different from the result of win/loose, and the like based on an image acquired from the monitoring camera.

[0004]

Meanwhile, in order to perceive the number or a total amount of bet gaming currency, it has been proposed to perceive the amount of gaming currency by attaching a radio IC (RFID) tag to each gaming currency.

[0005]

In a card game monitoring system disclosed in WO 2015/107902 A, it is determined whether or not gaming currency placed on a game table is collected or re-payed according to a result of win/loose by performing an image analysis of the movement of gaming currency, whereby fraud is monitored.

Summary of Invention

Technical Problem

[0006]

Embodiments of the present invention seek to detect unfairness when an unfair gaming currency or an unfair object is presented.

Solution to Problem

[0006a]

An aspect of the present invention provides a system comprising a table including a plurality of chip arrangement areas that are adjacent to each other and in each of which can

be stacked chips that (a) are usable by a player to make a bet and (b) include respective radio frequency identification (RFID) tags storing information of the respective chips, the information including a respective value and/or a respective chip identification information; at least one reading restrictor; and for each of the plurality of chip arrangement areas a respective RFID reader, wherein the respective RFID reader is configured to, constantly or at constant intervals, read the RFIDs of the one or more chips placed in the respective chip arrangement area and is prevented by the at least one reading restrictor from reading the RFID tag of any chip in an adjacent one of the chip arrangement areas. The system also comprises a management device, wherein the management device is configured to detect, respectively for each of the plurality of chip arrangement areas, whether any of the chips within the respective chip arrangement area includes an abnormality based on the information stored in the RFID tags read by the RFID reader of the respective chip arrangement area.

[0007]

An inspection system as disclosed is an inspection system for inspecting a gaming currency in which an RF tag is built,

comprising: a housing means for housing gaming currencies of a dealer in a casino game; an RF reading means for reading the RF tags of the plural gaming currencies housed in the housing means; a detection means for detecting at least the number of the plural gaming currencies housed in the housing means by a method other than an RFID at constant time intervals or always; and an alarm means for generating an alarm when the number of the gaming currencies whose RF tags are read by the RF reading means is not equal to the number of the gaming currencies detected by the detection means.

[0008]

The inspection system as also disclosed is an inspection system for inspecting a gaming currency used for a game played on a table, comprising a housing means installed on the table, the housing means housing plural gaming currencies, the number of the plural gaming currencies being increased or decreased for each game, and an inspection means for inspecting the gaming currencies, the number of the gaming currencies being increased or decreased for each game in the housing means.

[0009]

The inspection system as also disclosed is an inspection system for inspecting a gaming currency in which an RF tag is built, comprising: a housing means capable of housing a

predetermined number of gaming currencies; an RF reading means for reading RF tags of the plural gaming currencies housed in the housing means; and an alarm means for generating an alarm when the number of the gaming currencies whose RF tags are read by the RF reading means is not equal to the predetermined number.

[0010]

The inspection system as also disclosed is not limited to an inspection system for inspecting gaming currencies, and can be applied as an inspection system for inspecting an arbitrary valuable in which the RF tag is built. In this case, a valuable inspection system comprises: a valuable to which a unique ID that is individually identifiable is attached; a table on which the valuable is used; a tray for holding the valuable on the table; a determination means for specifying the number of valuables held on the tray using each unique ID; a detection means for shooting the valuables on the table including at least the tray to create an image, and detecting at least the number of the valuables based on the image; a storage means for storing the number detected by the detection means; and an inspection means for inspecting a relationship between the number determined by the determination means and the number detected by the detection means.

[0011]

An inspection system as also disclosed is an inspection system for inspecting an object in which an RF tag is built, comprising: an RF reading means for reading an RF tag of an object located at a predetermined place; a detection means for detecting at least the number of objects located at the predetermined place by a method other than an RFID; and an alarm means for generating an alarm when the number of the objects whose RF tags are read by the RF reading means is not equal to the number detected by the detection means.

[0012]

A management system as also disclosed is a valuable management system comprising: a valuable to which a unique ID that is individually identifiable is attached; a table on which the valuable is used; a tray for holding the valuable on the table; a determination device for specifying a kind and the number of valuables held on the tray using each unique ID; a management control device for determining abnormality of the valuable based on the ID; and a measuring device for measuring the number of the valuables on the table including at least the tray by using a camera, wherein the management control device has a function for specifying and storing the number of the valuables on the tray by using measuring results of the measuring device, and the management control device further has a function

CLAIMS

1. A system comprising

a table including:

a plurality of chip arrangement areas that are adjacent to each other and in each of which can be stacked chips that (a) are usable by a player to make a bet and (b) include respective radio frequency identification (RFID) tags storing information of the respective chips, the information including a respective value and/or a respective chip identification information;

at least one reading restrictor; and

for each of the plurality of chip arrangement areas a respective RFID reader, wherein the respective RFID reader is configured to, constantly or at constant intervals, read the RFIDs of the one or more chips placed in the respective chip arrangement area and is prevented by the at least one reading restrictor from reading the RFID tag of any chip in an adjacent one of the chip arrangement areas; and

a management device, wherein the management device is configured to detect, respectively for each of the plurality of chip arrangement areas, whether any of the chips within the respective chip arrangement area includes an abnormality based on the information stored

in the RFID tags read by the RFID reader of the respective chip arrangement area.

2. The system according to claim 1, wherein the management device is configured to detect, for each of the chip arrangement areas, one or more types, one or more numbers, or a total amount of the chips that are bet by a losing player and placed in the respective chip arrangement area.

3. The system according to claim 1, wherein the management device is configured to determine from which of a plurality of players respective ones of the chips have been delivered to a casino side.

4. The system according to claim 1, wherein the management device is configured to detect a total of a value and number of chips placed in all of the chip arrangement areas on the table based on the information of the RFID tags of the chips placed in the plurality of chip arrangement areas.

5. The system according to claim 1, wherein the management device is configured to determine whether there is a change in information of the RFID tags read from the chips placed in the chip arrangement areas, and output a signal based on the determination.

6. The system according to claim 5, wherein the management device is configured to determine whether there is the change between information of the RFID tags read from the chips in a first time interval and information of the RFID tags read from the chips in a second time interval.

7. The system according to claim 1, further comprising an information database in which information of all RFID tags included in chips to be used in a gaming house is stored, wherein the management device is configured to detect an abnormality of a chip by comparing information of the RFID tag of the chip as read by one of the RFID readers with the information of the information database.

8. The system according to claim 7, wherein the abnormality is that the information of the RFID tag as read is not present in the information database.

9. The system according to claim 7, wherein the abnormality is that the RFID tags of two or more of the chips have the same information.

10. The system according to claim 1, further comprising an information database in which information of all RFID tags included in chips to be used in a gaming house is

stored, wherein the management device is configured to detect an abnormality of not being able to obtain information from an RFID tag of one of the chips by comparing information of the RFID tags of the chips as read by one of the RFID readers with the information of the information database.

11. The system according to claim 1, wherein the management device is configured to identify a person holding a chip for which an abnormality is detected.

12. The system according to claim 1, wherein, for each of the plurality of chip arrangement areas, when a plurality of different types of the chips are placed in the respective chip arrangement area, the respective RFID reader of the respective chip arrangement area is configured to collectively read the RFID tags of all of the chips in the respective chip arrangement area.

13. The system according to claim 1, wherein the at least one reading restrictor includes, for each of one or more of the chip arrangement areas, a respective restrictor provided along the respective chip arrangement area.

14. The system according to claim 1, wherein the at least one reading restrictor is provided along the adjacent other chip arrangement area.

15. The system according to claim 1, wherein the RFID reader includes a detector and an RFID antenna connected to the detector.

16. The system according to claim 15, wherein the RFID antenna includes a single antenna line.

17. The system according to claim 16, wherein the single antenna line winds spirally.

18. The system according to claim 15, wherein the RFID antenna extends spirally.

19. The system according to claim 1, wherein the table includes a chip tray.