[DESCRIPTION]

[Title of Invention]: A METHOD FOR ADMINISTRATING A PACKAGE OF SHUFFLED PLAYING CARDS

[Technical Field]

[0001] The present invention relates to a method for administrating a package of shuffled playing cards in casinos or other card game facilities using card game tables to prevent packages of cards from being lost or replaced during operation of casinos which use a large number of packages of cards.

[Background Art]

[0002] Baccarat and Black Jack are of the many live table games played in casinos or gaming establishments. These games use a standard deck of 52 playing cards and are usually dealt from a shoe having multiple decks (6 to 9 or 10 decks) that have been shuffled together prior to the beginning of play. When operating people (hereinafter "the dealer") in casinos deliver playing cards to a game table for plays in such games, the cards sequence of multiple decks from the shoe will decide games (winners or winning hands). A predetermined number of decks of game cards are shuffled in a random order (sequence) and individually packaged as one package for these purposes before casinos use these packages.

[0003] Any loss or exchange of cards should not occur in casinos, because once some one reads the sequence of the package of cards and return the package in casinos, one can predict the results of games when dealer uses the read package.

To assure fair games by preventing such loss or exchanges of package of shuffled game cards in casinos, the casinos should administrate package of shuffled game cards so that games at tables are played properly (i.e. there is no exchange of the package of shuffled game cards or any other accidental or fraudulent acts etc.). A package of shuffled game cards is known and is disclosed in Patent Literature 1: (US Patent Publication 2010/0327525).

[Citation List]

[Patent Literature]

[0004] [PTL 1]: US Patent Application Publication No. 2010/0327525

[Summary of Invention]

[Technical Problem]

[0005] ~~The~~ Embodiments of the present invention seek to provide~~s~~ a real-time monitoring of the package of shuffled game cards in casinos and enable~~s~~ the casino to stop a game immediately when something unexpected happens by administrating the whole package of shuffled game

cards in casinos. This administrating is important because he or she may know the sequence of the shuffled playing cards on the table once it had been lost in the casino.

[0006] ~~The~~ Embodiments of the present invention ~~has been made in view of the above problem, and~~ aim~~s~~ to provide a package of shuffled game cards monitoring system with which it is possible to allow a casino to stop any suspicious package of shuffled game cards in the casino, by administrating the whole package of shuffled game cards in casinos.

When operating people in casinos distribute the packages of playing cards to game tables for plays, any loss of package or an exchange of packages should not occur. For example, if some of cards or whole package of cards in which the sequence of these cards are preliminary read or exchanged by someone during a delivery of packages to a game table, he or she may win the games at the table to which the exchanged or read package delivered.

[Solution to Problem]

[0006a] An aspect of the present invention provides a system for administering a plurality of packages of shuffled playing cards, which are shuffled in a random order and individually packed into each package having an ID code being unique to each of the packages, the system comprising:

a keeping box for containing the packages of shuffled playing cards with monitoring each of the ID codes attached to each of the packages; and an administrating controller, which has a computer readable medium that stores a database in relation to the ID codes of the packages which have been brought into a backyard of a casino and have been contained in the keeping
box,
wherein,
the keeping box has a first ID code reader for obtaining ID-code information on each of the ID codes of the packages in the keeping box, and a communication means for sending the ID-code information obtained by the first ID code reader to the administrating controller, the administrating controller is configured to periodically obtain the every ID-code information of the package in the keeping box and judge whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[0006b] Another aspect of the present invention provides a keeping box for containing playing cards shuffled and individually packed into each package, the keeping box comprising:

an ID code reader for obtaining ID-code information on ID code, which is attached to each of the packages of shuffled playing cards; and a communication means for sending the ID-code information obtained by the ID code reader to an administrating controller,

wherein

the administrating controller is configured to periodically obtain the every ID-code information of the package in the keeping box and judge whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[0006c] Another aspect of the present invention provides a method for administrating playing cards which includes a plurality decks of playing cards shuffled in a random order and are individually packed into each package having an ID code, the packages are stored in a keeping box at least at one of pits or playing tables in a casino, the method comprising steps of:

registering each of the ID codes of each of the packages, which have been brought into a backyard, into a database;

obtaining ID-code information on the ID code of each of the packages, which are stored in the keeping box; and

periodically judging whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[0007] ~~To solve the above conventional problems, the present invention provides~~There is also disclosed a system for administrating a package of shuffled playing cards, wherein

a predetermined number of decks of game cards are shuffled in a random order and individually packaged as one package, a unique ID code is attached to the package of each unique shuffled game cards

the system having

one or more ID code reader(s) for reading all of ID codes of the packages which have been brought into a pit for a game table,

an administrating controller for monitoring each ID code of all existing packages of shuffled game cards at the pit with obtaining each ID codes of all existing packages of shuffled game cards at the pit by the ID code reader(s),

the ID code reader(s) is also disposed at the game table for reading the ID code of the packages at the game table to identify the package which will be the next use for a card dealing shoe,

wherein,

the ID codes of the packages for the next use is examined whether it is the one properly arrived on the game table or the one arrived at proper timing or period of time by the administrating controller.

[0008] ~~To solve the above conventional problems, the present invention provides~~There is also disclosed a method for administrating a package of shuffled playing cards,

wherein

a predetermined number of decks of game cards are shuffled in a random order and individually packaged as one package, a unique ID code is attached to the package of each unique shuffled game cards

and
the packages of shuffled game cards are carried from a backyard to pits for game tables and game tables,
the method having,
a registering step for registering all of ID codes of the packages which have been brought into a back yard in a data base,
an administrating step for reading all of the ID codes of packages which have been brought into a pit and monitoring each ID code of all existing packages of shuffled game cards at the pit by obtaining each ID codes of all existing packages of shuffled game cards at the pit by ID code reader(s),
wherein,
in the administrating step at the pit all of ID codes of the packages is examined whether it is the one preliminarily brought into the back yard and having been registered in the data base or not.

[0009] The method for administrating a package of shuffled game cards according to this ~~invention~~disclosure, the registered ID codes of the packages in the data base may be deleted or acknowledged as after having used when the ID code of the package is read by an ID code reader at the game table. The ID codes of the packages read for the next use may be examined by the administrating controller whether it is the one properly arrived on the game table or the one arrived at proper timing or period of time that may be properly arrived on the game table or the one arrived at proper timing or period of time by judging at least one of the followings;

1) whether it was carried through predetermined delivery route,
2) whether it was missing one,
3) whether it has not been registered,
4) whether it has been unused in the pit more than predetermined period,
5) whether it was carried from unexpected pit or without passing any pit,
6) whether it had been used at any of game tables in the past.

[0010] The method for administrating a package of shuffled game cards according to this ~~invention~~disclosure, the administrating step further may have a step for administrating whether or not all of registered ID codes of the packages in the data base have been deleted or acknowledged as after having used during certain period of time. A pallet ID or a carton ID may be used for registering ID codes of the packages which have been brought into the back yard. The administrating step further may have a step for administrating whether or not there is any package which has not been used at the game tables during certain period of time.

[0011] A keeping box for containing plurality of packages of shuffled game cards for the method for administrating a package of shuffled game cards according to ~~our invention~~this disclosure

Claims

[Claim 1] A system for administrating a package of shuffled playing cards, wherein a predetermined number of decks of playing cards are shuffled in a random order and individually packaged as one package, a unique ID code is attached to the package of each unique shuffled playing cards
the system having
an ID code reader disposed at the game table configured to obtain the ID code of the packages at the game table to identify the package which will be used on a game table with a card dealing shoe,
and
an administrating controller for monitoring the ID code of package of shuffled playing cards, having computer readable medium that stores a data base of ID codes of the packages which have been brought into a backyard of casino,
the administrating controller is configured to obtain the ID code of the package to be used on the game table being read by the ID code reader and examine whether the ID code read on the game table is the one preliminarily being existed for the proper use in the data base.

[Claim 2] The system for administrating a package of shuffled playing cards according to claim 1, wherein,
the administrating controller is configured to examine whether the package of the ID code read on the game table is the one not expected to be on the game table or the one arrived at unexpected timing.

[Claim 3] The system for administrating a package of shuffled playing cards according to claim 1, wherein,
the administrating controller is configured to be programmed to examine the package by at least one of the followings items;
1) whether it was carried from predetermined delivery route,
2) whether it was not missing one,
3) whether it has not been registered in the data base,
4) whether it has been unused in the pit more than predetermined period,
5) whether it was carried from unexpected pit or without passing any pit,
6) whether it had been used at any game table in the past.

[Claim 4] The system for administrating a package of shuffled playing cards

according to claim 1, wherein,
at least one of the following items is stored in the computer readable medium in connection with the ID code of the package of shuffled playing cards and being examined on the game table by one of these items:
(1) the game table to be used;
(2) the dealer (person who draws cards) in charge of the game table to be used;
(3) the expected end time of the use of each package of shuffled playing cards on the game table;
(4) the information concerning the pit or the card room where each package of shuffled playing cards are expected to be carried before it is delivered to the relevant game table.

[Claim 5] The system for administrating a package of shuffled playing cards according to claim 1, wherein,
the ID code of the package being read for the next use will be deleted or acknowledged as the one having been used at the game table by the administrating controller.

[Claim 6] The system for administrating a package of shuffled playing cards according to claim 1, wherein,
the ID code reader is directly or indirectly connected to the card dealing shoe on the game table and configured to send the ID code of the packages to the administrating controller to identify the ID code of the package for the next use and the card dealing shoe receives an instruction from the administrating controller.

[Claim 7] The system for administrating a package of shuffled playing cards according to claim 1, wherein
the card dealing shoe has a output means for alarming the examined results of the ID code of the package or identified ID code of the package for preventing the use of the package.

[Claim 8] The system for administrating a package of shuffled playing cards according to claim 1, wherein
the card dealing shoe has a lock means for preventing a usage of the package by the examined results of the ID code of the package or an instruction for not using the next use by an user of a casino.

[Claim 9] The system for administrating a package of shuffled playing cards according to claim 1, wherein
the card dealing shoe has an alarm function for alarming to prevent a

usage of the package by an instruction for not using the next use by an user of a casino according to an instruction from the administrating controller.

[Claim 10] The system for administrating a package of shuffled playing cards according to claim 1,
the administrating controller is configured to search from the each ID code of the package to the place where the package exists.

[Claim 11] The system for administrating a package of shuffled playing cards according to claim 1,
the administrating controller is configured to search the ID code of the package identified from a container ID, a pallet ID or a carton ID which has stored the packages and prohibit the packages from being used at the game table.

[Claim 12] The system for administrating a package of shuffled playing cards according to claim 1,
multiple packages are monitored by reading each ID code of the package at predetermined places in the pits and registered in computer readable medium by the administrating controller.

[Claim 13] The system for administrating a package of shuffled playing cards according to claim 1,
multiple packages are carried on a vehicles for transferring the packages of shuffled playing cards from a backyard to the pits for game tables and are monitored while carrying on routes by the administrating controller whether there is any lost package or not by reading each ID code of the package.

[Claim 14] The system for administrating a package of shuffled playing cards according to claim 1,
all of the ID code of the packages which have been brought into the back yard are administrated with a group of packages which have been contained in one container and ID codes of the group of packages are registered and the number or the ID codes of the packages unused in the group of packages are monitored or detected.

[Claim 15] A keeping box for containing one or more packages of shuffled playing cards and monitoring ID codes attached to the packages which has one or more readers configured to read the ID code of package of shuffled playing cards in the keeping box, a communication means for sending information or image(s) obtained by the reader to outside the keeping box and a lock means configured to prevent taking off the package

from the keeping box.

[Claim 16] The keeping box according to claim 15, the keeping box is a carrier to carry the one or more packages.

[Claim 17] A method for administrating a package of shuffled playing cards, wherein
a predetermined number of decks of playing cards are shuffled in a random order and individually packaged as a set of shuffled playing cards, an ID code is attached to the package of the set;
the method having the steps of:
a registering step of registering to a data base, all of ID codes of the packages which have been brought into a backyard,
a carrying step of carrying the packages of the sets of shuffled playing cards by using plural carriers from the backyard to one of pits or playing tables,
and,
an administrating step of administrating numbers of the packages of shuffled playing cards and ID codes of the packages at each places which are a backyard and pits or playing tables by way of monitoring every ID codes of the packages at each places whether or not each package exists at authorized or programmed place in each predetermined timing,
wherein the ID code of the package at playing tables for the next use a of game is read by the ID code reader and registered to the data base as the one having been used for the game or deleted from the data base.

[Claim 18] The method for administrating a package of shuffled playing cards according to claim 17, the method further having,
in/out checking step for checking whether or not the ID code read at the place has been existed previously.

[Claim 19] The method for administrating a package of shuffled playing cards according to claims 17 or 18,
the administrating step further having,
a reporting step of reporting or alarming about the ID code of any unauthorized, unexpected or deficiency package with the place or the carrier where these fact is found.

[Claim 20] The method for administrating a package of shuffled playing cards according to any one of claims 17 to 19,
the administrating step further having,
a reporting step of reporting about the ID code of the package which

has been arrived inappropriate timing.

[Claim 21] The method for administrating a package of shuffled playing cards according to claim 17,
the administrating step further having,
a movement checking step of obtaining every ID codes of the packages of shuffled playing cards at least two places in predetermined period of times, grasping inventory information at each place from the ID code obtained at each place, and checking whether or not a predetermined movement between at least two places has been carried out.

[Claim 22] The method for administrating a package of shuffled playing cards according to claim 17,
wherein carrying paths of carries for carrying the packages from the backyard are being monitored in the carrying step.

[Claim 23] The method for administrating a package of shuffled playing cards according to claim 17,
wherein one or more packages are stored in a keeping box at least at one of pits or playing tables, and the keeping box is for containing one or more packages of shuffled playing cards for the method for administrating a package of shuffled playing cards.
wherein a keeping box is used for keeping or carrying one or more packages, and the keeping box has a reader for reading all of the ID codes of packages of in the keeping box, a communication means for sending information obtained by the reader to outside the keeping box and a lock means to prevent taking off the package from the keeping box.

[Claim 24] The method for administrating a package of shuffled playing cards according to claim 17,
wherein the ID code reader is selected from at least a barcode reader, a 2-dimentional code reader, a camera or RFID tag reading means.

[Claim 25] A package of shuffled playing cards to be used in a system for administrating a package of shuffled playing cards,
wherein a predetermined number of decks of playing cards are shuffled in a random order and individually packaged as one package, each unique ID code is attached to the package of each shuffled playing cards,
the ID code is read by an ID code reader disposed at a game table configured to obtain the ID code of the packages at the game table to identify the package which will be used on the game table with a card

dealing shoe,
and
the ID code is configured to be examined whether the package of the ID code read on the game table is the one not expected to be on the game table or the one arrived at unexpected timing by the system for administrating the package of shuffled playing cards.

[Claim 26] The package of shuffled playing cards according to claim 25, wherein the card dealing shoe has a output means for alarming the examined results of the ID code of the package for the next use for preventing the usage of the package.

[Claim 27] A card dealing shoe for a package of shuffled playing cards to be used in a system for administrating the package of shuffled playing cards, wherein a predetermined number of decks of playing cards are shuffled in a random order and individually packaged as one package, each unique ID code is attached to the package of each shuffled playing cards,
the ID code is read by an ID code reader disposed at a game table configured to obtain the ID code of the packages at the game table to identify the package which will be used on the game table with the card dealing shoe,
and
the ID code is configured to be examined whether the package of the ID code read on the game table is the one not expected to be on the game table or the one arrived at unexpected timing by the system for administrating the package of shuffled playing cards.

[Claim 28] The card dealing shoe for package of shuffled playing cards according to claim 27, wherein
the card dealing shoe has a output means for alarming the examined results of the ID code of the package for the use for preventing the usage of the package.

[Claim 29] The card dealing shoe for the package of shuffled playing cards according to claim 27, wherein
the card dealing shoe has a lock means for preventing a usage of the package by the examined results of the ID code of the package for the use.

[Claim 30] The card dealing shoe for the package of shuffled playing cards according to claim 28, wherein
the ID code reader is directly or indirectly connected to the admin-

istrating controller configured to send the ID code of the packages to identify the ID code of the package for the next use and the administrating controller instruct the card dealing shoe for the function of allowing delivering or not the cards of package from the shoe.

CLAIMS

[Claim 1]

A system for administrating a plurality of packages of shuffled playing cards, which are shuffled in a random order and individually packed into each package having an ID code being unique to each of the packages, the system comprising:

a keeping box for containing the packages of shuffled playing cards with monitoring each of the ID codes attached to each of the packages; and

an administrating controller, which has a computer readable medium that stores a database in relation to the ID codes of the packages which have been brought into a backyard of a casino and have been contained in the keeping box,

wherein,

the keeping box has

a first ID code reader for obtaining ID-code information on each of the ID codes of the packages in the keeping box, and

a communication means for sending the ID-code information obtained by the first ID code reader to the administrating controller,

the administrating controller is configured to periodically obtain the every ID-code information of the package in the keeping box and judge whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[Claim 2]

The administrating system according to claim 1, wherein,

the administrating controller is configured to be programmed to judge at least one of the followings items,

(2) whether any of the packages is not missing, and

(3) whether any of the packages has not been registered in the database.

[Claim 3]

The administrating system according to claim 1, further comprising:

a second ID code reader, which is communicably connected to the administrating controller, for obtaining the ID-code information on each of the ID

codes of the package being carried inside the casino, wherein

the administrating controller is configured to judge (1) whether each of the packages is delivered through a predetermined route in the casino.

[Claim 4]

The administrating system according to claim 1, further comprising:

a third ID code reader, which is communicably connected to the administrating controller, for obtaining the ID-code information on each of the ID codes of the package being at the pit of the casino, wherein

the administrating controller is configured to measure a unused time, which is a time period for the package of the shuffled playing cards being unused at the pit, and judge (4) whether the unused time of each of the packages exceeds a predetermined threshold.

[Claim 5]

The administrating system according to claim 1, further comprising:

third ID code readers, which are communicably connected to the administrating controller, for obtaining the ID-code information on each of the ID codes of the packages being at each of the pits of the casino, wherein

the administrating controller is configured to judge (5) whether each of the packages is carried to a destination via any of unexpected pits or not via expected pits.

[Claim 6]

The administrating system according to claim 1, further comprising:

forth ID code readers, which are communicably connected to the administrating controller, for obtaining the ID-code information on each of the ID codes of the package being at each of the game tables of the casino, wherein

the administrating controller is configured to judge whether each of the packages is carried a destination via any of unexpected pits or not via expected pits.

the administrating controller is configured to update the database in terms of usage of the packages of the shuffled playing cards and judge (6) whether any of the packages has been used at any of game tables in the past.

[Claim 7]

The administrating system according to claim 1, wherein,

the administrating controller stores the ID-code information linking with further information in regard to at least one of the following items into the database:

(i) game table on which the package of shuffled playing cards to be used;

(ii) dealer in charge of game table on which the package of shuffled playing cards to be used;

(iii) expected ending time of use of the package of shuffled playing cards on a game table,

(iv) information concerning a pit or a card room where the packages of shuffled playing cards are expected to be carried before the packages are delivered to relevant game table.

[Claim 8]

The administrating system according to claim 1,

wherein the ID code reader is any one of a barcode reader, a 2-dimentional code reader, a camera and an RFID tag reader.

[Claim 9]

The administrating system according to claim 1,

a container-ID code reader, which is communicably connected to the administrating controller, for obtaining carton-ID information on carton-ID code, wherein

the packages contained a container are carried into the backyard,

the container has the container-ID code which is unique to the container,

the administrating controller registers the container-ID code linking with each of the ID codes of the packages, which are contained in the container, into the database based on the container-ID information obtained by the container ID code reader,

[Claim 10]

The administrating system according to claim 1, wherein

the ID-information is image data of the ID code.

[Claim 11]

The administrating system according to any one of claims 1 to 10 further comprising:

a lock means for preventing from taking the packages out from the keeping box.

[Claim 12]

A keeping box for containing playing cards shuffled and individually packed into each package, the keeping box comprising:

an ID code reader for obtaining ID-code information on ID code, which is attached to each of the packages of shuffled playing cards; and

a communication means for sending the ID-code information obtained by the ID code reader to an administrating controller,

wherein

the administrating controller is configured to periodically obtain the every ID-code information of the package in the keeping box and judge whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[Claim 13]

The keeping box according to claim 12, wherein

the keeping box is a carrier to carry the one or more packages.

[Claim 14]

The keeping box according to claim 12,

wherein the ID code reader is one of a barcode reader, a 2-dimentional code reader, a camera and an RFID tag reader.

[Claim 15]

The keeping box according to claim 12,

wherein the ID-information is image data of the ID code.

[Claim 16]

The keeping box according to any one of claims 12 to 15 further

comprising:

a lock means for preventing from taking the packages out from the keeping box.

[Claim 17]

A method for administrating playing cards which includes a plurality decks of playing cards shuffled in a random order and are individually packed into each package having an ID code, the packages are stored in a keeping box at least at one of pits or playing tables in a casino, the method comprising steps of:

registering each of the ID codes of each of the packages, which have been brought into a backyard, into a database;

obtaining ID-code information on the ID code of each of the packages, which are stored in the keeping box; and

periodically judging whether there is a mismatch between the packages stored in the keeping box based on the ID-code information received from the communication means and the packages had been existed in the backyard based on the ID-code recorded in the database.

[Claim 18]

The administrating method according to claim 17,

wherein each of the ID codes are obtained by any one of a barcode reader, a 2-dimentional code reader, a camera and an RFID tag reader.

[Claim 19]

The administrating method according to claim 17,

wherein the ID-information is image data of the ID code.