DESCRIPTION

GAME TOKEN MANAGEMENT SYSTEM

Technical Field

[0001]

The present invention relates to a game token management system that prevents the use of forgeries of token in game places in game facilities used in casino or other game token.

Background Art

[0002]

Baccarat and blackjack may be mentioned among many live table games in casino and game facilities. In these games, a standard deck formed of 52 playing cards is used, and playing cards are distributed from a shooter provided with a plurality of previously shuffled decks (6 to 9 or 10 decks) onto a game table for start of the game. In casino or game facilities, game tokens are used in games.

[0003]

False game tokens should not be used in casino. In order to prevent the use of false game tokens in casino, a technique in which RFID is provided on the game token is adopted in casino. Game tokens attached with RFID are publicly known and are disclosed in Patent Literature 1

(International Application Publication WO 2008/120749).

Citation List

Patent Literature

[0004]

Patent Literature 1: International Application Publication WO 2008/120749

Summary of Invention

Technical Problem

[0005]

Embodiments of the present disclosure provide a management system or a game token that can prevent the use of false game tokens used in casino or game facilities and that can prevent the use of false game tokens and unfair exchange in casino or game facilities. In recent years, manufacturing techniques of false game tokens are progressed to such an extent that truth-or-falsity determination marks and RFIDs can be copied fully accurately. As a result, truth-or-falsity determination marks and RFIDs that are the same as authentic truth-or-falsity determination marks and RFIDs are provided on false game tokens, making it impossible to distinguish false game tokens from true game tokens and making it substantially impossible to perform truth-or-falsity determination.

Solution to Problem

[0006]

An aspect of the present invention provides a game token management system comprising: an ID reader, wherein the ID reader is configured to read unique IDs that are each respectively provided on a respective one or a plurality of game tokens; a storage at a location at which the game tokens can be cashed in; a chip tray located at a game table, wherein each of the storage and the chip tray at the game table is configured to hold the plurality of game tokens; a database in which the IDs of the plurality of game tokens are recorded each in association with information indicating a respective location of the respective game token on which the respective ID is provided; and at least one processor. The at least one processor is configured to use the ID reader to determine: respective types of the plurality of game tokens that are held in the chip tray; for each of the types of the plurality of game tokens that are held in the chip tray, respective numbers of the plurality of game tokens that are held in the chip tray; respective types of the plurality of game tokens that are held in the storage; and for each of the types of the plurality of game tokens that are held in the storage, respective numbers of the plurality of game tokens that are held in the storage. The at least one processor is also configured to periodically, according to a predetermined timing, update the recordation in the database of the IDs and

their respective associated information indicating their respective locations; reference the database to determine whether a first state is present and whether a second state is present; and generate an error signal when the first and also when the second state is determined to be present. The first state is when an ID that is not recorded in the database is identified by the at least one processor as being present in a predefined relevant region. The second state is that two or more copies of an identical one of the IDs are identified by the at least one processor as being present in the predefined relevant region with the two or more copies being on different game tokens.

Another aspect of the present invention provides a plurality of game tokens that each comprises a respective unique ID provided on the respective game token and that is readable by an ID reader when the respective game token is held in a storage at a location at which the game tokens can be cashed in and when the respective game token is held in a chip tray located at a game table. The unique IDs are such that (1) respective types of the plurality of game tokens that are held in the chip tray, (2) for each of the types of the plurality of game tokens that are held in the chip tray, respective numbers of the plurality of game tokens that are held in the chip tray, (3) respective types of the plurality of game tokens that are held in the storage, and (4) for each of the types of the plurality of game tokens that are held in

the storage, respective numbers of the plurality of game tokens that are held in the storage are specified by a chip determination device through determinable, based on readings of the unique IDs by the ID reader, by a processor that is configured to, based on a database in which IDs are recorded in association with information indicating respective locations and based on readings by the ID reader, determine whether a first state is present and whether a second state is present; and generate an error signal when the first state is determined to be present and also when the second state is determined to be present. The first state is when an ID that is not recorded in the database is identified by the processor as being present in a predefined relevant region. The second state is that two or more copies of an identical one of the IDs are identified by the at least one processor as being present in the predefined relevant region with the two or more copies being on different game tokens.

There is also disclosed a game token management system including:

game tokens attached with unique ID that is individually identifiable;

an ID reading device that reads the unique ID attached to the game token;

a storage that holds the game token in a casher in a game place;

a game table chip tray that holds the game token in a game table;

a chip determination device that specifies a type and number of game tokens held in the game table chip tray and the storage, with the ID reading device; and

a management control device that, in the game place, manages the IDs attached to the game tokens on the database, wherein

the management control device has a function that previously registers, on the database, the IDs of the game tokens that are contemplated to be used, manages, using the database,

at least

the IDs of the game tokens present on the game table

chip tray and the storage, together with information about location, on the database, specifies the game token in the game table chip tray and the storage at predetermined timing and further retrieves the database and determines the following events by the retrieval of the database:

1) ID absent on the database is newly present and

2) two or more identical IDs are present, and

generates an error signal when status 1) or 2) is noticed.

[0007]

Furthermore, the management control device further includes a function that

when there is a change in presence of the game token in at least the game table chip tray and the storage, records a time or a place at which the change has occurred, on the database in association with the ID,

retrieves the database, and, when two or more identical IDs are present,

extracts and stores the ID and the time or the place recorded in association with the ID on the database from the database, and

specifies the time at which the detected game token attached with the ID goes in or goes out the game table chip tray or the storage, or the place of the game table chip tray or the storage in which the game token has been

held.

[0008]

Further, the game token management system may include a bet area chip determination device that specifies the type and numbers of the game tokens bet on a bet area of the game table by the ID reading device, and a function is provided that determines following events by the retrieval of the database also for the ID of the game token present on the bet area of the game table:

1) a fact that ID absent on the database is newly present and

2) a fact that two or more identical IDs are present, and

generates an error signal when status 1) or 2) is noticed.

[0009]

The unique ID is provided at at least three places of a side face of the game token. The unique ID has been inkjet-printed with an ink that is viewable in visible light. In particular, a construction in which the unique ID has been provided by a presence or absence of marks in a plurality of lines and a plurality of rows is advantageous. Further, a transparent coating layer or varnish is provided on upper and lower surfaces of the game token.

[0010]

There is also disclosed a game token having a construction having a multilayer structure including a plurality of laminated plastic layers having respective different colors, at least one layer being a colored layer, a white layer or a light-color layer being laminated on an outer side of the colored layer, the multilayer structure having a striped pattern on a side face thereof in a laminated direction, the type of the game token being identifiable by the colored layer. Further, the game token has a construction including a unique ID that is provided at at least three places of a white layer on a side face or a side face of a light-color layer, is readable by a ID reading device to identify the type of and information about manufacture of a game token, and can be managed on database. The unique ID may be inkjet-printed with an ink viewable in visible light. The unique ID may be inkjet-printed with an ink unviewable in visible light.

[0011]

There is also disclosed a game token including IDs that are each identifiable, wherein

the unique ID provided on the game token is read with an ID reading device, the ID reading device can read

the game token held in a storage held by a casher in a game place and a game table chip tray in the game table, and, further,

the type and number of the game tokens held in the game table chip tray and the storage are specified by a chip determination device through the ID reading device,

the ID of the game token present on the game table chip tray and the storage is managed together with information about location on database,

at least

1) a fact that ID absent on the database is newly present and

2) a fact that two or more identical IDs are present, are examined, and

an occurrence of status 1) or 2) can be determined by the ID.

Brief Description of Drawings

[0012]

Fig. 1 is a schematic view of the whole management system of a game token in an embodiment of the present invention.

Fig. 2 is a side view of the game token in the embodiment of the present invention.

Fig. 3(a) is a plan view of a principal part of a

chip tray that illustrates such a state that game tokens that are one of embodiments of the present invention are held on a chip tray in a casino table, and Fig. 3(b) is a perspective view of the game token stacked on top of another.

Fig. 4 is an explanation view of IDs (illustrated in codes in a plurality of rows) attached to game tokens in the embodiment of the present invention.

Fig. 5 is a side view of ID attached to a game token in another embodiment of the present invention.

Description of Embodiments

[0013]

<First embodiment>

A management system of a game token in a game place having a game table in an embodiment of the present invention will be described. Fig. 1 is a schematic view of the whole management system. A management system of a game token in a game place having a plurality of game tables 1 (only one table in Fig. 1) takes images through a plurality of cameras 4, and stores and manages proceeding of a game in a game table 1, including a game participant 2 and a dealer 3. In particular, the management system of this game token specifies the type and number of game tokens 5 used in the game in the game table 1 by analyzing image

information obtained by the camera 4. The game token 5 is attached with a unique ID 6, and the type and number of the game tokens 5 is obtained by determining and reading the ID 6. An ID reading device 8 provided within a management control device 7 connected to the camera 4 analyzes image information obtained from the camera 4 and specifies the ID 6. In particular, the management control device 7 includes in its interior a chip determination device 9 that analyzes image data taken through the camera 4 and, from the results of reading of the ID 6, specifies the type and number of the game tokens 5 that are provided side by side or in a stacked state.

[0014]

In a casher 10 of a game place, a game token 5 is replaced with cash 11 paid by a game participant 2, and in the casher 10, the game token 5 is stored in a storage 12 that stores the game token 5. Further, in the casher 10 in the game place, the game token 5 brought by the game participant 2 is refunded in cash 11. In a game table 1, the game token 5 is held by a game table chip tray 13. Game tokens 5 bet by a game participant 2 who has lost in each game are collected from the table 1 by the dealer 3 and are returned to the game table chip tray 13. Thereafter, game tokens 5 are redeemed to the game participant 2 who has won the game. Interaction between

the game participant 2 and the casher 10 or the dealer 3 in the game place is wholly photographed and recorded by a camera 4. In the storage 12 and the game table chip tray 13, every time when there is an interaction between the game participant 2 and the game token 5, the number of game tokens 5 stored in the storage 12 and the game table chip tray 13 is increased or decreased. The type and number of game tokens 5 held in the game table chip tray 13 and the storage 12 are monitored by the ID reading device 8 and the chip determination device 9 through the camera 4 at predetermined timing or on a steady basis. The management control device 7 previously holds, on database 14, IDs 6 of all the game tokens 5 that are contemplated to be used in the game place (in the game place, IDs 6 of all the game tokens 5 that are contemplated to be used are previously registered).

[0015]

Thus, the management control device 7 that manages IDs 6 attached to the game token 5 on the database manages, using the database 14 in the game place, at least all the IDs 6 of game tokens 5 present on the game table chip tray 13 and the storage 12 together with information about location (for example, in the storage 12 or the game table chip tray 13, or in transit from a backyard (not shown), or held by the game participant 2 on the database 14. The

management control device 7 specifies all the game tokens 5 in the game table chip tray 13 and the storage 12 at predetermined timing or on a steady basis by IDs 6, and further retrieves the database 14 to determine the following events by the retrieval of the database 14.

The following determination is made:

1) a fact that IDs 6 that have been absent (or are absent) in the database 14 are newly present.

2) a fact that two or more identical IDs are present.

When the status 1) or 2) is noticed, an error signal that indicates abnormality is generated, and a management section or a security section 15 in the game place is informed of the error signal. The management control device 7 has the above function.

Since the management control device 7 specifies all the game tokens 5 in the game table chip tray 13 and the storage 12 at predetermined timing or on a steady basis by IDs 6 and stores the game token 5 on the database 14, 1) a fact that IDs 6 that have been absent (or are absent) in the database 14 are newly present can be determined. Further, 2) a fact that two or more identical I IDs 6 are present can also be determined.

[0016]

The management control device 7 further has a function that when there is a change in presence of the

game token 5 in at least the game table chip tray 13 and the storage 12, records, on the database 14, a time or a place (the storage 12, the game table chip tray 13, and the like) at which the change has occurred, in association with the ID 6, retrieves the database 14, and, when two or more identical IDs 6 are present, and extracts and stores the ID 6 and the time or the place recorded in association with the ID 6 on the database 14 from the database 14, and specifies, by the database 14, the time at which the detected game token 5 (already used or converted) attached with the ID 6 goes in or goes out the game table chip tray 13 or the storage 13, or the place of the game table chip tray 13 or the storage 13 in which the game token 5 has been held. When the time and the place are specified, for example, a person with suspected misuse of the game token 5 can be specified from the record image of the camera 4.

[0017]

In the game token management system, the management control device 7 can specify the type and number of game tokens 5 bet on a bet area 16 in the game table 1 by an ID reading device 8. The game token 5 in the bet area 16 is photographed by a camera 4b that particularly takes photographs of the bet area 16, and also for IDs 6 of the game tokens 5 present on the bet area 16 in the game table 1, the following events are determined by the retrieval of

the database 14.

1) a fact that ID 6 that has been absent on the database 14 is newly present on the bet area 16.

2) a fact that two or more identical IDs are present.

When the status 1) or 2) is noticed, an error signal is generated. The management control device 7 has the above function.

[0018]

In this system, the management control device 7, the ID reading device 8 provided in the interior of the system, and the chip determination device 9 that specifies the type and number of game tokens 5 have a structure that compositely includes a computer and a program and a memory integrally or as a plurality of constructions.

[0019]

Next, the game token 5 (the so-called “chip”) used in this system will be described in more detail. Fig. 2 is a front view of a game token 5 (chip) used in the system of the present invention, the game token 5 is formed by laminating a plurality of plastic layers having respective different colors, integrating the laminate, for example, by thermocompression bonding, and punching the laminate into a circular or quadrilateral shape. The game token 5 has a multilayer structure that includes a colored layer 101 at least as an intermediate layer and that includes a white

layer 102 or a light-color layer (that is not shown and may be a layer having a lighter color than the colored layer 101) provided between both sides (upper and lower surfaces in Fig. 2) of the colored layer 101 that the intermediate layer. When the multilayer structure including the colored layer 101 and the white layer 102 or the light-color layer (that is not shown and is a layer having a lighter color than the colored layer 101) laminated on both sides of the colored layer 101 that is the intermediate layer is adopted, as illustrated in Fig. 3, as viewed from the side surface, a striped pattern (in a laminated direction) is formed and the type of game tokens 5 (for example, 10 points, 20 points, 100 points, and 1000 points) can be specified by varying the color of the colored layer 101 (for example, red, green, yellow, or blue).

[0020]

Further, as illustrated in Fig. 2, in the game token 5, ID 6 indicating the type of the game token 5 is provided on a side face of the white layer 102. A transparent layer 104 is provided on the outermost layer, and the layers are thermocompression-bonded to a structure including at least five layers. These game tokens 5 are formed by using an elongated plastic material, subjecting layers in the elongated state (for example, at least the colored layer 101 and the white layer 102) to thermocompression bonding

to form a bonded state (for example, a five-layer structure) and then punching the laminate, for example, by a press into, for example, a circular or rectangular shape. When punching is carried out by pressing, the dimension of a molding die and a punch for punching is designed, and the end of the transparent layer 104 that is the outermost layer is formed in R-shape (round corner). The transparent layer 104 may be a coating layer of varnish. The unique ID 6 is provided at at least three places of a side face of the game token 5. The unique ID 6 has been inkjet-printed with an ink viewable in visible light.

[0021]

In particular, in the present embodiment, the unique ID6 is constructed and provided by the absence or presence of mark C provided in a plurality of lines and a plurality of rows. In the marks C in the plurality of lines and the plurality of rows, as illustrated in Fig. 2, upper and lower marks C are paired to construct a code, and, in Fig. 2, a ten-digit code is provided. Pairing of upper and lower marks C to constitute codes (four types) is illustrated in Fig. 4. A character Y located next to the mark C is an identification mark for the identification of upper and lower sides of the mark. The code formed of the mark C is constructed so as to specify a predetermined combination of marks C. As a result, in an embodiment

illustrated in Fig. 4, when four types are possible as a combination of marks C in upper and lower two rows, and, when this is printed in 10 rows, codes of the tenth power of the four types can be constructed. In ten-digit codes, since four types are possible, codes of the types of the tenth power of four are obtained. Thus, satisfactory unique IDs 6 of game tokens 5 can be provided.

[0022]

The game token 5 in the present embodiment has a construction having a multilayer structure including a plurality of laminated plastic layers having different colors, at least one layer being a colored layer 101, a white layer 102 or a light-color layer being laminated on an outer side of the colored layer 101, the multilayer structure having a striped pattern on a side face thereof in a laminated direction, the type of the game token 5 being identifiable by the colored layer 101. The unique ID6 is provided at at least three places (desirably six places) on a side face of the white layer 102 or the light-color layer. In the present embodiment, six IDs are provided while providing a predetermined spacing at 60 degrees in a rotating direction. In the game token 5, unique IDs 6 that are individually identifiable (different from each other one by one) are provided while providing a predetermined spacing at 60 degrees in a rotating direction

so that IDs 6 can be necessarily viewed from the side. The unique ID 6 provided on the game token 5 is read by the ID reading device 8. For example, the type and information about manufacture of the game token 5 can be specified by reading the ID 6 with the ID reading device 8, and the ID 6 can be managed on the database 14. In the present embodiment, the unique ID has been inkjet-printed with an ink viewable in visible light. The unique IDs 6 may be attached by inkjet printing with inks (UV ink, carbon black ink or infrared reaction ink) which are not visible with visible light.

[0023]

The unique IDs 6 attached to the game token 5 are read by the ID reading device 8, the ID reading device 8 can read game tokens 5 held in the storage 12 held by the casher in the game place and the game table chip tray 13 in the game table, and, in fact, even when game tokens 5 are stacked horizontally (laterally) as illustrated in (a) of Fig. 3, the IDs 6 can be read.

[0024]

Further, in the game token 5, a mark M formed of UV ink or carbon black ink is provided on a surface (X) of the white layer 102. This mark M is provided for the indication of truth or falsity of the game token 5. When the mark M is exposed to ultraviolet light (or infrared

light), the mark M can be viewed with the naked eye. An authentic game token can be determined by combining the shape and number of marks. A transparent layer 104 is thermocompression-bonded or coated as an outermost layer so as to cover a print 103 (for example, 100 points) or mark M for game place specifying purposes on the surface of the game token. The transparent layer 104 is subjected to embossing or varnish processing to prevent mutual intimate contact of the game token 5 or to improve slipperiness.

[0025]

The end of the transparent layer 104 that is the outermost layer on which the print 103 (for example, 100 points) is formed in R-shape (R) to prevent appearance of the white layer 102 on the side surface due to deformation of the surface of the white layer 102 in the step of punching of a game token 100. Further, this prevents a sharp end of the game token 100 from damaging hands or other chips T. The colored layer 101 may be formed of one colored layer or a plurality of colored layers. In order to increase the weight, metal or ceramics may be incorporated within the layer constituting the colored layer 101. Further, a part of the colored layer 101 may be bored, or alternatively a space may be provided between the colored layer 101 and the white layer 102, followed by incorporation of RFID in the space. In this case, a

combination of IDs by the mark C-derived codes and RFID is adopted as the ID 6 of the game token 5.

[0026]

In the game token 5 thus constructed, the type and number of game tokens 5 held in the game table chip tray 13 and the storage 12 are specified by the chip determination device 9 through the camera 4 and the ID reading device 8, and IDs 6 of game tokens 5 present on the game table chip tray 13 and the storage 12, together with information about location, are managed on the database 14. This makes it possible to examine at least the following events:

1) a fact that ID 6 that has been absent on the database 14 is newly present and

2) a fact that two or more identical IDs are present.

The occurrence of the status 1) or 2) can be realized by the retrieval and determination of all the IDs 6.

[0027]

The management control device 7 may be a control device having an artificial intelligent-type or deep-learning-type structure. The management control device 7 can grasp a position 24 (a position where the token is bet to a player, a banker, or a pair), the type (different values are allocated for each color in the game token), and the number of game tokens 5, using, for example, artificial

intelligence-type computers or control systems, deep-learning (structure) techniques, and self-learning functions.

[0028]

Variants of the game token 5 will be described. In a variant, a seven-digit figure is printed as ID 6 on a side face of the game token 5. In an embodiment illustrated in Fig. 5, a white layer 102 is provided in the center, and a colored layer 101 is provided on upper and lower surfaces of the white layer 102. A figure is printed as a mark in the white layer 102 that is the center to constitute ID6. A combination of 10 figures is possible, and, when the combination of figures is printed by digit printing, codes of the seventh power of the 10 figures can be constructed, making it possible to impart satisfactory unique IDs6 of the game token 5. In the camera 4 and image analyses, reading of determination and reading of figures is sometimes difficult, and a combination of marks C in embodiments described above is advantageous in terms of image analysis.

Reference Signs List

[0029]

5 game token,

6 ID,

7 management control device,

8 ID reading device,

9 chip determination device,

12 storage,

13 chip tray,

14 database, and

M mark.

CLAIMS

1. A game token management system comprising:

an ID reader, wherein the ID reader is configured to read unique IDs that are each respectively provided on a respective one or a plurality of game tokens;

a storage at a location at which the game tokens can be cashed in;

a chip tray located at a game table, wherein each of the storage and the chip tray at the game table is configured to hold the plurality of game tokens;

a database in which the IDs of the plurality of game tokens are recorded each in association with information indicating a respective location of the respective game token on which the respective ID is provided; and

at least one processor;

wherein:

the at least one processor is configured to use the ID reader to:

determine:

respective types of the plurality of game tokens that are held in the chip tray;

for each of the types of the plurality of game tokens that are held in the chip tray, respective numbers of the plurality of game tokens that are held in the chip tray;

respective types of the plurality of game tokens that are held in the storage; and

for each of the types of the plurality of game tokens that are held in the storage, respective numbers of the plurality of game tokens that are held in the storage;

periodically, according to a predetermined timing, update the recordation in the database of the IDs and their respective associated information indicating their respective locations;

reference the database to determine whether a first state is present and whether a second state is present; and

generate an error signal when the first and also when the second state is determined to be present;

the first state is when an ID that is not recorded in the database is identified by the at least one processor as being present in a predefined relevant region; and

the second state is that two or more copies of an identical one of the IDs are identified by the at least one processor as being present in the predefined relevant region with the two or more copies being on different game tokens.

2. The game token management system according to claim 1, wherein the at least one processor is configured to:

when there is a change in a state of presence of any one of the plurality of game tokens in the chip tray or in the storage, update the database by recording, in association with the respective ID of the any one of the plurality of game tokens, a time of the change of the state and/or by updating the information in the database indicating the respective location of the any one of the plurality of game tokens.

3. The game token management system according to claim 1, wherein the at least one processor is further configured to:

for each of one or more bet areas of the game table:

identify respective types and numbers of the plurality of game tokens placed as a bet on the respective bet area of the game table by using the ID reader; and

for each of the plurality of game tokens identified as having been placed on the respective bet area, determine whether either of the first and second states is present for the respective ID of the respective game token, in which case the error signal is generated.

4. The game token management system according to claim 1, wherein the game token management system further comprises the plurality of game tokens, and, for each of one or more of the plurality of game tokens, the respective game token includes the respective unique ID of the game token on each of three different areas of a side face of the respective game token.

5. The game token management system according to claim 1, wherein the game token management system further comprises the plurality of game tokens, and, for each of one or more of the plurality of game tokens, the unique ID of the respective game token is inkjet-printed with an ink viewable in visible light.

6. The game token management system according to claim 1, wherein the game token management system further comprises the plurality of game tokens, and, for each of one or more of the plurality of game tokens, the unique ID of the respective game token is inkjet-printed with an ink unviewable in visible light.

7. The game token management system according to claim 1, wherein the game token management system further

comprises the plurality of game tokens, and, for each of one or more of the plurality of game tokens, the unique ID of the respective game token is provided by a presence or absence of marks in a plurality of lines and a plurality of rows.

8. The game token management system according to claim 1, wherein the game token management system further comprises the plurality of game tokens, and, for each of one or more of the plurality of game tokens, a transparent coating layer or varnish is provided on a side face of the respective game token.

9. The game token management system according to claim 1, wherein the ID reader is a Radio Frequency Identification (RFID) reader configured to read RFIDs of the plurality of game tokens as the unique IDs of the plurality of game tokens.

10. The game token management system according to claim 1, wherein the game token management system further comprises the plurality of game tokens, and each of one or more of the plurality of game tokens has a structure having the respective unique ID of the respective game token ink jet printed on a side face of the respective game token and

having a Radio Frequency Identification (RFID), and the at least one processor is configured to associate with each other in the database information about the inkjet printed unique ID of the respective game token and information from the RFID of the respective game token.

11. The game token management system according to claim 1, wherein:

the game token management system further comprises the plurality of game tokens, and, with respect to each of one or more of the plurality of game tokens:

the respective game token has a multilayer structure comprising a plurality of laminated plastic layers;

a first one of the plurality of laminated plastic layers is of a first color;

a second one of the plurality of laminated plastic layers is of a second color that is lighter than the first one of the plurality of laminated plastic layers and is laminated onto a side of the first one of the plurality of laminated plastic layers;

the multilayer structure forms a striped pattern on a side face of the respective game token in a laminated direction; and

a respective type of the respective game token is identifiable by the first one of the plurality of laminated plastic layer.

12. The game token management system according to claim 1, wherein the at least one processor is configured to respond to presence of the second state by updating the database by recording, in association with the respective ID whose two copies have been identified, a time at which the second state is sensed and/or one or more locations at which the copies have been identified to be present.

13. The game token management system according to claim 1, wherein the at least one processor is configured to:

for each of the plurality of game tokens that enters into the chip tray, record in the database in association with the respective game token's ID a time at which the respective game token entered into the chip tray;

for each of the plurality of game tokens that exits from the chip tray, record in the database in association with the respective game token's ID a time at which the respective game token exited from the chip tray;

for each of the plurality of game tokens that enters into the storage, record in the database in association with the respective game token's ID a time at which the

respective game token entered into the storage; and

for each of the plurality of game tokens that exits from the storage, record in the database in association with the respective game token's ID a time at which the respective game token exited from the storage.

14. A plurality of game tokens that each comprises a respective unique ID provided on the respective game token and that is readable by an ID reader when the respective game token is held in a storage at a location at which the game tokens can be cashed in and when the respective game token is held in a chip tray located at a game table, wherein:

the unique IDs are such that (1) respective types of the plurality of game tokens that are held in the chip tray, (2) for each of the types of the plurality of game tokens that are held in the chip tray, respective numbers of the plurality of game tokens that are held in the chip tray, (3) respective types of the plurality of game tokens that are held in the storage, and (4) for each of the types of the plurality of game tokens that are held in the storage, respective numbers of the plurality of game tokens that are held in the storage are specified by a chip determination device through determinable, based on readings of the unique IDs by the ID reader, by a processor that is

configured to:

based on a database in which IDs are recorded in association with information indicating respective locations and based on readings by the ID reader, determine whether a first state is present and whether a second state is present; and

generate an error signal when the first state is determined to be present and also when the second state is determined to be present;

the first state is when an ID that is not recorded in the database is identified by the processor as being present in a predefined relevant region; and

the second state is that two or more copies of an identical one of the IDs are identified by the at least one processor as being present in the predefined relevant region with the two or more copies being on different game tokens.

15. The plurality of game tokens according to claim 14, wherein each of at least one of the plurality of game tokens includes the respective unique ID of the respective game token on each of three different areas of a side face of a white layer of the respective game token.

16. The plurality of game tokens, according to claim 14,

wherein, for each of at least one of the plurality of game tokens, the respective unique ID of the respective game token is inkjet-printed with an ink viewable in visible light.

17. The plurality of game tokens according to claim 14, wherein, for each of at least one of the plurality of game tokens, the respective unique ID of the respective game token is inkjet-printed with an ink unviewable in visible light.

18. The plurality of game tokens according to claim 14, wherein, for each of at least one of the plurality of game tokens, the respective unique ID of the respective game token is provided by a presence or absence of marks in a plurality of lines and a plurality of rows.

19. The plurality of game tokens according to claim 14, wherein, for each of at least one of the plurality of game tokens, a transparent coating layer or varnish is provided on the side face of the respective game token.