wireless IC (RFID) tag to each chip to recognize the amount of the chip.

[0005]

In a card game monitoring system disclosed in WO 2015/107902 A, fraud monitoring is performed by determining through image analysis of movement of chips whether or not the chips placed on a gaming table are collected or redeemed in accordance with a win or lose result.

SUMMARY

[0006]

The present disclosure seeks to provide a new system for detecting fraud in a game in a casino or an error or fraud at the time of wagering chips or doing settlement.

[0006a]

According to an aspect of the present disclosure, there is provided a management system used in a casino having a plurality of game tables including a first game table and a second game table, wherein the first game table comprising: a first chip recognition device configured to recognize one or more chips on the first game table of the casino; a first controller configured to: obtain game win/loss results; identify chip wagering information, including a position, type and number of chips wagered by the player, based on the recognition by the first chip recognition device; determine a win/loss amount for each player in each game based on the obtained game win/loss results and the identified chip wager

information of the player in each game; and obtain a history of the game win/loss results in the plurality of games and/or a total gained amount or a total lost amount of chips of the player based on the amount of chips won or lost by the player in the plurality of games; and a first player identifying device configured to identify a player playing on the first game table using a player ID, the second game table comprising: a second chip recognition device configured to recognize one or more chips on the second game table of the casino; a second controller configured to: obtain game win/loss results; identify chip wagering information, including a position, type and number of chips wagered by the player, based on the recognition by the second chip recognition device; determine a win/loss amount for each player in each game based on the obtained game win/loss results and the identified chip wager information of the player in each game; and obtain the history of the game win/loss results in the plurality of games and/or the total gained amount or the total lost amount of chips of the player based on the amount of chips won or lost by the player in the plurality of games; and a second player identifying device configured to identify a player playing on the second game table using a player ID, the management system comprising: a database configured to record the history of the game win/loss results and/or the total gained amount or the total lost amount of chips, wherein for a player who has moved from the first game table to the second game table in the casino, an alert is sent to the second game table based on the history of the game win/loss results or the

total gained amount or the total lost amount of chips recorded in the database, using a player ID of the player.

[0007]

There is also disclosed a fraud detection system in a casino having a plurality of gaming tables, including: a game recording apparatus which records a progress of a game played in the gaming table as an image; an image analyzing apparatus which performs image analysis on the image of the recorded progress of the game; a win/lose result determining apparatus which determines a win or lose result of each game in the gaming table; and a control device which detects fraud practiced in the gaming table by using a result of the image analysis by the image analyzing apparatus and the win or lose result determined by the win/lose result determining apparatus,

determining apparatus may be a card distribution device which distributes the cards in the gaming table or a control device which determines the win or lose result of each game from information of the image analyzing apparatus reading the cards distributed in the gaming table by using a camera.

[0021]

According to the fraud detection system of the present disclosure, it is possible to detect fraud in collection and redemption of chips in accordance with a win or lose result of a game.

[0022]

In addition, according to the system of the present disclosure, although the cards are slanted by "card squeegee" frequently performed by players in a baccarat game or the like, the rank and suit of the cards can be determined by image analysis, so that the total amount of chips being overlapped or being in a blind spot together with the positions can be recognized. In addition, fraud at the time of exchanging cash and chips can be detected.

BRIEF DESCRIPTION OF DRAWINGS

[0023]

FIG. 1 is a diagram illustrating an overview of a fraud detection system in a casino having a plurality of gaming tables according to a first embodiment of the invention;

FIG. 2A is a perspective diagram of chips illustrating an example of different overlapped states of chips recognized in the first embodiment of the invention;