, Magnification, or Special Attract Animation Sequence is executed. The one or more extended game event executed is an additional
 20 game result, resulting in an additional transformation of the state of the gaming apparatus/machine.

Therefore, as illustrated in the example, in general, the example embodiments described may also be modified such that there can be one or more win classes being valid
 25 at the same time. In such a scenario, the game processing module may retrieve multiple instruction sets. Thus, there is a chance of multiple extended game events at once.

Fig. 5 is a schematic flowchart for illustrating a method of executing an instruction set based on matching of a player condition group in an example embodiment. At step 502, a
 30 player begins play of a main game at a gaming machine/apparatus. The player enters a player input to the gaming apparatus via a player input module. At step 504, a game processing module of the gaming apparatus instructs a random number generator to execute a random number generator (RNG) process for obtaining a game output result. At

step 506, the game processing module determines whether the player is awarded with a game win from the game output result.

In the example embodiment, if it is determined that the player is not awarded with a game win at step 506, at step 508, the game processing module polls for a player input on whether the player elects to play a new round of the main game. On the other hand, if it is determined that the player is awarded with a game win at step 506, at step 510, the game processing module determines whether one or more player condition groups is a match to at least one pre-determined condition group. If it is determined that there is no match between one or more player condition groups to at least one pre-determined condition group at step 510, the game processing module loops to step 508.

In the example embodiment, if it is determined that there is a match between one or more player condition groups to at least one pre-determined condition group at step 510, at step 512, the game processing module retrieves an instruction set associated with each matched pre-determined condition group. In the example embodiment, the game processing module instructs the random number generator to execute a random number generator (RNG) process to generate one or more new random numbers. In the example embodiment, at step 514, the game processing module determines whether the generated one or more new random numbers of step 512, with the instruction set, corresponds to an extended game event.

If it is determined that the generated one or more new random numbers does not correspond to an extended game event at step 514, the game processing module loops to step 508. On the other hand, if it is determined that the generated one or more new random numbers corresponds to an extended game event at step 514, at step 516, the game processing module executes the additional game result or the extended game event. After step 516, the game processing module proceeds, at step 508, to poll for a player input on whether the player elects to play a new round of the main game.

Fig. 6 is a schematic flowchart for illustrating a method of creating one or more pre-determined condition groups in an example embodiment. At step 602, a pre-determined condition group or termed as a win class is created. At step 604, a first condition is inserted for the win class. For the first condition, a game output result value range, e.g. a win amount

range, is determined. For example, a minimum value for the range may be "g" while a maximum value of the range may be "h". Compare, for example, WC1 of Table 1.

At step 606, it is determined whether the game output result value of the first
 5 condition is to be restricted to a specified subset of the game output result. For example, compare the example illustrated with reference to Figs. 4(a) to (b)(ii). If it is determined that the game output result value of the first condition is to be restricted to a specified subset of the game output result at step 606, at step 608, a specific subset of the game output result is chosen to restrict the win class. Otherwise, if it is determined that the game output result
 10 value of the first condition is not restricted to a specified subset of the game output result at step 606, at step 610, it is determined whether all win classes or pre-determined condition group have been created for the main game.

If there are still additional win classes to be created, the process loops to step 602.
 15 Otherwise, the process is ended at step 612.

With the example illustrated in Fig. 6, it will be appreciated that win classes may also be modified substantially similarly. For example, win classes may be modified to affect the frequency of e.g. extended game events. In addition, it will be appreciated that instruction
 20 sets may also be associated with the created win classes. Furthermore, it will be appreciated that instruction sets may also be modified.

Fig. 7 is a schematic flowchart 700 for illustrating a process of retrieval of an instruction set and changing the state of a gaming apparatus in an example embodiment.
 25 In other example embodiments, the process may be stored as instructions on a non-transitory storage medium. At step 702, a player input is provided to the gaming apparatus via a player input module. At step 704, a game output result is output based on a random number generator. At step 706, the player input and a value associated with the game output result are combined by a processing module as a player condition group. At step 708, the
 30 processing module compares or matches the player condition group to a set of one or more pre-determined condition groups. At step 710, if the player condition group is a match to at least one pre-determined condition group from said set of one or more pre-determined condition groups, the processing module retrieves an instruction set associated with the matched at least one pre-determined condition group from a storage device. At step 712, the

processing module uses the retrieved instruction set to instruct the random number generator such that an additional game result is output at the gaming apparatus.

Fig. 8 is a schematic diagram illustrating a plurality of gaming apparatus in a network in an example embodiment. The network 802 comprises a plurality of gaming apparatus e.g. 804, 806 network-linked to a network server 808. The network links or communication links may be wired or wireless. The gaming apparatus e.g. 804, 806 may each function substantially similarly to the gaming apparatus as described with reference to any of Figs. 1(a), (b) and 2. The network server 808 implements server functions for the gaming apparatus e.g. 804, 806. For example, the network server 808 carries out logging functions for the games performed at the gaming apparatus e.g. 804, 806.

The network 802 further comprises a storage server 810 connected to the network server 808. The storage server 810 is coupled via a communication link to the network server 808.

In the example embodiment, the storage server 810 stores a set of one or more pre-determined condition groups. In addition, the storage server 810 also stores an instruction set associated with each of the pre-determined condition groups.

In the example embodiment, the storage server 810 may also function as a pool server. In such a function, the storage server 810 accumulates a pool of prizes for awarding of prizes for players at the gaming apparatus e.g. 804, 806 who have a related extended event awarded. For example, a player may have a Magnification extended event that may have a pool prize awarded. The accumulation of the pool may be based on points collected from the gaming apparatus e.g. 804, 806 or prizes contributed by sponsors. When a Magnification extended event is executed at the respective gaming apparatus e.g. 804, 806, a portion, or the whole, of the prizes stored in the pool server 810 is discharged to the respective gaming apparatus e.g. 804, 806. For example, 50% of the prizes may be awarded to the respective gaming apparatus.

Thus, additional entertainment may be provided to the players at the gaming apparatus e.g. 804, 806 via additional prizes awarded by the pool server 810, regardless of the progress or results of the main games being played at the gaming apparatus e.g. 804, 806.

In the example embodiment, the prizes may include, but are not limited to, gaming points, loyalty points, bonus points, bonus items etc. Awarding of the prizes may be via a number of methods. For example, in one method, the network server 808 transmits the ID numbers of the gaming apparati e.g. 804, 806 that have players winning their side games to an operator and the operator presents the respective prizes to the players at the respective gaming apparati e.g. 804, 806. Alternatively, bonus points may be respectively awarded electronically by the network server 808 to the players at the gaming apparati e.g. 804, 806.

In the above example embodiments, the gaming apparati are described as being in the form of arcade machines. However, it will be appreciated that the gaming apparati may include other electronic devices.

Fig. 9 shows a schematic drawing of a game system 900 according to an example embodiment. The system 900 comprises a plurality of gaming apparati 902, 904, 906, each coupled to an game network server or unit 908. The gaming apparati 902, 904, 906 and the game unit 908 communicate via respective network interfaces provided on the gaming apparati and the game unit. The gaming apparati 902, 904, 906 may be implemented in a variety of different ways. For example, one or more of the gaming apparati 902 are implemented as physical gaming machines such as arcade gaming machines, slot machines, electronic gaming tables or the like. One or more other gaming gaming apparati 904 are implemented as virtual gaming machines on desktop or tablet computing devices. One or more other gaming apparati 906 are implemented as virtual gaming machines on portable handheld devices such as mobile phones, Personnel Digital Assistants (PDAs) or the like. The virtual gaming machines 904, 906 may be implemented via Wi-Fi, the Internet, interactive TV or other service networks. The coupling between the game unit 908 and the respective gaming apparati 902, 904, 906 may be implemented in a variety of different ways, including via Wi-Fi, the Internet, or via other wired or wireless networks.

The game unit 908 comprises a database 910 for storing data for conducting one or more main games and other information such as information identifying the respective gaming apparati 902, 904, 906. The database 910 also stores a set of one or more pre-determined condition groups. In addition, the database 910 also stores an instruction set associated with each of the pre-determined condition groups.

Further, the game unit 908 comprises a processor unit/module 912 coupled to the database 910. The processor module 912 is capable of awarding prizes to players on the respective gaming apparati 902, 904, 906, e.g. based on the information stored in the database 910. The processor module 912 is coupled to a pool database 914 comprising a prize pool.

During execution of the one or more main games, the processor module 912 is capable of instructing play of the main games at the plurality of gaming apparati 902, 904, 906. In addition, the processor module 912 is capable of awarding a portion, or a whole, of the prize pool from the pool database 914 to players at respective gaming apparati 902, 904, 906.

The processor module 912 awards the pool prizes based on results of e.g. extended game events and independent of the main games implemented on the respective gaming apparati 902, 904, 906. It will be appreciated that the game system 900 thus provides a distributed gaming environment with a centralized game database for awarding prizes to players on the respective gaming apparati 902, 904, 906.

In distinguishing the described example embodiments, the inventors have recognised that some current gaming apparati/machines require specific combinations of game symbols (or specific game output results) in order to activate special game events for players. Other current gaming apparati/machines include features to activate randomly game events for players.

Furthermore, for current gaming apparati/machines, activated game events, randomly or through specific game output results, are typically independent of the game results of the underlying/primary/main game.

In contrast, example embodiments described herein are not significantly independent of the game results of the underlying/primary/main game and may activate one or more extended game events such as special bonus rounds etc.

In addition, example embodiments described herein also may provide extended game events without a change to the underlying/primary/main game result probabilities. That is, the random number generator process for the underlying/primary/main game need not be changed. It is recognised that a game designer may only need to change an instruction set associated with a predetermined condition group or the combination for the predetermined condition group to change probabilities of extended game events, thus making calculating of game probabilities easier.

Therefore, in example embodiments described herein, game features/events may be produced using a unique mechanism based on pre-determined condition groups. In some examples described, such pre-determined condition groups are termed win classes or categories. Thus, a relatively convenient way of creating additional or new variations to provide extended game events is provided. Time and effort may be saved for a game designer when producing games. For example, the game designer may change a progression of a game without modifying the game itself. For example, for a typical reel game, a game designer typically needs to modify slot reels and/or make win table adjustments for the reel game. In contrast, in example embodiments described herein, extended game events may occur based on predetermined win classes associated with a game.

Different example embodiments can be implemented in the context of data structure, program modules, program and computer instructions executed in a computer implemented environment. A general purpose computing environment is briefly disclosed herein. One or more example embodiments may be embodied in one or more computer systems, such as is schematically illustrated in Fig. 10.

One or more example embodiments may be implemented as software, such as a computer program being executed within a computer system 1000, and instructing the computer system 1000 to conduct a method of an example embodiment.

The computer system 1000 comprises a computer unit 1002, input modules such as a keyboard 1004 and a pointing device 1006 and a plurality of output devices such as a display 1008, and printer 1010. A user can interact with the computer unit 1002 using the above devices. The pointing device can be implemented with a mouse, track ball, pen device

or any similar device. One or more other input devices (not shown) such as a joystick, game pad, satellite dish, scanner, touch sensitive screen or the like can also be connected to the computer unit 1002. Such input devices may function as player input devices/modules arranged to accept a player input. The display 1008 may include a cathode ray tube (CRT),
5 liquid crystal display (LCD), field emission display (FED), plasma display or any other device that produces an image that is viewable by the user.

The computer unit 1002 can be connected to a computer network 1012 via a suitable transceiver device 1014, to enable access to e.g. the Internet or other network systems such
10 as Local Area Network (LAN) or Wide Area Network (WAN) or a personal network. The network 1012 can comprise a server, a router, a network personal computer, a peer device or other common network node, a wireless telephone or wireless personal digital assistant. Networking environments may be found in offices, enterprise-wide computer networks and home computer systems etc. The transceiver device 1014 can be a modem/router unit
15 located within or external to the computer unit 1002, and may be any type of modem/router such as a cable modem or a satellite modem.

It will be appreciated that network connections shown are exemplary and other ways of establishing a communications link between computers can be used. The existence of any
20 of various protocols, such as TCP/IP, Frame Relay, Ethernet, FTP, HTTP and the like, is presumed, and the computer unit 1002 can be operated in a client-server configuration to permit a user to retrieve web pages from a web-based server. Furthermore, any of various web browsers can be used to display and manipulate data on web pages.

25 The computer unit 1002 in the example comprises a processor 1018, a Random Access Memory (RAM) 1020 and a Read Only Memory (ROM) 1022. The ROM 1022 can be a system memory storing basic input/ output system (BIOS) information. The RAM 1020 can store one or more program modules such as operating systems, application programs and program data.

30

The processor 1018 may function as a processing module to combine a player input and a value associated with a game output result as a player condition group. The processor 1018 may also perform as, or instruct functions of, a comparator to compare/match the player condition group to a set of one or more pre-determined condition groups. The

processor 1018 may also perform as, or instruct functions, of a random number generator to output a game output result. The RAM 1020 may store the set of one or more pre-determined condition groups and instruction sets, each instruction set associated with each pre-determined condition groups.

5

The computer unit 1002 further comprises a number of Input/Output (I/O) interface units, for example I/O interface unit 1024 to the display 1008, and I/O interface unit 1026 to the keyboard 1004. The components of the computer unit 1002 typically communicate and interface/couple connectedly via an interconnected system bus 1028 and in a manner known
10 to the person skilled in the relevant art. The bus 1028 can be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures.

It will be appreciated that other devices can also be connected to the system bus
15 1028. For example, a universal serial bus (USB) interface can be used for coupling a video or digital camera to the system bus 1028. An IEEE 1394 interface may be used to couple additional devices to the computer unit 1002. Other manufacturer interfaces are also possible such as FireWire developed by Apple Computer and i.Link developed by Sony. Coupling of devices to the system bus 1028 can also be via a parallel port, a game port, a
20 PCI board or any other interface used to couple an input device to a computer. It will also be appreciated that, while the components are not shown in the figure, sound/audio can be recorded and reproduced with a microphone and a speaker. A sound card may be used to couple a microphone and a speaker to the system bus 1028. It will be appreciated that several peripheral devices can be coupled to the system bus 1028 via alternative interfaces
25 simultaneously.

An application program can be supplied to the user of the computer system 1000 being encoded/stored on a data storage medium such as a CD-ROM or flash memory carrier. The application program can be read using a corresponding data storage medium drive of a
30 data storage device 1030. The data storage medium is not limited to being portable and can include instances of being embedded in the computer unit 1002. The data storage device 1030 can comprise a hard disk interface unit and/or a removable memory interface unit (both not shown in detail) respectively coupling a hard disk drive and/or a removable memory drive to the system bus 1028. This can enable reading/writing of data. Examples of removable

memory drives include magnetic disk drives and optical disk drives. The drives and their associated computer-readable media, such as a floppy disk provide nonvolatile storage of computer readable instructions, data structures, program modules and other data for the computer unit 1002. It will be appreciated that the computer unit 1002 may include several of
5 such drives. Furthermore, the computer unit 1002 may include drives for interfacing with other types of computer readable media.

The application program is read and controlled in its execution by the processor 1018. Intermediate storage of program data may be accomplished using RAM 1020. The method(s)
10 of the example embodiments can be implemented as computer readable instructions, computer executable components, or software modules. One or more software modules may alternatively be used. These can include an executable program, a data link library, a configuration file, a database, a graphical image, a binary data file, a text data file, an object file, a source code file, or the like. When one or more computer processors execute one or
15 more of the software modules, the software modules interact to cause one or more computer systems to perform according to the teachings herein.

The operation of the computer unit 1002 can be controlled by a variety of different program modules. Examples of program modules are routines, programs, objects,
20 components, data structures, libraries, etc. that perform particular tasks or implement particular abstract data types. The example embodiments may also be practiced with other computer system configurations, including handheld devices, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, personal digital assistants, mobile telephones and the like.
25 Furthermore, the example embodiments may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a wireless or wired communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

30 Further to the above, different example embodiments can be implemented in the context of data structure, program modules, program and computer instructions executed in a communication device. An exemplary communication device is briefly disclosed herein. One or more example embodiments may be embodied in one or more communication devices e.g. 1100, such as is schematically illustrated in Fig. 11.

One or more example embodiments may be implemented as software, such as a computer program being executed within a communication device 1100, and instructing the communication device 1100 to conduct a method of an example embodiment.

5

The communication device 1100 comprises a processor module 1102, an input module such as a touchscreen interface or a keypad 1104 and an output module such as a display 1106 on a touchscreen.

10

The processor module 1102 is coupled to a first communication unit 1108 for communication with a cellular network 1110. The first communication unit 1108 can include, but is not limited to, a subscriber identity module (SIM) card loading bay. The cellular network 1110 can, for example, be a 3G or 4G network.

15

The processor module 1102 is further coupled to a second communication unit 1112 for connection to a network 1114. For example, the second communication unit 1112 can enable access to e.g. the Internet or other network systems such as Local Area Network (LAN) or Wide Area Network (WAN) or a personal network. The network 1114 can comprise a server, a router, a network personal computer, a peer device or other common network node, a wireless telephone or wireless personal digital assistant. Networking environments may be found in offices, enterprise-wide computer networks and home computer systems etc. The second communication unit 1112 can include, but is not limited to, a wireless network card or an ethernet network cable port. The second communication unit 1112 can also be a modem/router unit and may be any type of modem/router such as a cable-type
20 modem or a satellite-type modem.
25

30

It will be appreciated that network connections shown are exemplary and other ways of establishing a communications link between computers can be used. The existence of any of various protocols, such as TCP/IP, Frame Relay, Ethernet, FTP, HTTP and the like, is presumed, and the communication device 1100 can be operated in a client-server configuration to permit a user to retrieve web pages from a web-based server. Furthermore, any of various web browsers can be used to display and manipulate data on web pages.

The processor module 1102 in the example includes a processor 1116, a Random Access Memory (RAM) 1118 and a Read Only Memory (ROM) 1120. The ROM 1120 can be a system memory storing basic input/ output system (BIOS) information. The RAM 1118 can store one or more program modules such as operating systems, application programs
5 and program data.

The processor 1116 may function as a processing module to combine a player input and a value associated with a game output result as a player condition group. The processor 1116 may also perform as, or instruct functions of, a comparator to compare/match the
10 player condition group to a set of one or more pre-determined condition groups. The processor 1116 may also perform as, or instruct functions of, a random number generator to output a game output result. The RAM 1118 may store the set of one or more pre-determined condition groups and instruction sets, each instruction set associated with each pre-determined condition groups.

15

The processor module 1102 also includes a number of Input/Output (I/O) interfaces, for example I/O interface 1122 to the display 1106, and I/O interface 1124 to the keypad 1104.

20 The components of the processor module 1102 typically communicate and interface/couple connectedly via an interconnected bus 1126 and in a manner known to the person skilled in the relevant art. The bus 1126 can be any of several types of bus structures including a memory bus or memory controller, a peripheral bus, and a local bus using any of a variety of bus architectures.

25

It will be appreciated that other devices can also be connected to the system bus 1126. For example, a universal serial bus (USB) interface can be used for coupling an accessory of the communication device, such as a card reader, to the system bus 1126.

30 The application program is typically supplied to the user of the communication device 1100 encoded on a data storage medium such as a flash memory module or memory card/stick and read utilising a corresponding memory reader-writer of a data storage device 1128. The data storage medium is not limited to being portable and can include instances of being embedded in the communication device 1100.

The application program is read and controlled in its execution by the processor 1116. Intermediate storage of program data may be accomplished using RAM 1118. The method(s) of the example embodiments can be implemented as computer readable instructions, computer executable components, or software modules. One or more software modules may alternatively be used. These can include an executable program, a data link library, a configuration file, a database, a graphical image, a binary data file, a text data file, an object file, a source code file, or the like. When one or more processor modules execute one or more of the software modules, the software modules interact to cause one or more processor modules to perform according to the teachings herein.

The operation of the communication device 1100 can be controlled by a variety of different program modules. Examples of program modules are routines, programs, objects, components, data structures, libraries, etc. that perform particular tasks or implement particular abstract data types.

The example embodiments may also be practiced with other computer system configurations, including handheld devices, multiprocessor systems/servers, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, personal digital assistants, mobile telephones and the like. Furthermore, the example embodiments may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a wireless or wired communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

The terms "coupled" or "connected" as used in this description are intended to cover both directly connected or connected through one or more intermediate means, unless otherwise stated.

The description herein may be, in certain portions, explicitly or implicitly described as algorithms and/or functional operations that operate on data within a computer memory or an electronic circuit. These algorithmic descriptions and/or functional operations are usually used by those skilled in the information/data processing arts for efficient description. An algorithm is generally relating to a self-consistent sequence of steps leading to a desired

result. The algorithmic steps can include physical manipulations of physical quantities, such as electrical, magnetic or optical signals capable of being stored, transmitted, transferred, combined, compared, and otherwise manipulated.

5 Further, unless specifically stated otherwise, and would ordinarily be apparent from the following, a person skilled in the art will appreciate that throughout the present specification, discussions utilizing terms such as "scanning", "calculating", "determining", "replacing", "generating", "initializing", "outputting", and the like, refer to action and processes of an instructing processor/computer system, or similar electronic circuit/device/component,
10 that manipulates/processes and transforms data represented as physical quantities within the described system into other data similarly represented as physical quantities within the system or other information storage, transmission or display devices etc.

 The description also discloses relevant device/apparatus for performing the steps of
15 the described methods. Such apparatus may be specifically constructed for the purposes of the methods, or may comprise a general purpose computer/processor or other device selectively activated or reconfigured by a computer program stored in a storage member. The algorithms and displays described herein are not inherently related to any particular computer or other apparatus. It is understood that general purpose devices/machines may
20 be used in accordance with the teachings herein. Alternatively, the construction of a specialized device/apparatus to perform the method steps may be desired.

 In addition, it is submitted that the description also implicitly covers a computer program, in that it would be clear that the steps of the methods described herein may be put
25 into effect by computer code. It will be appreciated that a large variety of programming languages and coding can be used to implement the teachings of the description herein. Moreover, the computer program if applicable is not limited to any particular control flow and can use different control flows without departing from the scope of the invention.

30 Furthermore, one or more of the steps of the computer program if applicable may be performed in parallel and/or sequentially. Such a computer program if applicable may be stored on any computer readable medium. The computer readable medium may include storage devices such as magnetic or optical disks, memory chips, or other storage devices suitable for interfacing with a suitable reader/general purpose computer. In such instances,

the computer readable storage medium is non-transitory. Such storage medium also covers all computer-readable media e.g. medium that stores data only for short periods of time and/or only in the presence of power, such as register memory, processor cache and Random Access Memory (RAM) and the like. The computer readable medium may even
5 include a wired medium such as exemplified in the Internet system, or wireless medium such as exemplified in bluetooth technology. The computer program when loaded and executed on a suitable reader effectively results in an apparatus that can implement the steps of the described methods.

10 The example embodiments may also be implemented as hardware modules. A module is a functional hardware unit designed for use with other components or modules. For example, a module may be implemented using digital or discrete electronic components, or it can form a portion of an entire electronic circuit such as an Application Specific Integrated Circuit (ASIC). A person skilled in the art will understand that the example
15 embodiments can also be implemented as a combination of hardware and software modules,

Additionally, when describing some embodiments, the disclosure may have disclosed a method and/or process as a particular sequence of steps. However, unless otherwise required, it will be appreciated the method or process should not be limited to the particular
20 sequence of steps disclosed. Other sequences of steps may be possible. The particular order of the steps disclosed herein should not be construed as undue limitations. Unless otherwise required, a method and/or process disclosed herein should not be limited to the steps being carried out in the order written. The sequence of steps may be varied and still remain within the scope of the disclosure.

25 Further, in the description herein, the word "substantially" whenever used is understood to include, but not restricted to, "entirely" or "completely" and the like. In addition, terms such as "comprising", "comprise", and the like whenever used, are intended to be non-restricting descriptive language in that they broadly include elements/components recited
30 after such terms, in addition to other components not explicitly recited. Further, terms such as "about", "approximately" and the like whenever used, typically means a reasonable variation, for example a variation of +/- 5% of the disclosed value, or a variance of 4% of the disclosed value, or a variance of 3% of the disclosed value, a variance of 2% of the disclosed value or a variance of 1% of the disclosed value.

Furthermore, in the description herein, certain values may be disclosed in a range. The values showing the end points of a range are intended to illustrate a preferred range. Whenever a range has been described, it is intended that the range covers and teaches all possible sub-ranges as well as individual numerical values within that range. That is, the end points of a range should not be interpreted as inflexible limitations. For example, a description of a range of 1% to 5% is intended to have specifically disclosed sub-ranges 1% to 2%, 1% to 3%, 1% to 4%, 2% to 3% etc., as well as individually, values within that range such as 1%, 2%, 3%, 4% and 5%. The intention of the above specific disclosure is applicable to any depth/breadth of a range.

It will be appreciated that the gaming apparatus/machine described in the example embodiments are not limited to the form as illustrated in the description. The example embodiments may also be implemented with gaming machines such as slot machines or electronic gaming machines (EGMs).

In addition, it will be appreciated that the extended game events described in the example embodiments are not limited to those as illustrated in the description. The example embodiments may also be any other forms of extended game events, such as any types of bonus features or second screen features found in EGMs.

Furthermore, it will be appreciated that the example embodiments may result in non-payout to a player. That is, the player may use points to play games and be awarded with points e.g. for wins of games. However, the points may not be able to be exchanged into cash, money or credits. That is, the example embodiments may be implemented for non-gambling purposes.

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

CLAIMS

1. A gaming apparatus, the gaming apparatus comprising,
a player input module arranged to accept a player input;
5 a random number generator arranged for output of a game output result;
a processing module arranged to combine the player input and a value associated with
the game output result as a player condition group, the processing module further arranged to
match the player condition group to a set of one or more pre-determined condition groups to
determine if one or more extended game events is to be activated prior to a next round of a
10 main game of the gaming apparatus;
wherein if the player condition group is a match to at least one pre-determined
condition group from said set of one or more pre-determined condition groups, the processing
module is further arranged to retrieve an instruction set associated with the matched at least
one pre-determined condition group from a storage device; and
15 further wherein the processing module is arranged to use the retrieved instruction set
for instructing the random number generator to output an additional game result prior to said
next round of the main game.
2. The gaming apparatus as claimed in claim 1, wherein the value associated
20 with the game output result is a portion of a total game output result value.
3. The gaming apparatus as claimed in claim 2, wherein the portion of a total
game output result value is based on a subset of the game output result.
- 25 4. The gaming apparatus as claimed in claim 1, wherein the value associated
with the game output result is a total game output result value.
5. The gaming apparatus as claimed in claim 1, wherein the instruction set
comprises an instruction to the random number generator to restrict a range of numbers during
30 generation of one or more randomly generated numbers.