[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]

Embodiments of the present invention seek to provide a real-time monitoring of the package of shuffled game cards in casinos and enable 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]

Embodiments of the present invention seek 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 tracking system for monitoring and recording movement of packages of playing cards in an entertainment facility, the system comprising:

a plurality of the packages of the playing cards, each having remotely readable ID code associated therewith;

a plurality of ID code sensors for obtaining the ID code of each of the packages when any at least one of the packages comes into a detectable range of the ID code sensor and for individually generating an signal including information on the obtained ID code and a location of the ID code obtained in the entertainment facility;

a processor for creating, based on the signal, an event record including information on the obtained ID code, a time of the detection and a location of the detection; and

a database being communicably connected to the processor,

wherein at least one of the ID code sensors is installed at a storage area where the packages are stored in the entertainment facility,

wherein at least one of the ID code reader sensors is installed in an forwarding area where each of the packages are in transit in the entertainment facility,

wherein each of the ID code sensors obtains the ID code when any one of the packages either enters or departs, or both enters and departs, the detectable range of the ID code sensor,

wherein the processor writes the event record into the database,

wherein the processor creates the event record periodically based on the signals generated by the ID code sensor, and

wherein the ID code sensors obtains repeatedly the ID code of the packages.

[0006b]

Another aspect of the present invention provides a method for tracking movement of a plurality of packages of playing cards in an entertainment facility, the method comprising:

obtaining ID code of each of the packages when any at least one of the package comes into a detectable range of an ID code sensor;

generating an signal including information on the obtained ID code and a location of the ID code obtained;

generating the signal when any at least one of the packages either enters or departs, or both enters and departs, the detectable range;

periodically creating, based on the generated signal, an event record including information on the obtained the ID code, a time of obtaining the ID code and a location of obtaining the ID coded;

writing the created event record into a database; and

obtaining repeatedly the ID code of the packages by the ID code sensors.

[0006c]

Another aspect of the present invention provides a system for administrating a plurality of packages, which has been provided with an ID code being unique to each of the packages, the system comprising:

a storage for containing the valuable items for monitoring each of ID codes provided with the packages; and

an administrating controller, which has been provided with a computer readable medium that stores a database in relation to the ID codes of the packages, wherein further the system has

a ID code reader for obtaining ID-code information on each of the ID codes of the packages in the storage,

a plurality of ID code sensors for individually generating an signal including information on the obtained ID code and a location of the ID code obtained, 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 obtain repeatedly every ID-code information of each packages in the storage and inspect whether there is a mismatch between the packages existing in the storage and the packages which had been contained in the storage, and

the ID code sensors obtains repeatedly the ID code of the packages.

[0006d]

Another aspect of the present invention provides a storage for containing packages, the storage comprising:

an ID code reader for obtaining ID-code information on ID code provided with the packages,

a plurality of ID code sensors for individually generating an signal including information on the obtained ID code and a location of the ID code obtained, 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 obtain repeatedly obtain code information of the packages in the storage and judge whether there is a mismatch between the packages existing in the storage and the packages which had been contained in the storage, and

the ID code sensors obtains repeatedly the ID code of the packages.

[0006e]

Another aspect of the present invention provides a method for administrating packages having an ID code, the packages are stored in a storage, the method comprising steps of:

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

generating an signal including information on the obtained ID code and a location of the ID code obtained; and

repeatedly inspecting whether there is a mismatch between the packages existing in the storage and the packages initially stored in the storage,

wherein the ID code sensors obtains repeatedly the ID code of the packages.

[0007]

The present disclosure also provides 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]

The present disclosure also provides 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 the present 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 the present 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 the present disclosure may have reader(s) for reading the ID codes of packages of shuffled game cards 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.

[Brief Description of Drawings]

[0012]

[Fig. 1]

Fig. 1 is a perspective view of a package and an unpackaged shuffled playing cards to be used in a card dealing shoe of the system for administrating a package of shuffled playing cards according to the embodiment of the present invention.

[Fig. 2]

Fig. 2 is a diagram schematically showing the entirety of a system for administrating a package of shuffled playing cards according to an embodiment of the present invention.

[Fig. 3]

Fig. 3 is a perspective view of the shuffled playing cards to be carried from a factory to a backyard and pits of casino tables as a package or carton, of pallet according to one embodiment of the present invention.

[Fig. 4A]

Fig. 4A is a perspective view showing a keeping box according to an embodiment of the present invention in