of chips is recognized.

[0005]

In a card game monitoring system described in WO 2015/107902 A, whether or not chips placed on a gaming table are collected or paid as a win or lose result is determined by performing image analysis with respect to the movement of the chip, and thus, fraud monitoring is performed.

[0006]

Embodiments of the invention seek to provide a novel system managing a game in a casino.

[0007]

An aspect of the present invention provides a game management system managing a casino game performed in casino facilities, the system comprising:

a betting detection section configured to detect betting contents including a betting target and a betting amount of the casino game;

a game result determination section configured to determine a game result of the casino game; and

a calculation section configured to calculate a profit of a casino manager on the basis of the betting contents and the game result,

wherein the casino game is played on a game table on which side betting areas for each of which different gross profit margins are set according to a game rule,

the calculation section is configured to calculate a total amount of the bet amount or a total amount of profit for each of the side betting areas of different gross profit margins.

There is also disclosed a game management system managing a casino game performed in a plurality of tables in casino facilities, the system including:

a camera obtaining an image by capturing bet gaming tokens;

an information processing device specifying a betting amount on the basis of the type and the number of gaming tokens in the image by specifying a betting target on the basis of a position of the gaming token in the image;

a game result determination device determining a game result of the casino game;

a calculation device calculating a profit of a casino manager for each table and each game of the plurality of tables, on the basis of the betting target, the betting amount, and the game result; and

a recording apparatus recording the profit.

CLAIMS

1. A game management system managing a casino game performed in casino facilities, the system comprising:

a betting detection section configured to detect betting contents including a betting target and a betting amount of the casino game;

a game result determination section configured to determine a game result of the casino game; and

a calculation section configured to calculate a profit of a casino manager on the basis of the betting contents and the game result,

wherein the casino game is played on a game table on which side betting areas for each of which different gross profit margins are set according to a game rule,

the calculation section is configured to calculate a total amount of the bet amount or a total amount of profit for each of the side betting areas of different gross profit margins.

2. The game management system according to claim 1,

wherein the calculation section has a function to compare a result of the actual win rate and profit of each player or each dealer in charge of each game table and a numerical value in the probability statistical calculation or a numerical value based on past accumulated data when a predetermined number of games is finished, to determine

whether or not there is a significant difference between them, and to identify a player or a dealer who has the significant difference, and

the calculation section is configured to determine whether the cause of the significant difference in a series of games in which the significant difference occurred is related to the side betting area of the different gross profit margins.

3. The game management system according to claim 1 or 2,

wherein the betting detection section includes a capturing section configured to obtain an image by capturing the casino game, and an information processing section configured to specify the betting contents on the basis of the image.

4. The game management system according to claim 3,

wherein the information processing section is configured to specify the betting contents on the basis of the image, according to image recognition using a machine learning model.

5. The game management system according to any one of claims 1 to 4, further comprising:

a dealer amount detection section configured to detect a total amount of gaming tokens of a dealer,

wherein an RF tag storing information capable of

specifying at least a value of the gaming token is built in the gaming token, and

the dealer amount detection section includes an RF reader reading out the RF tag.

6. The game management system according to any one of claims 1 to 5,

wherein the betting detection section is configured to detect the betting contents for each game,

the game result determination section is configured to determine the game result for each game, and

the calculation section is configured to calculate a profit for each game on the basis of the betting contents and the game result of the same game.

7. The game management system according to any one of claims 1 to 6,

wherein the game result determination section is an electronic shoe including a containing portion containing playing cards, an extraction mechanism for extracting the playing cards one by one from the containing portion, a detection unit detecting contents of the playing cards extracted by the extraction mechanism, and a determination unit determining a game result of a baccarat game on the basis of the contents of the playing cards detected by the detection unit.

8. The game management system according to any one of claims 1 to 7, further comprising:

a dealer amount detection section configured to detect a total amount of gaming tokens of a dealer,

wherein the calculation section is further configured to calculate the profit, on the basis of the total amount.

9. The game management system according to any one of claims 1 to 8, further comprising:

a plurality of the game tables,

wherein the betting detection section and the game result determination section are provided to each of the game table,

the calculation section is configured to calculate the profit for each of one or more game tables.

10. The game management system according to any one of claims 1 to 9, further comprising:

a table creation section configured to create a table indicating the total amount of the bet amount or a profit for each game or each game table.

11. The game management system according to any one of claims 1 to 10,

wherein the calculation section is further configured to calculate an actual profit for each of the side betting areas of different gross profit margins on the basis of the

profit and the total bet amount.

12. The game management system according to any one of claims 1 to 11, further comprising:

an alarm section configured to generate an alarm for a profit rate that is below a predetermined threshold or above a predetermined threshold.