

A Gaming Apparatus With A Process Trigger

5 TECHNICAL FIELD

The present disclosure relates broadly to a gaming apparatus.

10 BACKGROUND

For current gaming machines and apparatus, the inventors have recognised that players are using smaller inputs to play games. In addition, with increasing difficulties in games, the inventors have recognised a new problem that players increasingly end
15 playing games relatively fast or early in the games.

The above problems typically cause players to have reduced levels of entertainment and enjoyment of the games. Some available solutions include providing additional feature or side or bonus games coupled to the main games to prolong the
20 players' game time at the gaming machines. However, it has been recognised by the inventors that such side games are typically similar in execution to the main games in that the players also end playing the side games relatively fast or early when the players enter into playing the side games.

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

SUMMARY

30 In accordance with an aspect of the present disclosure, there is provided a gaming apparatus, the gaming apparatus comprising a random number generator arranged

for output of a game output result; a first credits database configured to contain a player deposit of player credits for playing at the gaming apparatus; a game points database configured to contain a win value associated with the game output result; a processing module configured to award the win value associated with the game output result, the processing module further configured to monitor for a first user trigger at a first pre-determined stage of a gaming process; wherein upon detection of the first user trigger, the processing module is configured to access the game points database to match against a first process trigger; wherein based on a matching of the first process trigger, the processing module is configured to enter a triggered process automatically without further command by a user; wherein upon entry into the triggered process, the processing module is configured to monitor for a second user trigger at a second pre-determined stage within the triggered process.

Upon entry into the triggered process, the processing module may be configured to access one or more triggered process conditions, the one or more triggered process conditions being different from one or more main game process conditions.

The one or more main game process conditions may comprise an instruction to the processing module to determine an output of a game output result of a main game based on a first game RTP (return-to-player) and the one or more triggered process conditions may comprise an instruction to the processing module to determine an output of a game output result of the triggered process based on a second game RTP (return-to-player), wherein the first game RTP is lower than the second game RTP.

Based on the second user trigger within the second pre-determined stage of the triggered process, the processing module may be configured to exit the triggered process.

The processing module may be configured to monitor for a third user trigger at the second pre-determined stage within the triggered process and upon detection of the third user trigger, to continue the triggered process, the processing module may be configured to access the game points database to match against an exit process trigger.

The first process trigger may be an opposite of the exit process trigger.

The first process trigger may be based on a pre-determined input for entering the triggered process and the exit process trigger may be based on a pre-determined input for playing a next turn of a triggered process game.

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Upon entry into the triggered process, the game points database may be configured to further function as a second credits database within the triggered process.

At least one of the first user trigger, the second user trigger and the third user trigger may be based on the processing module monitoring actuation of a user actuation button.

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BRIEF DESCRIPTION OF THE DRAWINGS

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Exemplary 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:

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FIG. 1A is a schematic front view diagram of a front panel of a gaming apparatus/machine in an exemplary embodiment.

FIG. 1B is a schematic front view diagram of the gaming apparatus/machine with the front panel opened in part from the gaming machine in the exemplary embodiment.

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FIG. 2 is a schematic block diagram illustrating a gaming machine/apparatus in an exemplary embodiment.

FIG. 3 is a schematic flowchart for illustrating a gaming process implementing a process trigger in an exemplary embodiment.

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FIG. 4 is a schematic drawing illustrating a screenshot of an example game output result in an exemplary embodiment.

FIG. 5A is a schematic flowchart for illustrating a gaming process implementing a process trigger in an exemplary embodiment.

FIG. 5B is a schematic flowchart for illustrating a triggered process in the
5 exemplary embodiment.

FIG. 6 is a schematic diagram illustrating a plurality of gaming apparatus in a network in an exemplary embodiment.

10 FIG. 7 shows a schematic drawing of a game system according to an exemplary embodiment.

FIG. 8 is a schematic drawing of a computer system suitable for implementing an exemplary embodiment.
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FIG. 9 is a schematic drawing of a wireless communication device suitable for implementing an exemplary embodiment.

20 DETAILED DESCRIPTION

In an exemplary embodiment, a gaming apparatus may be provided that changes its state based on a process trigger. The gaming apparatus comprises a random number generator arranged for output of a game output result. The gaming apparatus also
25 comprises a first credits database/meter configured to contain a player deposit of player credits for playing at the gaming apparatus, and a game points database/meter configured to contain a win value associated with the game output result. The gaming apparatus comprises further a processing module configured to award the win value associated with the game output result. In the exemplary embodiment, the processing module is further
30 configured to monitor for a first user trigger at a first pre-determined stage of a gaming process. Upon detection of the first user trigger, the processing module is configured to access the game points meter to match against a first process trigger. Based on a matching of the first process trigger, the processing module is configured to enter a triggered process

automatically without further command by a user. Upon entry into the triggered process, the processing module is configured to monitor for a second user trigger at a second pre-determined stage within the triggered process.

5 Upon entry into the triggered process, the processing module may be configured to access one or more triggered process conditions, the one or more triggered process conditions being different from one or more main game process conditions. In the exemplary embodiment, the one or more main game process conditions comprises an instruction to the processing module to determine an output of a game output result of a main game based on
10 a first game RTP (return-to-player) and the one or more triggered process conditions comprises an instruction to the processing module to determine an output of a game output result of the triggered process based on a second game RTP (return-to-player), wherein the first game RTP is lower than the second game RTP.

15 In the exemplary embodiment, based on the second user trigger at the second pre-determined stage within the triggered process, the processing module may be configured to exit the triggered process. The processing module may be configured to monitor for a third user trigger at the second pre-determined stage within the triggered process and upon detection of the third user trigger, to continue the triggered process, the processing module
20 is configured to access the game points database to match against an exit process trigger.

The first process trigger may be the opposite of the exit process trigger.

25 In the exemplary embodiment, the first process trigger may be based on a pre-determined input for entering the triggered process and the exit process trigger may be based on a pre-determined input for playing a next turn of a triggered process game.

30 In the exemplary embodiment, upon entry into the triggered process, the game points database may be configured to further function as a second credits database within the triggered process.

In the exemplary embodiment, at least one of the first user trigger, the second user trigger and the third user trigger may be based on the processing module monitoring actuation of a user actuation button.

5 In exemplary embodiments herein, a RNG (Random Number Generator) may be used for RNG processes. A RNG may provide randomly generated numbers from which, for 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
10 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 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
15 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 use that seed as an input for the number generation.

FIG. 1A is a schematic front view diagram of a front panel of a gaming
20 apparatus/machine in an exemplary embodiment. The gaming machine 100 comprises a front panel 101 that in turn comprises a top screen 102, a main screen 104, a player 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-
25 implemented by the gaming machine 100.

In the exemplary 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
30 104 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 games.

In the exemplary 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 credits/points that the player possesses or insertion of credits/points that the player 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 credits/points and/or identification belonging to the player. The credits/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 credits/points information in the stored-value card. For exemplary embodiments relating to using player identification cards, the player transactions panel 106 may retrieve credits/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 credits/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 credits/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.

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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.

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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.

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In some exemplary embodiments, a player input may be a user trigger monitored by a processing module.

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In the exemplary 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.

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In the exemplary 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.

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FIG. 1B is a schematic front view diagram of the gaming apparatus/machine with the front panel opened in part from the gaming machine in the exemplary 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 100. 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, but not limited to, 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 exemplary embodiment, the game processing module 128 is coupled to a random number generator 130 and a storage device 132. In an alternative exemplary 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 exemplary embodiment, the storage device 132 is arranged to store one or more process triggers. The storage device 132 may also be arranged to store one or more main game process conditions and one or more triggered process conditions. The storage device 132 is also arranged to store a credits database/meter for containing, but is not limited to, a player deposit of player credits for playing at the gaming apparatus. The storage device 132 is also arranged to store a game points database/meter for containing one or more win values associated with game output results or game winnings at the gaming apparatus. The credits database may also contain credits converted from a value of the game points database. In the exemplary embodiment, depending on a state of the gaming apparatus, the game points database may function as a second credits database.

Each of the one or more process triggers 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. For example, a process trigger may cause an instruction to the game processing module 128 to enter a triggered process automatically without further command/input by a user. For example, an exit process trigger may cause an instruction to the game processing module 128 to exit a triggered process.

Each of the one or more main game process conditions and one or more triggered process conditions 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. For example, a main game process condition may cause an instruction to the game processing module 128 to determine an output of a main game based on a first/main game RTP (return-to-player). For example, a triggered process condition may cause an instruction to the game processing module 128 to determine an output of a triggered process game based on a second/side game RTP (return-to-player). In some exemplary embodiments, a main game RTP is different from a side game RTP, e.g. the side game RTP being higher than the main game RTP.

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.

In the exemplary embodiment, the game processing module 128 is configured to monitor for a first user trigger at a first pre-determined stage of a gaming process. For example, the first user trigger may be a player input to continue game play and the first pre-determined stage of the gaming process may be at the end of a turn of a main game. In the exemplary embodiment, upon entering a triggered process, the game processing module 128 is also configured to monitor for another/second user trigger at a pre-determined stage of the triggered process, e.g. a second pre-determined stage of the triggered process. For example, the second user trigger may be a player input to exit the triggered process and the second pre-determined stage of the gaming process may

be at the end of a turn of a triggered process game. Within the triggered process, the game processing module 128 is also configured to monitor for yet another/third user trigger at a pre-determined stage of the triggered process, e.g. the second pre-determined stage of the triggered process. For example, the third user trigger may be a player input to continue within the triggered process.

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 exemplary 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/member 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 exemplary 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. The player input value may be deducted from a credits database/meter. Upon receipt of the player input, to commence a main game of the gaming machine 100, 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 win 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 win value associated with the game output result.

In the exemplary embodiment, the game processing module 128 is arranged to accumulate the win value into the game points database/meter.

5 In the exemplary embodiment, the game processing module 128 is arranged to monitor for a first user trigger at a first pre-determined stage of a gaming process, e.g. at the end of a turn of the main game. For example, the first user trigger may be to continue play of the main game or to play a side game. Upon detection of the first user trigger, the game processing module 128 is arranged to access the game points database to match against a first process trigger. For example, the matching against the first process trigger may
10 comprise determining if a value of the game points database is sufficient to (or is more than) a pre-determined input for entering a triggered process. The pre-determined input may be an input for a next turn of the main game or an input for a side game. If the first process trigger is matched, e.g. a condition is met, the game processing module 128 is arranged to enter a triggered process automatically within further command/input by the player/user. Upon entry
15 into the triggered process, the game processing module 128 is arranged to monitor for a second user trigger at a second pre-determined stage within the triggered process.

In the exemplary embodiment, upon entry into the triggered process, the game processing module 128 is arranged to use the game points database as a second credits
20 database within the triggered process.

In the exemplary embodiment, based on the second user trigger at the second pre-determined stage within the triggered process, the game processing module 128 is arranged to exit the triggered process. The game processing module 128 is arranged to monitor for a
25 third user trigger at the second pre-determined stage within the triggered process and upon detection of the third user trigger, to continue the triggered process, is arranged to access the game points database to match against an exit process trigger. The exit process trigger may be based on a pre-determined input for playing a next turn of a triggered process game.

30 In the exemplary embodiment, at least one of the first user trigger, the second user trigger and the third user trigger is based on the game processing module 128 being arranged to monitor actuation of a user actuation button, e.g. via the player interaction panel 108 or the main screen 104.

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 exemplary embodiment, if a printer outlet 110 is provided, a printer 142 is also comprised in the gaming machine 100 for performing the printing functions.

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 exemplary embodiments.

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.

In such an exemplary 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.

In some exemplary 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 exemplary 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 turn of a game, such as a main game, implemented on the gaming apparatus 200. The processing module 202 is further coupled to a random number

generator 206 and a display member 208. The processing module 202 is also coupled to a storage device 210.

The storage device 210 stores one or more credits databases, and/or one or more
5 game points databases, and/or game win display data, and/or one or more process triggers, and/or one or more triggered process conditions and/or one or more main game conditions. A player deposit of credits for use to play at the gaming apparatus 200 is stored in a credits database. In some exemplary embodiments, the storage device 210 may be external the gaming apparatus 200.

10 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 instruct the display member 208 to visually display a value of the credits database, a value of a game points database and game win display data. The display member 208 may also
15 display a pre-determined input for playing a next turn of a main game and/or a next turn of a side game.

In the exemplary embodiment, the processing module 202 is arranged to provide a
20 game output result based on the one or more random numbers generated by the random number generator 206. In some examples, the game output result may be the final symbols and/or positions of a reel game.

In the exemplary embodiment, the processing module 202 is capable of awarding to
25 the player a win value associated with the game output result. The win 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. The processing module 202 is further configured to display the win value as game win display data. The processing module 202 is also configured to accumulate the win value into the game points database. The value of the game points
30 database is convertible to a value that may be accumulated into the credits database.

The final values accumulated in both the credits database and the game points database are visually displayed to the player.

In the exemplary embodiment, the processing module 202 is further configured to monitor for a first user trigger at a first pre-determined stage of a gaming process. For example, the first user trigger may be based on a user actuation of an actuation button e.g. to continue play of a next turn of a main game or e.g. to play a side game or e.g. not to convert the value of the game points database to the credits database. Upon detection of the first user trigger, i.e. there is a trigger e.g. a user actuation, the processing module 202 is configured to access the game points database to match against a first process trigger. For example, the first process trigger may be a matching condition to determine whether the value of the game points database is sufficient to (or is more than) a pre-determined input to enter a triggered process. The input may be an input for a next turn of a main game or for a turn of a side game.

Based on a matching of the first process trigger e.g. if it is determined that the condition is met and there is a trigger, the the processing module 202 is configured to enter a triggered process automatically without further command by a user. Upon entry into the triggered process, the processing module 202 is configured to monitor for a second user trigger at a second pre-determined stage within the triggered process. For example, within the triggered process, the second user trigger may be based on a user actuation of an actuation button e.g. to convert the value of the game points database to the credits database.

Upon entry into the triggered process, the processing module 202 is configured to use the game points database to further function as a second credits database within the triggered process.

The processing module 202 may be configured to access one or more triggered process conditions, the one or more triggered process conditions being different from one or more main game process conditions. For example, the one or more main game process conditions comprises an instruction to the processing module 202 to determine an output of a game output result of a main game based on a first game RTP (return-to-player) and the one or more triggered process conditions comprises an instruction to the processing module 202 to determine an output of a game output result of the triggered process based on a

second game RTP (return-to-player), wherein the first game RTP is lower than the second game RTP. As such, the player may be able to prolong game play at the gaming apparatus 200 within the triggered process.

5 In the exemplary embodiment, based on the second user trigger at the second pre-determined stage within the triggered process, the processing module 202 is configured to exit the triggered process. For example, if it is determined that there is a trigger e.g. a user actuation to convert the value of the game points database to the credits database, the processing module 202 is configured to exit the triggered process.

10 The processing module 202 is also configured to monitor for a third user trigger at the second pre-determined stage within the triggered process. For example, the third user trigger may be based on a user actuation of an actuation button e.g. to continue play of a next turn of a triggered process game or e.g. not to convert the value of the game points
15 database to the credits database.

 Upon detection of the third user trigger i.e. there is a trigger e.g. a user actuation, to continue the triggered process, the processing module 202 is configured to access the game points database to match against an exit process trigger. For example, the exit process
20 trigger may be a matching condition to determine whether the value of the game points database is sufficient to (or is more than) a pre-determined input to continue play within the triggered process. The input may be an input for a next turn of a triggered process game. For example, if the value of the game points database is not sufficient to continue play within the triggered process, the processing module 202 is configured to exit the triggered process,
25 i.e. there is a trigger to exit the triggered process.

 If the exit process trigger does not trigger the processing module 202 to exit the triggered process, the processing module 202 may be configured to accumulate a win value of the triggered process game into the game points database and to continue using the
30 game points database as a credits database within the triggered process to play a next turn of the triggered process game.

FIG. 3 is a schematic flowchart illustrating a gaming process implementing a process trigger in an exemplary embodiment.

At step 302, a first credits database is provided to contain a player deposit of player credits for playing at the gaming apparatus. At step 304, a game points database is provided to contain a win value associated with a game output result. At step 306, a random number generator outputs a game output result. At step 308, a processing module awards a win value associated with the game output result, the processing module also monitors for a first user trigger at a first pre-determined stage of the gaming process.

At step 310, upon detection of the first user trigger, the processing module accesses the game points database to match against a first process trigger. At step 312, based on a matching of the first process trigger, the processing module is triggered to enter a triggered process automatically without further command by a user.

At step 314, upon entry into the triggered process, the processing module monitors for a second user trigger at a second pre-determined stage within the triggered process.

In the exemplary embodiment, upon entry into the triggered process, the game points database may further function as a second credits database within the triggered process.

In the exemplary embodiment, upon entry into the triggered process, the processing module may access one or more triggered process conditions, the one or more triggered process conditions being different from one or more main game process conditions. For example, the one or more main game process conditions may comprise an instruction to the processing module to determine an output of a game output result of a main game based on a first game RTP (return-to-player) and the one or more triggered process conditions may comprise an instruction to the processing module to determine an output of a game output result of the triggered process based on a second game RTP (return-to-player), wherein the first game RTP is lower than the second game RTP.

In the exemplary embodiment, based on the second user trigger within the second pre-determined stage of the triggered process, the processing module may exit the triggered process.

5 In the exemplary embodiment, the processing module may also monitor for a third user trigger at the second pre-determined stage within the triggered process. Upon detection of the third user trigger, to continue the triggered process, the processing module may access the game points database to match against an exit process trigger. For example, if the exit process trigger is matched or met, i.e. there is a trigger, the processing module may
10 exit the triggered process.

In the exemplary embodiment, the first process trigger may be based on a pre-determined input for entering the triggered process and the exit process trigger may be based on a pre-determined input for playing a next turn of a triggered process game.

15 FIG. 4 is a schematic drawing illustrating a screenshot 400 of an example game output result in an exemplary embodiment. The game may be a main game or a side game or a triggered process game. The triggered process game may be a turn of the main game but implemented using one or more triggered process conditions. The game may be
20 implemented on a gaming machine substantially identical to the gaming machines 100, 200 respectively of FIGs. 1A, 1B and 2.

In the screenshot 400, the game output result is displayed at a game display portion 402. The game shown at the game display portion 402 may be, for example, a reel game. A
25 credits display 404 is provided to display a value of a credits meter/database. The credits database may store a player deposit of player credits for playing at a gaming machine and/or may store credits that are converted from win values of one or more games played at the gaming machine. The player input may be input via a player input module (compare e.g. player input module 134 of Fig. 1B). The conversion may be from a game points database.

30 A total win display 410 is provided to display a value of the game points database. The game points database may store and accumulate a win value of a game output result (e.g. of each turn) of one or more games played at the gaming machine. Thus, cumulatively,

the game points database may increase over the turns. In exemplary embodiments, the game points database may also become zero if a player decides to convert the value of the game points database to credits to be stored in the credits database. In exemplary embodiments, the game points database may also decrease if the game points database
5 functions as a second credits database within a triggered process. Therefore, in the exemplary embodiment, the accumulated win value in the game points database may be seen as virtual points or game points that may be used to play within a triggered process.

In some exemplary embodiments, the triggered process may have a higher RTP as
10 compared to a main game RTP of the main game and thus, a player may prolong game play within the triggered process and get awarded game points progressively over time.

In some exemplary embodiments, the accumulation of points into the game points database may be of any win type from a main game or a triggered process game, such as,
15 but not limited to, from a symbol combination win, and/or a symbol scatter win, and/or a multiplier win, and/or a mystery bonus win, and/or a player selection bonus win, and/or an in-machine jackpot win, a network jackpot win etc.

In the exemplary embodiment, an input display 406 is provided to display an input to
20 play a turn of a game e.g. a main game or a side game or a triggered process game. The input may be a player input or may be a fixed input.

Further, there is provided a game win display 408. The game win display 408 is for
25 displaying game win display data, e.g. a win value of a game output result (e.g. of each turn) of one or more games played at the gaming machine.

In the exemplary embodiment, there is further provided and displayed a convert
decision button 412 and a next-play decision button 414. The convert decision button 412
30 may allow a player to make a selection or decision to convert the value of the game points database to credits to be stored in the credits database, the selection being allowed at a pre-determined stage of a gaming process. For example, the convert decision button 412 may be displayed as a "Take Win" button. The next-play decision button 414 may allow a player to make a selection or decision to continue play of a next turn of a main game or a next turn

of a side game or triggered process game or to enter a triggered process. For example, the next-play decision button 414 may be displayed as a "Continue/Bonus Play" button. As another example, for a reel game, the next-play decision button 414 may be displayed as a "Spin/Bonus Play" button. The actuation of the convert decision button 412 and the next-play decision button 414 may be by, but is not limited to, touchscreen commands by a player.

In some exemplary embodiments, the convert decision button 412 and the next-play decision button 414 may appear only at a pre-determined stage of a gaming process e.g. at the end of a turn of a main game, at the end of a turn of a side game or triggered process game.

FIG. 5A is a schematic flowchart for illustrating a gaming process implementing a process trigger in an exemplary embodiment. FIG. 5B is a schematic flowchart for illustrating a triggered process in the exemplary embodiment. The gaming process and the triggered process are implemented on a gaming machine/apparatus that is substantially similar to the gaming machine/apparatus 100 of FIGs. 1A,1B, and gaming machine/apparatus 200 of FIG. 2.

At step 502, a main game starts or idles. For example, a processing module of the gaming machine/apparatus polls for a player input to play a first/next turn of the main game. For starting a first turn of the main game, a player deposits an amount of own player credits for playing at the gaming machine, e.g. via a player transactions panel of the gaming machine. The processing module of the gaming machine/apparatus stores the amount of player credits in a credits database/meter (i.e. as a value of the credits meter) and displays the amount of player credits on a display of the gaming machine. Compare e.g. the credits display 404 of FIG. 4.

At step 504, the player is allowed to provide a player input to play the main game. For example, the player may make a selection via a player interaction panel and/or a main screen of the gaming machine. The processing module displays a value of the player input on the display of the gaming machine. Compare e.g. the input display 406 of FIG. 4.

At step 506, the processing module deducts the value of the player input from the value of the credits meter. The credits display is then updated accordingly with the resultant value of the credits meter. The processing module is configured to access one or more main game process conditions.

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At step 508, for a main game, the processing module instructs a random number generator for output of a game output result. The output of the game output result is based on the one or more main game process conditions. The one or more main game process conditions is associated with an instruction set for instructing the processing module to perform a further action, for changing the state of the gaming machine.

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In the exemplary embodiment, a main game process condition causes an instruction to the processing module to determine the output of the game output result of a main game based on a main/first game RTP (return-to-player).

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At step 510, the processing module determines whether there is a win from the game output result. If there is no win, the process proceeds to step 502. Otherwise, if there is a win at step 510, the process proceeds to step 512.

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At step 512, the processing module awards a win value associated with the game output result. The processing module displays a value of the win value on the display of the gaming machine. Compare e.g. the game win display 408 of FIG. 4.

In the exemplary embodiment, the processing module accumulates the win value into a total win meter or a game points database/meter. The total win meter of the gaming machine is configured to contain the win values of game winnings at the gaming machine. For example, the game winnings may be in the form of game points etc. At this step, the total win meter is distinguished from the player own credits or credits of the credits meter. The processing module displays a value of the total win meter on the display of the gaming machine. Compare e.g. the total win display 410 of FIG. 4.

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At step 514, the processing module monitors or determines whether the player decides/selects to convert the win values into player credits.

The player may select to convert the win values into player credits and the process proceeds to step 516. For example, the player may actuate a convert decision button to convert the win values of the total win meter. Compare e.g. the "Take Win" button 412 of FIG. 4. At step 516, the processing module determines a total amount of value of the total win meter and accumulates this total amount into the credits meter. The processing module also resets the total win meter to zero. The credits display is then updated accordingly with the resultant value of the credits meter. The total win display is also updated to show zero value. The process then proceeds to step 502.

As an alternative, at step 514, the player may select not to convert the win values into player credits and the process proceeds to step 518. At step 518, the player may actuate a next-play decision button to continue play at the gaming machine without converting the win values into player credits. Compare e.g. the "Continue/Bonus Play" button 414 of FIG. 4. The processing module is configured to monitor for a (first) user/player trigger at this (first) pre-determined stage of the gaming process. For example, the processing module is monitoring for actuation of a next-play decision button at a pre-determined stage of the gaming process. For example, the pre-determined stage is at the end of a turn of a main game or when there is a win value awarded, e.g. at step 512.

At step 518, the processing module determines whether the player has actuated the next-play decision button. If the decision button has not been actuated, the processing module continues to poll at step 514. If the next-play decision button has been actuated, the process proceeds to step 520. That is, the processing module has detected a first user/player trigger at this first pre-determined stage of the gaming process.

At step 520, upon detecting a first user/player trigger at step 518, the processing module is configured to perform a matching/comparison procedure against a first process trigger. In the exemplary embodiment, the first process trigger is based on a value of the total win meter. For example, the processing module accesses the total win meter to determine a resultant value of the total win meter and the processing module then compares the value of the total win meter to a pre-determined input for entering a triggered process. For example, the pre-determined input may be an input amount for playing a side game. For

example, the pre-determined input may be an input amount for playing a next turn of the main game.

If, at step 520, the processing module determines that the first process trigger is not
5 matched or met, the process proceeds to step 522. For example, the value of the total win
meter is not sufficient to (or is less than) a pre-determined input for entering a triggered
process. At step 522, the processing module determines a total amount of value of the total
win meter and accumulates this total amount into the credits meter. The processing module
also resets the total win meter to zero. The credits display is then updated accordingly with
10 the resultant value of the credits meter. The total win display is also updated to show zero
value. The process then proceeds to step 506, whereby the gaming process moves onto the
next turn of the main game.

If, at step 520, the processing module determines that the first process trigger is
15 matched or met, the process proceeds to step 524. For example, the first process trigger
may be if the value of the total win meter is sufficient to (or is more than) a pre-determined
input for entering a triggered process, and here it is determined that the value of the total win
meter is sufficient to (or is more than) a pre-determined input for entering a triggered
process. That is, the first process trigger is a condition that has been met at this step. At step
20 524, the processing module enters a triggered process automatically based on the first
process trigger and without further command/input by the user/player. That is, the first
process trigger is associated with an instruction set for instructing the processing module to
perform a further action, for changing the state of the gaming machine 100. In the exemplary
embodiment, the first process trigger causes an instruction to the processing module to
25 enter the triggered process automatically without further command/input by the user/player.

Step 524 and the triggered process is also illustrated in FIG. 5B.

At step 526, within the triggered process, the processing module uses the total win
30 meter as a second credits database/meter. That is, the total win meter, which outside of the
triggered process is configured to contain the win values of game winnings at the gaming
machine, is now configured to be used for providing an input or a player input within the
triggered process. At step 526, in the exemplary embodiment, the processing module

deducts the value of the player input from the value of the total win meter. The total win display is then updated accordingly with the resultant value of the total win meter. The processing module is configured to access one or more triggered process conditions, the one or more trigger process conditions being different from the one or more main game process conditions.

At step 528, a game of the triggered process is performed. For the triggered process game, the processing module instructs a random number generator for output of a game output result of the triggered process game. In the exemplary embodiment, the triggered process game is provided to always provide a win value. In other exemplary embodiments, the processing module may determine whether there is a win from the game output result of the triggered process game. Compare step 510. The process at step 510 may be added to step 528 for other exemplary embodiments.

The output of the game output result of the triggered process game is based on the one or more triggered process conditions. The one or more triggered process conditions is associated with an instruction set for instructing the processing module to perform a further action, for changing the state of the gaming machine.

In the exemplary embodiment, a triggered process condition causes an instruction to the processing module to determine the output of the game output result of a triggered process game based on a side/second game RTP (return-to-player). In the exemplary embodiment, the side/second game RTP is different and is higher than the main/first game RTP. As such, the user/player may obtain higher game winnings during the triggered process.

At step 528, for the triggered process game, the processing module awards a win value associated with the game output result of the triggered process game. The processing module displays a value of the win value on the display of the gaming machine. Compare e.g. the game win display 408 of FIG. 4.

At step 538, the processing module accumulates the win value of the triggered process game of step 528, or of the current turn of the triggered process game, into the total

win meter. The total win meter of the gaming machine is thus configured to contain the win values of game winnings at the gaming machine and also provide the input for the triggered process game. The processing module displays a value of the total win meter on the display of the gaming machine. Compare e.g. the total win display 410 of FIG. 4.

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At step 530, the processing module monitors or determines whether the player decides/selects to convert the win value into player credits. The processing module is configured to monitor for a second user/player trigger at this (second) pre-determined stage of the gaming process. For example, the processing module is monitoring for actuation of the convert decision button at a pre-determined stage of the gaming process. For example, the second pre-determined stage is at the end of a turn of a triggered process game or when there is a win value awarded, e.g. at step 528.

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The player may select to convert the win value into player credits. For example, the player may actuate the convert decision button to convert the win value of the triggered process game of step 528. Compare e.g. the "Take Win" button 412 of FIG. 4. If the convert decision button has been actuated, the process proceeds to step 532 and step 516 of FIG. 5A. That is, the processing module has detected a second user/player trigger at this second pre-determined stage of the gaming process. The processing module proceeds to exit the triggered process.

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As an alternative, at step 530, the player may select not to convert the win value into player credits and the process proceeds to step 534. The processing module proceeds to continue the triggered process.

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At step 534, the player may actuate the next-play decision button to continue play at the gaming machine without converting the win value into player credits. Compare e.g. the "Continue/Bonus Play" button 414 of FIG. 4. The processing module is configured to monitor for a third user/player trigger at this (third) pre-determined stage of the gaming process. For example, the processing module is monitoring for actuation of the next-play decision button at a pre-determined stage of the gaming process. For example, the third pre-determined stage is at the end of a turn of a triggered process game or when there is a win value awarded, e.g. at step 528.

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At step 534, the processing module determines whether the player has actuated the next-play decision button. If the decision button has not been actuated, the processing module continues to poll at step 530. If the next-play decision button has been actuated, the process proceeds to step 536. That is, the processing module has detected a third user/player trigger at this third pre-determined stage of the gaming process.

At step 536, upon detecting a third user/player trigger at step 534, the processing module is configured to perform a matching/comparison procedure against a second/exit process trigger. In the exemplary embodiment, the second process trigger is based on a value of the total win meter, i.e. resultant value after step 538. For example, the processing module accesses the total win meter to determine a resultant value of the total win meter and the processing module then compares the value of the total win meter to a pre-determined input for continuing play in the triggered process. For example, the pre-determined input may be an input amount for playing a side game. For example, the pre-determined input may be an input amount for playing a next turn of the triggered process game.

If, at step 536, the processing module determines that the exit process trigger is matched or met, the process proceeds to step 532 and step 516. That is, the processing module proceeds to exit the triggered process. For example, the exit process trigger may be if the value of the total win meter is not sufficient to (or is less than) a pre-determined input for continuing play in the triggered process and here, the processing module determines that the value of the total win meter is not sufficient to (or is less than) a pre-determined input for continuing play in the triggered process. That is, the exit process trigger is a condition that has been met at this step. Therefore, in this exemplary embodiment, the exit process trigger is the opposite of the first process trigger.

If, at step 536, the processing module determines that the exit process trigger is not matched or met, the process proceeds to step 526. For example, the processing module determines that the value of the total win meter is sufficient to (or is more than) a pre-determined input for continuing play in the triggered process, e.g. a next turn of the triggered process game.

The triggered process then continues to step 526, or for the next turn of the triggered process game.

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FIG. 6 is a schematic diagram illustrating a plurality of gaming apparati in a network in an exemplary embodiment. The network 602 comprises a plurality of gaming apparati e.g. 604, 606 network-linked to a network server 608. The network links or communication links may be wired or wireless. The gaming apparati e.g. 604, 606 may each function substantially similarly to the gaming apparati as described with reference to any of FIGs. 1A, 1B and 2. The network server 608 implements server functions for the gaming apparati e.g. 604, 606. For example, the network server 608 carries out logging functions for the games performed at the gaming apparati e.g. 604, 606.

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The network 602 further comprises a storage server 610 connected to the network server 608. The storage server 610 is coupled via a communication link to the network server 608.

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In the exemplary embodiment, the storage server 610 stores one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparati e.g. 604, 606 to perform an action, for changing the state of the gaming apparati e.g. 604, 606. In some exemplary embodiments, the storage server 610 may store a credits database/meter each for the gaming apparati e.g. 604, 606. In some exemplary embodiments, the storage server 610 may also store a game points database/meter each for the gaming apparati e.g. 604, 606. The gaming apparati e.g. 604, 606 may retrieve the one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets, and/or the credits database and/or the game points database, from the storage server 610.

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In the exemplary embodiment, depending on a state of the gaming apparati e.g. 604, 606, the game points database may function as a second credits database. In the exemplary embodiment, each of the one or more process triggers is associated with an instruction set

for instructing the gaming apparatus e.g. 604, 606 to perform a further action, for changing the state of the gaming apparatus e.g. 604, 606. For example, a process trigger may cause an instruction to the gaming apparatus e.g. 604, 606 to enter a triggered process automatically without further command/input by a user. For example, an exit process trigger may cause an instruction to the gaming apparatus e.g. 604, 606 to exit a triggered process. In the exemplary embodiment, each of the one or more main game process conditions and one or more triggered process conditions is associated with an instruction set for instructing the gaming apparatus e.g. 604, 606 to perform a further action, for changing the state of the gaming apparatus e.g. 604, 606. For example, a main game process condition may cause an instruction to the gaming apparatus e.g. 604, 606 to determine an output of a main game based on a first/main game RTP (return-to-player). For example, a triggered process condition may cause an instruction to the gaming apparatus e.g. 604, 606 to determine an output of a triggered process game based on a second/side game RTP (return-to-player). In some exemplary embodiments, a main game RTP is different from a side game RTP, e.g. the side game RTP being higher than the main game RTP.

In the exemplary embodiment, the storage server 610 may additionally also function as a pool server. In such a function, the storage server 610 accumulates a pool of prizes for awarding of prizes for players at the gaming apparatus e.g. 604, 606 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. 604, 606 or prizes contributed by sponsors. When a Magnification extended event is executed at the respective gaming apparatus e.g. 604, 606, a portion, or the whole, of the prizes stored in the pool server 610 is discharged to the respective gaming apparatus e.g. 604, 606. 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. 604, 606 via additional prizes awarded by the pool server 610, regardless of the progress or results of the main games being played at the gaming apparatus e.g. 604, 606.

In the exemplary 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 608 transmits the ID numbers of the gaming apparati e.g. 604, 606 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. 604, 606. Alternatively, bonus points may be respectively awarded
5 electronically by the network server 608 to the players at the gaming apparati e.g. 604, 606.

In the above exemplary embodiment, the one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparati e.g. 604, 606 are described
10 as being stored in a storage server 610 accessible by the gaming apparati e.g. 604, 606. It will be appreciated that the described exemplary embodiments are not limited as such and the one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparati e.g. 604, 606 may be stored stand-alone, for example in a storage
15 device 132 of a gaming machine 100 described with reference to FIG. 1B.

In the above exemplary 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. 7 shows a schematic drawing of a game system 700 according to an exemplary embodiment. The system 700 comprises a plurality of gaming apparati 702, 704, 706, each coupled to a game network server or unit 708. The gaming apparati 702, 704, 706 and the game unit 708 communicate via respective network interfaces provided on the gaming
25 apparati and the game unit. The gaming apparati 702, 704, 706 may be implemented in a variety of different ways. For example, one or more of the gaming apparati 702 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 704 are implemented as virtual gaming machines on desktop or tablet computing devices.
30 One or more other gaming apparati 706 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 704, 706 may be implemented via Wi-Fi, the Internet, interactive TV or other service networks. The coupling between the game unit 708 and the

respective gaming apparati 702, 704, 706 may be implemented in a variety of different ways, including via Wi-Fi, the Internet, or via other wired or wireless networks.

5 The game unit 708 comprises a database 710 for storing data for conducting one or more main games and other information such as information identifying the respective gaming apparati 702, 704, 706. The database 710 also stores one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparati e.g. 702, 704, 706 to perform an action, for changing the state of the gaming apparati e.g. 702, 704, 10 706. In some exemplary embodiments, the database 710 may store a credits database/meter each for the gaming apparati e.g. 702, 704, 706. In some exemplary embodiments, the database 710 may also store a game points database/meter each for the gaming apparati e.g. 702, 704, 706. The gaming apparati e.g. 702, 704, 706 may retrieve the one or more process triggers and/or one or more main game process conditions and/or 15 one or more triggered process conditions and/or one or more instruction sets, and/or the credits database and/or the game points database, from the database 710.

Further, the game unit 708 comprises a processor unit/module 712 coupled to the database 710. The processor module 712 is capable of awarding prizes to players on the 20 respective gaming apparati 702, 704, 706, e.g. based on the information stored in the database 710. The processor module 712 is coupled to a pool database 714 comprising a prize pool.

The processing module 712 is also configured to award a win value associated with 25 the game output result at each gaming apparati 702, 704, 706. The processing module 712 is further configured to monitor for a first user trigger at a first pre-determined stage of a gaming process. Upon detection of the first user trigger, the processing module 712 is configured to access the game points database to match against a first process trigger. Based on a matching of the first process trigger, the processing module 712 is configured to 30 enter a triggered process automatically without further command by a user. Upon entry into the triggered process, the processing module 712 is configured to monitor for a second user trigger at a second pre-determined stage within the triggered process.

During execution of the one or more main games, the processor module 712 is capable of instructing play of the main games at the plurality of gaming apparatus 702, 704, 706. In addition, the processor module 712 is capable of awarding a portion, or a whole, of the prize pool from the pool database 714 to players at respective gaming apparatus 702, 704, 706.

The processor module 712 awards the pool prizes based on results of e.g. extended game events and independent of the main games implemented on the respective gaming apparatus 702, 704, 706. It will be appreciated that the game system 700 thus provides a distributed gaming environment with a centralized game database for awarding prizes to players on the respective gaming apparatus 702, 704, 706.

In the above exemplary embodiment, the one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparatus e.g. 702, 704, 706 are described as being stored in a database 710 of a game unit 708 and is accessible by the gaming apparatus e.g. 702, 704, 706. It will be appreciated that the described exemplary embodiments are not limited as such and the one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the gaming apparatus e.g. 702, 704, 706 may be stored stand-alone within each gaming apparatus, for example in a storage device 132 of a gaming machine 100 described with reference to FIG. 1B.

In the described exemplary embodiments, after a turn of a main game play and in a winning state, when a player actuates an input to signal a continuance in play, e.g. actuates/presses a "Spin" button, as long as available unconverted game winnings (e.g. in a total win meter) are sufficient for a triggered process game, a processing module may enter the triggered process and engage the triggered process game play. If it is determined that available unconverted game winnings are insufficient for playing a turn of the triggered process game, the processing module may automatically deduct from a credits meter/database and trigger a next turn or game play with the input to play the game unchanged. The inventors recognize that the functionality behind the actuation to signal a continuance in play (e.g. actuation of a next-play decision button on a mechanical actuator

or on a touchscreen) may usefully provide a triggered process that may prolong a player's interest and entertainment at a gaming machine.

5 In the described exemplary embodiments, "game winnings" may refer to winnings or game points from both a main game and a side game or triggered process game, whereas there is provided e.g. a total win meter/database (or game points database) that is a new meter containing the "game winnings". The game points database may function as a meter/database containing winnings during a main game and when a triggered process is entered into, the game points database may function like a credits meter/database in which
10 the value contained in the game points database are deductible to play a triggered process game (i.e. within the triggered process).

The inventors have recognized that currently, there is a lack of a meter that may collect/accumulate and contain winnings or game points from games and this same meter
15 may also be used by a processing module as a credits meter that is deductible (within a triggered process) for a side game or triggered process game. The existence of such a "dual-functionality" meter may allow a player to delay deduction of the player's own credits and to decide to utilize the game winnings to prolong the player's interest and entertainment at a gaming machine.

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In the described exemplary embodiments, a side game or a triggered process game is provided to be more attractive to a player and to prolong the player's game play within the side game or triggered process. For example, the RTP (return to player) of the side game is higher than the RTP of the main game itself. As another example, the side game or triggered
25 process game may even appear visually the same or similar to a main game (e.g. in terms of a reel game appearance) but the back-end rules such as reel combination and RTP are different. The player may continue playing the side game or triggered process game for a relatively long time due to e.g. a higher RTP within the triggered process until e.g. a "take win" command or actuation of a convert decision button to convert game winnings into
30 credits to be accumulated into a credits database. The inventors recognize that even though currently there may be machines implementing a main game and a side game, such games typically access a same set of game instructions and RTP. As such, even if a player were to enter a side game, with a RTP that is the same as the main game, the player may not

prolong game play within the side game leading to the same problem of difficulty in sustaining a player's interest and entertainment at a gaming machine.

Further, it is provided that the first process trigger (or triggering condition) is based on an amount of a main game's win value or game points sufficient to qualify and play the side game. The exit process trigger (or triggering condition) is based on an amount of game points sufficient to continue to play the side game. For example, if it is determined that an amount of a main game's win value or game points are sufficient to play the side game, the player may get entered into the side game automatically when actuating an input to signal a continuance in play, e.g. actuating/pressing a "Spin" button, for a next turn of the game. The inventors have recognized that there is a lack of a trigger condition currently that is specifically based on win values from a main game and that triggers entry into a triggered process.

Different exemplary 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 exemplary embodiments may be embodied in one or more computer systems, such as is schematically illustrated in FIG. 8.

One or more exemplary embodiments may be implemented as software, such as a computer program being executed within a computer system 800, and instructing the computer system 800 to conduct a method of an exemplary embodiment.

The computer system 800 comprises a computer unit 802, input modules such as a keyboard 804 and a pointing device 806 and a plurality of output devices such as a display 808, and printer 810. A user can interact with the computer unit 802 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 802. Such input devices may function as player input devices/modules arranged to accept a player input. The display 808 may include a cathode ray tube (CRT),

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 802 can be connected to a computer network 812 via a suitable
5 transceiver device 814, to 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 812 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
10 home computer systems etc. The transceiver device 814 can be a modem/router unit located within or external to the computer unit 802, 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
15 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 computer unit 802 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.

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The computer unit 802 in the example comprises a processor 818, a Random Access Memory (RAM) 820 and a Read Only Memory (ROM) 822. The ROM 822 can be a system memory storing basic input/ output system (BIOS) information. The RAM 820 can store one or more program modules such as operating systems, application programs and program
25 data.

The processor 818 may function as a processing module to, amongst others, award a win value associated with a game output result; monitor for a first user trigger at a first pre-determined stage of a gaming process; upon detection of the first user trigger, access a
30 game points database to match against a first process trigger; based on a matching of the first process trigger, enter a triggered process automatically without further command by a user; and upon entry into the triggered process, monitor for a second user trigger at a second pre-determined stage within the triggered process. The processor 818 may also

perform as, or instruct functions, of a random number generator to output a game output result. The RAM 820 may store one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the processor 818 to perform an action, for changing the state of the computer system 800. The RAM 820 may store a credits database/meter and a game points database/meter.

The computer unit 802 further comprises a number of Input/Output (I/O) interface units, for example I/O interface unit 824 to the display 808, and I/O interface unit 826 to the keyboard 804. The components of the computer unit 802 typically communicate and interface/couple connectedly via an interconnected system bus 828 and in a manner known to the person skilled in the relevant art. The bus 828 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 828. For example, a universal serial bus (USB) interface can be used for coupling a video or digital camera to the system bus 828. An IEEE 1394 interface may be used to couple additional devices to the computer unit 802. 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 828 can also be via a parallel port, a game port, a 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 828. It will be appreciated that several peripheral devices can be coupled to the system bus 828 via alternative interfaces simultaneously.

An application program can be supplied to the user of the computer system 800 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 data storage device 830. The data storage medium is not limited to being portable and can include instances of being embedded in the computer unit 802. The data storage

device 830 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 828. 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 802. It will be appreciated that the computer unit 802 may include several of such drives. Furthermore, the computer unit 802 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 818. Intermediate storage of program data may be accomplished using RAM 820. The method(s) of the exemplary 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 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 802 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 exemplary 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. Furthermore, the exemplary 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.

Further to the above, different exemplary 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 exemplary embodiments may be embodied in one or more communication devices e.g. 900, such as is schematically illustrated in FIG. 9.

One or more exemplary embodiments may be implemented as software, such as a computer program being executed within a communication device 900, and instructing the communication device 900 to conduct a method of an exemplary embodiment.

The communication device 900 comprises a processor module 902, an input module such as a touchscreen interface or a keypad 904 and an output module such as a display 906 on a touchscreen.

The processor module 902 is coupled to a first communication unit 908 for communication with a cellular network 910. The first communication unit 908 can include, but is not limited to, a subscriber identity module (SIM) card loading bay. The cellular network 910 can, for example, be a 3G or 4G network.

The processor module 902 is further coupled to a second communication unit 912 for connection to a network 914. For example, the second communication unit 912 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 914 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 912 can include, but is not limited to, a wireless network card or an ethernet network cable port. The second communication unit 912 can also be a modem/router unit and may be any type of modem/router such as a cable-type modem or a satellite-type 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

of various protocols, such as TCP/IP, Frame Relay, Ethernet, FTP, HTTP and the like, is presumed, and the communication device 900 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.

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The processor module 902 in the example includes a processor 916, a Random Access Memory (RAM) 918 and a Read Only Memory (ROM) 920. The ROM 920 can be a system memory storing basic input/ output system (BIOS) information. The RAM 918 can store one or more program modules such as operating systems, application programs and
10 program data.

The processor 916 may function as a processing module to, amongst others, award a win value associated with a game output result; monitor for a first user trigger at a first pre-determined stage of a gaming process; upon detection of the first user trigger, access a
15 game points database to match against a first process trigger; based on a matching of the first process trigger, enter a triggered process automatically without further command by a user; and upon entry into the triggered process, monitor for a second user trigger at a second pre-determined stage within the triggered process. The processor 916 may also perform as, or instruct functions, of a random number generator to output a game output
20 result. The RAM 918 may store one or more process triggers and/or one or more main game process conditions and/or one or more triggered process conditions and/or one or more instruction sets for instructing the processor 916 to perform an action, for changing the state of the communication device 900. The RAM 918 may store a credits database/meter and a game points database/meter.

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The processor module 902 also includes a number of Input/Output (I/O) interfaces, for example I/O interface 922 to the display 906, and I/O interface 924 to the keypad 904.

The components of the processor module 902 typically communicate and
30 interface/couple connectedly via an interconnected bus 926 and in a manner known to the person skilled in the relevant art. The bus 926 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 926. 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 926.

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The application program is typically supplied to the user of the communication device 900 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 928. The data storage medium is not limited to being portable and can include instances of being embedded in the communication device 900.

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The application program is read and controlled in its execution by the processor 916. Intermediate storage of program data may be accomplished using RAM 918. The method(s) of the exemplary 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.

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The operation of the communication device 900 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.

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The exemplary 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 exemplary 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

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environment, program modules may be located in both local and remote memory storage devices.

5 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.

10 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, 15 combined, compared, and otherwise manipulated.

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", 20 "replacing", "generating", "initializing", "outputting", and the like, refer to action and processes of an instructing processor/computer system, or similar electronic circuit/device/component, 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.

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The description also discloses relevant device/apparatus for performing the steps of 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. 30 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 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 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.

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 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.

The exemplary 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 exemplary 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

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.

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 after such terms, in addition to other components not explicitly recited. For an example, when "comprising" is used, reference to a "one" feature is also intended to be a reference to "at least one" of that feature. Terms such as "consisting", "consist", and the like, may, in the appropriate context, be considered as a subset of terms such as "comprising", "comprise", and the like. Therefore, in embodiments disclosed herein using the terms such as "comprising", "comprise", and the like, it will be appreciated that these embodiments provide teaching for corresponding embodiments using terms such as "consisting", "consist", and the like. 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.

In the exemplary embodiments, a side game is described as a game within a triggered process or as a triggered process game. It will be appreciated that a side game may not need to be limited to being a different game visually from a main game. The exemplary embodiments are intended to have two game states, a normal game play (i.e. a main game or for example, a normal reel spin game) and a triggered process game. The triggered process game may refer to a game that may visually present like a main game but with different backend rules such as a different RTP as compared to the main game. The triggered process game may also refer to a game having special game features such as a free spin with a special win feature, a side game chance or a player-engaged feature etc.

In the described exemplary embodiments, the terms "meter" and "database" are used interchangeably. The various functions of the respective meters/database should be interpreted as they are described. For example, a credits database may contain credits converted from a game points database as well as a player's deposit of credits. For example, a game points database may contain win values of game output results from a main game or a triggered process game and may be used a deductible second credits database within a triggered process.

In the described exemplary embodiments, a player may prolong game play due to a triggered process game. For example, a higher RTP of a triggered process game as compared to a RTP of a main game may allow the player to obtain higher winnings within the triggered process game and to continue playing the triggered process game. It will be appreciated that the exemplary embodiments are not limited to only using the RTP for prolonging game play and the exemplary embodiments may include any other modifications or features that may prolong game play within the triggered process.

In the described exemplary embodiments, a matching of a process trigger may refer to determination of whether a process condition is matched or met. The described exemplary embodiments are based on using a game points database for determination of such conditions. For example, for a first process trigger, the determination is based on whether the game points database may be sufficient to or is more than an input for a turn of a triggered process game. For example, for an exit process trigger, the determination is based

on whether the game points database may be insufficient or is less than an input for a next turn of a triggered process game.

Next, regarding the input for playing a next turn of a main game and the input for entering a triggered process, it will be appreciated that the respective inputs are not limited to being the same amount/value. Further, it will also be appreciated that determination on whether a value of a game points database matches a pre-determined input may not be limited to matching to a 100% of the pre-determined input. For example, it may be appreciated that the matching may be determined based on a percentage of lower than 100% of the pre-determined input. For example, based on, but not limited to, a 50% of an input for playing the next turn of the main game, it may be possible for a processing module to enter a triggered process.

Further, in the exemplary embodiments, it is described that a processing module monitors for a user trigger and a process trigger. It will be appreciated that the monitoring may be simultaneous or in parallel for such triggers.

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

Furthermore, it will be appreciated that in the exemplary embodiments, the accumulated value in the credits database, the game points database or both may be used to redeem non-credit and non-monetary prizes for a player.

In addition, in the exemplary embodiments, the accumulated value in the credits database may be returned to the player or player account and may be used to play future games. However, in some exemplary embodiments, such credits of the player account may not be able to be exchanged into cash, money or credits. That is, such exemplary 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. For example, in the description herein, features of different exemplary embodiments may be mixed, combined, interchanged, incorporated, adopted, modified, included etc. or the like across different exemplary embodiments. 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 random number generator arranged for output of a game output result;
5 a first credits database configured to contain a player deposit of player credits for playing at the gaming apparatus;
a game points database configured to contain a win value associated with the game output result;
a processing module configured to award the win value associated with the game
10 output result, the processing module further configured to monitor for a first user trigger at a first pre-determined stage of a gaming process;
wherein upon detection of the first user trigger, the processing module is configured to access the game points database to match against a first process trigger;
wherein based on a matching of the first process trigger, the processing module is
15 configured to enter a triggered process automatically without further command by a user;
wherein upon entry into the triggered process, the processing module is configured to monitor for a second user trigger at a second pre-determined stage within the triggered process.
- 20 2. The gaming apparatus as claimed in claim 1, wherein upon entry into the triggered process, the processing module is configured to access one or more triggered process conditions, the one or more triggered process conditions being different from one or more main game process conditions.
- 25 3. The gaming apparatus as claimed in claim 2, wherein the one or more main game process conditions comprises an instruction to the processing module to determine an output of a game output result of a main game based on a first game RTP (return-to-player) and the one or more triggered process conditions comprises an instruction to the processing module to determine an output of a game output result of the triggered process based on a
30 second game RTP (return-to-player), wherein the first game RTP is lower than the second game RTP.

4. The gaming apparatus as claimed in any one of claims 1 to 3, wherein based on the second user trigger within the second pre-determined stage of the triggered process, the processing module is configured to exit the triggered process.

5. The gaming apparatus as claimed in claim 4, the processing module is configured to monitor for a third user trigger at the second pre-determined stage within the triggered process and upon detection of the third user trigger, to continue the triggered process, the processing module is configured to access the game points database to match against an exit process trigger.

6. The gaming apparatus as claimed in claim 5, wherein the first process trigger is an opposite of the exit process trigger.

7. The gaming apparatus as claimed in claim 5 or 6, wherein the first process trigger is based on a pre-determined input for entering the triggered process and the exit process trigger is based on a pre-determined input for playing a next turn of a triggered process game.

8. The gaming apparatus as claimed in any one of claims 1 to 7, wherein upon entry into the triggered process, the game points database is configured to further function as a second credits database within the triggered process.

9. The gaming apparatus as claimed in any one of claims 1 to 8, wherein at least one of the first user trigger, the second user trigger and the third user trigger is based on the processing module monitoring actuation of a user actuation button.