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]

The present disclosure seeks to provide a novel system managing a game in a casino.

[0006a]

An aspect of the present invention provides a management system for managing games in a casino having a plurality of gaming tables, comprising for each gaming table: a chip identification device configured to identify positions, types, and number of gaming chips on the gaming table; a control device configured to determine a bet amount for each player at the gaming table based on the position, type, and number of gaming chips identified by the chip identification device; and a management device configured to obtain management information, using a machine learning model, including at least one of information of (a) the open/close of the gaming table; (b) the minimum bet amount for the gaming table to be opened; (c) the area where the gaming table is to be opened; (d) the dealer to be assigned; and (e) the chips to be prepared for replenishment at the gaming table, based on: (1) the bet amount for each player; (2) the profit amount or profit rate based on the bet amount;

and/or (3) the trends in the bet amount, profit amount, or profit rate, in a predetermined time period or predetermined number of games.

[0006b]

Another aspect of the present invention provides a management system for managing games in a casino having a plurality of gaming tables, comprising for each gaming table: a control device configured to determine a bet amount for each player position or each player at the gaming tables, a management device configured to determine, using a machine learning model, an abnormal situation based on a trend of (1) the bet amounts and game results and/or (2) profit amounts in a predetermined time period or predetermined number of games, wherein (a) the control device includes: a camera configured to capture images of gaming chips on the gaming table to generate images; and an image analysis device with a deep learning structure that performs image analysis on the images to identify positions, types, and numbers of gaming chips on the gaming table, and determines the bet amounts for each player position or each player based on the positions, types, and numbers of chips identified by the image analysis device, or (b) the gaming chips are equipped with RFID tags, and the control device is configured to read the RFID tags of the gaming chips on the gaming table to determine the bet amount for each player position or each player.

[0007]

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.