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]

Embodiments of the present disclosure seek 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.

[0007]

According to an aspect, there is provided a management system for managing an equivalent exchange between a dealer and a player with respect to gaming chips at a game table where games are played using the gaming chips, the management system comprising: a chip tray from which the amount of stored gaming chips is read; a reader configured to read the amount of gaming chips put out from the chip tray to the game table by a dealer; a game recognition device configured to recognize a predetermined game stage; a detection device configured to detect that an equivalent exchange of the gaming chips is taking place between the dealer and the player; a management controller configured to activate a predetermined function corresponding to the equivalent exchange, using information on the amount read by the reader for the gaming chips that have been put out on the game table by the dealer from the chip tray and read by the reader, in response to the detection of the equivalent exchange by the detection device during the predetermined game phase recognized by the game recognition device.

[0007a]

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]

As disclosed, 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, as disclosed, 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;