A method and a system to provide an outcome-modifying feature in a game are disclosed. The method comprises, upon generation of a game outcome and reception of sporadic triggering information, processing the triggering information to determine a feature condition. The method further comprises applying on the game outcome the determined feature condition in an optimal manner according to an evaluation of the game outcome. Thus, a feature outcome is generated. The system comprises a gaming machine designed to conduct a game in which game outcomes are generated and evaluated. It further comprises feature providing means sporadically providing triggering information to the gaming machine. Upon generation of a game outcome and processing of the triggering information, the gaming machine determines a feature condition, and applies on the game outcome the feature condition in an optimal manner according to an evaluation of the outcome. Thus, the gaming machine generates a feature outcome.
Figure 2
30 Receiving credit information from a player

32 Receiving activation information from the player

34 Randomly generating a game outcome

36 Displaying the game outcome

38 Evaluating the game outcome according to game rules

40 Awarding a prize for a winning game outcome

Figure 3
50

Receiving actuation information from a player

52

Generating a game outcome

54

Evaluating the game outcome according to game rules

56

Awarding a prize for a winning game outcome

58

Has triggering information been received?

No

End of play

Yes

Processing the triggering information

64

Determining a feature condition based on the triggering information

66

Displaying the triggering information

68

Evaluating the game outcome in function of the feature condition

70

Optimally applying the feature condition to generate a feature outcome

72

Evaluating the feature outcome

74

Awarding a prize for a winning outcome

Figure 4
Expected value

- 6: 2 credits \times \frac{25}{50} = 1 - 108
- Bell: 50 credits \times \frac{10}{50} = 10 - 110
- 7: 250 credits \times \frac{7}{50} = 5 - 112

Figure 7
Figure 10
METHOD AND SYSTEM TO APPLY AN OUTCOME-MODIFYING FEATURE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35USC§119(e) of U.S. provisional patent application 60/487,078 filed on Jul. 15th, 2003, the specification of which is hereby incorporated by reference.

TECHNICAL FIELD

[0002] The invention relates to a method of and a system for applying an outcome-modifying feature on a game outcome.

BACKGROUND OF THE INVENTION

[0003] The field of casino-style games and gaming machines is in constant evolution. Players are always demanding new games with new characteristics schemes that may incite them to play. While the variety of the games has increased, players and game designers are still craving for novelty.

[0004] Accordingly, improvements in this field are desired.

SUMMARY OF THE INVENTION

[0005] In an embodiment, the invention provides a method of providing an outcome-modifying feature in a game. The method comprises, upon generation of a game outcome and reception of sporadic triggering information, processing the triggering information to determine a feature condition. The method further comprises applying on the game outcome the determined feature condition in an optimal manner according to an evaluation of the game outcome to generate a feature outcome.

[0006] In another embodiment, the invention provides a system to provide the outcome-modifying feature. The system comprises a gaming machine adapted to conduct a game in which game outcomes are generated and evaluated. The system further comprises feature-providing means sporadically providing a triggering information to the game conducted by the gaming machine. Upon generation of a game outcome and processing of the triggering information, the game processes said triggering information, determines a feature condition, and applies on the game outcome said determined feature condition in an optimal manner according to an evaluation of the game outcome to generate a feature outcome.

[0007] In yet another embodiment, the invention provides a computer program embodied in an electric or an electromagnetic carrier signal having codes adapted, when performed by a CPU of a device, to sporadically generate triggering information and to communicate said information to said device designed to conduct a game in order for said device, upon generation of a game outcome and reception of said triggering information, to determine a feature condition, to apply on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and to thereby generate a feature outcome.

[0008] In another embodiment, the invention provides a computer program on a computer readable medium or processor-readable memory having codes adapted, when performed by a CPU of a device, to sporadically generate triggering information and to communicate said information to said device designed to conduct a game in order for said device, upon generation of a game outcome and reception of said triggering information, to determine a feature condition, to apply on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and to thereby generate a feature outcome.

[0009] In this specification, the terms “game outcome” are intended to mean “the result of a play of the game, which is compared with criteria to establish an outcome value (such as a prize)”; examples of such game outcomes comprise the cards resulting from a poker game play, or the game indicia displayed once the reels stop in a line game.

[0010] The terms “triggering information” are intended to mean “information generated and/or communicated in any suitable format that a machine may interpret to trigger the outcome-modifying feature”; such format comprises electric, magnetic, mechanical and electro-magnetic signals.

[0011] Finally, the terms “feature condition” are intended to mean “a process associated to the feature indicating how the game outcome may be modified”. Examples of feature conditions comprise the use of a wild condition applied on part of or on the entire pay schedule, and a random regeneration of at least one game indicium to generate a feature outcome. Such re-generation comprises the replacement of a card in a poker hand by a new card, or the action of re-spinning a reel in a line game.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Further features and advantages of the present invention will become apparent from the following detailed description, taken in combination with the appended drawings, in which:

[0013] FIG. 1 is a schematic diagram showing a perspective view of a gaming machine for the present invention;

[0014] FIG. 2 is a block diagram illustrating the components of the gaming machine of FIG. 1;

[0015] FIG. 3 is a flowchart illustrating the steps of a basic game process as played on the gaming machine of FIGS. 1 and 2;

[0016] FIG. 4 is a flowchart of the process of the method of providing an outcome-modifying feature in accordance with the present invention;

[0017] FIG. 5 is a screen shot of a line game applying a wild condition embodiment in accordance with the present invention;

[0018] FIG. 6 is a screen shot of a line game applying a partial wild condition embodiment in accordance with the present invention;

[0019] FIG. 7 is a screen shot of a line game applying a re-spin condition embodiment in accordance with the present invention;

[0020] FIGS. 8a and 8b are screen shots of a line game applying a nudge condition embodiment in accordance with the present invention;
FIG. 9 is a representation of gaming machines in a network embodiment in accordance with the present invention; and

FIG. 10 is a representation of a plurality of screen shots of a bingo game in a network embodiment in accordance with the present invention.

It will be noted that throughout the appended drawings, like features are identified by like reference numerals.

DETAILED DESCRIPTION OF THE INVENTION

The present invention may be carried out on a gaming machine, as illustrated on FIGS. 1 and 2. Gaming machine 10 comprises display means 12 such as a video screen, a LCD screen or mechanical reels; credit-receiving means 14 such as a card reader or a coin and/or bill acceptor; input means 16 such as buttons, levers or touch screen control, awarding means 18 such as a ticket printer, a card reader or a hopper; memory means 20; and game controller means 22.

Such a gaming machine 10 is designed, in its basic realization and as shown on FIG. 3, to receive credit information from a player 30 either in a physical format (such as coins or bills) or in an electronic format (such as a player card or a money transfer from a bank account), to receive activation information from the player 32, to randomly generate 34 and display 36 a game outcome, to evaluate said game outcome according to game rules (a pay table for example) 38, and to award a prize to the player for a winning game outcome 40.

Those skilled in the art may recognize other methods to provide such a game, either through a central distribution of play data to networked gaming machines, a computer program adapted for such a game application and performing said game on computers, or program codes broadcasted using a suitable carrier or saved on memory, said program codes being adapted, when loaded on a device, to perform a similar game.

Also, the present outcome-modifying feature may be triggered in a game played on a gaming machine 10 by triggering information coming either from inside the gaming machine using the game controller means 22, from a device (software or hardware) installed in or around the gaming machine and using other controller means, or from an external device communicatively linked to at least one other gaming machine.

Accordingly, triggering information is sporadically generated and communicated to the game. The game then processes said triggering information to determine the feature condition and informs the player, using a written message, an animation, the gaming machine candle light or any other means, that an outcome-modifying feature has been triggered and, in certain cases, displays the feature condition. Afterwards, in order to apply the condition, the game outcome is evaluated to determine the optimal manner in which the feature condition may be applied to produce the best feature outcome and thus the best feature prize.

FIG. 4 illustrates the process of the method for providing such an outcome-modifying feature. After activation information has been entered by the player 50 (usually pushing the Play button), a game outcome has been generated 52, evaluated 54 and the corresponding prize has been awarded 56, it is determined whether or not triggering information has been received by the game or not 58. If no triggering information has been received, the play is over 60 and the game waits for new activation information from the player. On the other hand, if triggering information is received, the game processes said information 62 to determine the feature condition 64 and the triggering information is displayed to the player 66 to at least inform him of the occurrence of said feature. The game outcome is then evaluated 68 to determine the best way to apply the feature condition to generate a feature outcome 70. The feature outcome is evaluated 72 according to game rules to determine a feature prize, which is then awarded to the player 74.

The triggering information may be generated randomly and is not linked in any way to the game outcome. But there can be mechanisms to link the frequency of the triggering information or of each feature condition to the success rate or to certain game outcomes in the game. Thus allowing the player to get more outcome-modifying features when he wins or on the contrary giving him the opportunity of replenishing his credits when he loses a lot by giving him more opportunities of winning.

Furthermore, play information may be monitored on a single machine or on a plurality of machines to determine times when triggering information may be generated, communicated or deactivated, or even to determine which gaming machines may be allowed to generate or receive said triggering information. Said selection can be randomly determined, and/or dynamically determined based on monitored play information such as wins and losses occurring on gaming machines, gaming machine player identification, casino floor occupancy, occurrence of special events like tournaments, etc.

In a first embodiment, a player places a bet and initiates a play of the game. When the set of reels stops, the resulting game outcome is evaluated and the game outcome value is awarded to the player. When triggering information is received by the game, either from an external device or from inside the gaming machine, the game establishes the feature condition triggered by said triggering information and displays a message or an animation informing the player of the nature of said feature condition. In the present embodiment, the feature condition is always a wild condition. The game outcome is re-evaluated according to this wild condition, and a feature outcome is therefore established. FIG. 5 illustrates an example of a three-reel, three-line game applying such an embodiment. When the feature is triggered, the game outcome is evaluated to determine the optimal application of the feature condition. In this example, the Wild feature can be placed in three (3) different positions to complete winning lines. The first position 82 and the third 86 both complete a line of “Cherry” symbols which have a value of two (2) credits according to the pay table 80, while the second position 84 complete a line of “Bell” symbols which awards a prize of one hundred (100) credits. Since the line of “Bell” symbols awards a higher prize than a line of “Cherry” symbols, the Wild feature will replace the “Cherry” on the second position 84 and the feature outcome will award a feature prize of one hundred (100) credits to the player.
In another embodiment, the triggering information may trigger any of a list of possible feature conditions, such as a wild condition, a partial wild condition, a re-spin condition, a nudge condition or a combination of two or more of them.

The wild symbol of the wild condition is used in the manner offering the best feature outcome and thus the best feature prize according to the pay table, as explained in the first embodiment and illustrated in FIG. 5.

In the case of a partial wild condition, the wild symbol may only be used to generate a win according to a predetermined portion of the pay table. For example, if the partial wild is applied only to the “scatter prizes” part of the pay table, the wild feature will replace a symbol to create the best scatter feature outcome, and not the best line feature outcome. FIG. 6 illustrates this embodiment. In this example, the wild feature is applied only to the scatter prizes. The game outcome comprises three (3) “Moon” symbols 97 and 98, which have already resulted in a game prize of twenty-five (25) credits to the player, and two (2) “Star” symbols 99. The pay table 90 shows that the player would receive fifty (50) credits for a fourth “Moon” symbol 92, and seventy-five (75) credits for a third “Star” symbol 94. Thus, the wild symbol may replace any symbol on the reels, except for the “Star” symbols, and will take the value of a “Star” symbol, awarding seventy-five (75) credits to the player, even though it would have been more interesting for the player to replace the “Moon” symbol 98 at the end of the first line by the wild symbol to complete a line of “One Bar” symbol, which, according to the pay table, has a value of two hundred (200) credits 96. With the re-spin condition, an evaluation of the expected value associated to each one of the reels is computed according to the prize value of a possible winning line and the probability of getting the desired symbol. The reel having the best expected value is selected. FIG. 7 illustrates such a feature condition. The game outcome has no winning line, but there are three possible winning lines during the re-spin feature. The expected value of each reel that may be re-spun to create a winning outcome is evaluated. Accordingly, the first possibility 102 asks for a “Bell” symbol to complete the line, thus its expected value is ten (10) 110, since the prize value of a “Bell” symbol line, according to the pay table 100, is fifty (50) credits and there are ten (10) “Bell” symbols among the fifty (50) symbols on this reel (50x10/50=10). The same way, the expected value for the second possibility 104, a “Cherry” symbol line, has an expected value of one (1) 108, while the third possibility 106, a line of “Seven” symbols, has an expected value of five (5) 112. Since the expected value of the first possibility 104 is the highest, this reel will be re-spun.

Finally, the nudge condition is a feature wherein a reel bearing more than one indicium is moved up or down, thus generating a new outcome. FIGS. 8a and 8b illustrates an example of this feature condition. FIG. 8a illustrates a game outcome in a five-reel, five-line game. The center line 120 already has two “B” symbols aligned, and the third reel 122 has a “B” symbol at one position over the center line 120. Upon trigger of the nudge condition, an evaluation of which of the reels should be moved is performed, and in which direction the move should happen, to create the best feature outcome. FIG. 8b shows the feature outcome that includes a winning line 124 (three “B” symbols), for which the player is awarded the corresponding prize.

In another embodiment, an external device provides the triggering information to one or a plurality of gaming machines through a communication channel that is usually a local network communication. When deemed appropriate, the device communicates triggering information to at least one gaming machine, which reacts as described above. The triggering information may be broadcasted to all linked gaming machines or to only a few chosen randomly or by applying a criteria, such as the gaming machines in play (credits are present on the counter) or gaming machines offering a certain game.

An example is a bank of gaming machines as illustrated on FIG. 9 (the external device being not illustrated). On this figure, one gaming machine 130 shows a signal (top candle highlighted) illustrating triggering of an outcome-modifying feature. In this example, the external device generated triggering information and randomly determined one machine 130 to which this triggering information has been sent.

Another example is illustrated on FIG. 10. On this figure, each bingo card represents a different player and thus a different machine that has received triggering information bearing a wild condition. The triggering information is received by each machine, is processed by each game individually and the game outcome generated by each game is individually evaluated to determine the best way to apply the wild condition and thus to generate the best feature outcome. On the card, the letter “W” identifies the position the wild condition is applied to. For example, Player 1150 misses one number to get a diagonal line, the wild condition will apply to complete this diagonal line, while Player 2152 cannot apply any winning pattern. Finally, Player 6154 has two possible winning patterns on his card, a diagonal and the T. Since the T pays more than the diagonal, the wild condition is applied to complete the T pattern, awarding the corresponding prize to the player.

Embodiments of the external device comprise a device linked to a display visible to all players; a computer; or a central blower of the kind of bingo blowers with a draw of a ball or the nature of the drawn ball fulfilling a criterion initiating the communication of triggering information. The above-described play monitoring may take place on the network, the control of the feature being managed globally on the networked gaming machines.

While the appended block diagrams illustrates the present invention as groups of discrete components communicating with each other via distinct data signal connections, it will be understood by those skilled in the art that the invention may be embodied through a combination of hardware and software components, with some components being implemented by a given function or operation of a hardware or software system, and many of the data paths illustrated being implemented by data communication within a computer application or operating system. The structure illustrated is thus provided for efficiency of teaching embodiments of the invention.

It should be noted that the present invention can be carried out as a method, can be embodied in a system, a computer readable medium, a processing-readable memory, or an electrical or electromagnetic signal.
The embodiments of the invention described above are intended to be exemplary only. The scope of the invention is therefore intended to be limited solely by the scope of the appended claims.

1. A method of providing an outcome-modifying feature in a game, comprising:
   upon generation of a game outcome and reception of a sporadic triggering information, processing said triggering information to determine a feature condition; and
   optimally applying said feature condition to said game outcome according to an evaluation of said game outcome to thereby generate a feature outcome.

2. The method of claim 1, further comprising providing a representation of said feature condition.

3. The method of claim 1, further comprising generating said triggering information.

4. The method of claim 3, further comprising analyzing said triggering information to determine a feature condition among a plurality of feature conditions.

5. The method of claim 3, further comprising monitoring game play information and generating sporadic triggering information according to said monitoring.

6. The method of claim 1, wherein said feature condition comprises at least one of (a) use of a wild condition, (b) movement of a game indicium, and (c) generation of a new game indicium.

7. A system for providing an outcome-modifying feature comprising:
   a gaming machine comprising game controller means conducting a game in which game outcomes are generated and evaluated; and
   feature providing means sporadically providing triggering information to said gaming machine,
   wherein the game controller means, upon generation of a game outcome and processing of triggering information, determines a feature condition, applies on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and thereby generates a feature outcome.

8. The system of claim 7, wherein the gaming machine further comprises display means providing a representation of at least one of (a) the game outcome, (b) the trigger information, and (c) the determined feature condition.

9. The system of claim 7, wherein the game controller means is adapted to perform functions of said feature providing means.

10. The system of claim 7, wherein the gaming machine further comprises a feature indicator providing a signal informing on the game controller means processing triggering information.

11. The system of claim 7, wherein the feature providing means performs a selection function to determine said feature condition borne by said triggering information.

12. The system of claim 7, further comprising monitoring means monitoring play information on said gaming machine and signaling said feature providing means to communicate game information when said monitored play information fulfills a criterion.

13. The system of claim 7, wherein said feature condition comprises at least one of (a) use of a wild condition, (b) use of a scatter condition, and (c) new game indicium participating in said game outcome.

14. A system for providing an outcome-modifying feature comprising:

   a plurality of gaming machines, each comprising game controller means conducting a game in which game outcomes are generated and evaluated; and
   feature providing means communicatively linked to said gaming machines sporadically provide triggering information to said gaming machines,
   wherein each gaming machine game controller means, upon generation of a game outcome, reception and processing of triggering information, determines a feature condition, applies on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and thereby generates a feature outcome.

15. A computer program embodied in an electric or an electro-magnetic carrier signal having codes adapted, when performed by a CPU of a device, to sporadically generate triggering information and to communicate said information to said device designed to conduct a game in order for said device, upon generation of a game outcome and reception of said triggering information, to determine a feature condition, to apply on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and to thereby generate a feature outcome.

16. A computer program embodied on a computer readable medium or processor-readable memory having codes adapted, when performed by a CPU of a device, to sporadically generate triggering information and to communicate said information to said device designed to conduct a game in order for said device, upon generation of a game outcome and reception of said triggering information, to determine a feature condition, to apply on said game outcome said feature condition in an optimal manner according to an evaluation of said game outcome, and to thereby generate a feature outcome.

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