

DESCRIPTION

[Title of the Invention] TRADING CARD SYSTEM AND TRADING CARD
TRANSACTION PROCESSING METHOD FOR TRADING CARD SYSTEM

5 [Technical Field]

[0001]

The present invention relates to a trading card system and a trading card transaction processing method for the trading card system.

[Background]

10 [0002]

In recent years, in addition to historical artworks, the market has become dotted with expensive products of various genres, with added value due to brand and rarity.

[0003]

One of these products is trading cards. In Japan, many trading cards are popular,
15 including Magic the Gathering (product name), Duel Masters (product name), Pokémon Cards (product name), "Magic the Gathering (product name)", "Yu-Gi-Oh! (product name)", and "Pokémon Cards (product name)". Some of these cards have become assets worth millions of yen or even tens of millions of yen per card.

[0004]

20 In particular, enthusiasts who collect these types of trading cards as assets use online sites where trading cards are bought and sold to keep track of the value and changes in value of the trading cards they have collected.

[0005]

Patent Literature 1 listed below describes the use of non-fungible tokens (NFTs) for

managing transactions and the like of objects other than the NFTs.

Patent Literature 2 listed below describes the management of ownership of real cards that are tangible objects and digital cards that are intangible objects.

[0006]

- 5 Non Patent Literature listed below describes that Toretoku (company name) allows customers to view cards eligible for high purchase prices of Magic the Gathering (product name), Duel Masters (product name), and Pokémon Cards (product name), for example.

[Citation List]

[Patent Literature]

- 10 [0007]

Patent Literature 1: Japanese Patent No.6710401

Patent Literature 2: Japanese Patent No.6894033

[Non Patent Literature]

[0008]

- 15 Non Patent Literature 1: Internet EC site of trading card purchase specialty store Toretoku
URL: <https://kaitori-toretoku.jp>

[Summary of the Invention]

[Technical Problem]

[0009]

- 20 In the exchange of such items with a focus on rarity, the asset value of trading cards is different from that of stock certificates or precious metals in that it is difficult to recognize their asset value, and trading cards have a special market nature in which prices fluctuate greatly.

On the other hand, there are frequent cases where items that actually have market

value are mistaken for childhood toys and discarded.

[0010]

Moreover, because trading cards are, by their very nature, made of paper and ink, there is a continuous stream of counterfeits (forgeries, fakes), which is a cause of concern for potential buyers, particularly in secondhand goods trading markets (Yahoo! Auctions, Mercari, eBay (service names), and the like).

[0011]

In the future, the more trading cards are recognized as assets, the greater the incidence and risk of counterfeit products being sold. In addition, because counterfeits of trading cards are more difficult to distinguish than printed cash notes and the risk of being detected as a criminal forger is lower, this issue is expected to continue for a long time to come.

The issues facing the trading card market are (1) to (4) as follows:

(1) There are no professional agencies in Japan that can verify the authenticity or grade trading cards.

(2) The current value of trading cards used in old games is not recognized, and items with assets are discarded.

(3) Counterfeits are in circulation (there are particularly many incidents of fraud in the secondary market).

(4) Thefts are occurring frequently.

Regarding the issue (1), collectors mentioned above are faced with the challenge of having to transport their items by air to an appraisal agency in the United States, at the risk of damage or loss.

Regarding issue (2), there are many cases where the assets are discarded because the

asset value cannot be determined.

Regarding the issue (3), even if an amateur obtains a counterfeit, he or she will be unable to detect it, resulting in economic losses due to wasted investment.

[0012]

5 Regarding the issue (4), as the value of each trading card increases, theft also becomes more frequent, so trading cards must be deposited with some kind of credit institution, and the management costs must be borne.

[0013]

10 Therefore, there are attempts to generate digital image data showing the contents of a trading card separately from the physical trading card, issue an NFT for the digital image data, and circulate it as a digital asset on a management server using blockchain.

In this case, since digital assets are assumed to be subject to secondary circulation, it is possible to add a degree of verification function to the transfer of ownership by using NFTs.

15 [0014]

However, even if NFTs are used, the current rule-making process means that there is no consistency in the form of transactions, and since creating a system that incorporates trading cards with high asset value that have already been issued depends on owners' intention, no agreements have been reached at present.

20 [0015]

The present invention has been made to solve the above-mentioned issues, and an object of the present invention is to provide a trading card system and a trading card transaction method for the trading card system, the system being capable of combining physical trading cards circulating in the market with trading cards as digital assets linked

to the physical trading cards, and building a system that allows each trading activity to be smoothly carried out.

[Solution to Problem]

[0016]

5 The trading card system of the present invention that achieves the above object includes the following configuration.

[0017]

10 The trading card system is characterized by connecting a first data terminal operated by an appraisal requester and a management server in a communicable manner through a predetermined communication medium, the management server including a generation function configured to generate digital trading card information in which appraisal information is generated by reading a trading card body sent by the appraisal requester and the trading card body are imaged in a laid-out, and a management function configured to issue an NFT that identifies the digital trading card information generated by the

15 generation function, and to register and manage the NFT in a predetermined database in a state of being linked to the digital trading card information, and to determine whether to send the NFT that identifies the digital trading card information to the first data terminal based on whether an administrator of the management server will store the trading card body sent by the appraisal requester in a repository.

20 [Advantageous Effects of Invention]

[0018]

According to the trading card system of the present invention, it is possible to build a system that allows trading activities to be smoothly carried out for both physical trading cards circulating in the market and trading cards as digital assets linked to the physical

trading cards.

[Brief Description of Drawings]

[0019]

The drawings illustrate specific embodiments of the present invention including
5 optional and preferred embodiments as well as essential features of the invention.

FIG. 1 is a block diagram describing a configuration of a trading card system
according to an embodiment.

FIG. 2 is a block diagram describing hardware resources of a data terminal device
shown in FIG. 1.

10 FIG. 3 is a block diagram describing a hardware configuration of various servers
shown in FIG. 1.

FIG. 4 is a block diagram describing a configuration of an appraisal server shown in
FIG. 1.

15 FIG. 5 is a block diagram describing functions of an NFT management server shown
in FIG. 1.

FIG. 6 is a chart showing an example of a trading card handling process according
to the embodiment.

FIG. 7 is a diagram showing an example of a grading evaluation sheet printed and
pressed by a printing unit shown in FIG. 4.

20 FIG. 8 is a flowchart describing a determination/evaluation method of a trading card
determination/evaluation device according to the embodiment.

FIG. 9 is a diagram showing a grading process of a trading card service system
according to the embodiment.

FIG. 10 is a block diagram describing the role of virtual currency in the trading card

system according to the embodiment.

FIG. 11 is a flowchart describing a trading card appraisal processing method of a first data terminal in the trading card system according to the embodiment.

FIG. 12 is a flowchart describing a trading card appraisal processing method of the appraisal server in the trading card system according to the embodiment.

FIG. 13 is a flowchart describing a trading card appraisal processing method of the first data terminal in the trading card system according to the embodiment.

FIG. 14 is a flowchart describing a trading card return processing method of the data terminal device in the trading card system according to the embodiment.

FIG. 15 is a flowchart describing a trading card appraisal processing method of the appraisal server in the trading card system according to the embodiment.

[Description of Embodiment]

[0020]

Next, the best modes for carrying out the present invention will be described with reference to the drawings.

The following embodiment relates to the trading card system shown in FIGS. 1 to 15 and include not only essential configurations of the invention but also optional and preferred embodiments.

<Description of System Configuration>

[First Embodiment]

FIG. 1 is a block diagram describing a configuration of a trading card system according to the present embodiment. In the present embodiment, it is possible to configure the system with an appraisal server, an NFT management server, and a TC disclosure server described below as a single management server. However, in order to

clarify the functions of these servers, a case where the system is constructed by independent servers will be described here in detail.

[0021]

Referring to FIG. 1, data terminal devices 200-1 to 200-N are constituted by smartphones, for example, and include a touch panel 204-1 as one of various hardware resources as shown in FIG. 2.

[0022]

A network 100 communicates with the data terminal devices 200-1 to 200-N using a predetermined protocol to connect to a TC disclosure server 700 that functions as a content server, enabling the viewing and buying/selling of digital trading cards linked to NFTs.

[0023]

A virtual currency server 500-1 performs payment processing using virtual currencies, and manages virtual currencies with different exchange rates using a blockchain. The data terminal devices 200-1 to 200-N, which are equipped with a wallet function for making payments with virtual currency, can select a virtual currency that can be used for payment when buying and selling digital trading cards with issued NFTs from a virtual currency selection screen displayed on a touch panel display unit described later. A distributed ledger network system 600 is connected to a plurality of data processing devices in a peer-to-peer (P2P) manner.

[0024]

A trading card disclosure server 700 stores the prices of trading card bodies that are actually traded in an updateable manner based on fluctuations in market prices. Since the transaction price fluctuates in conjunction with the rarity value of a trading card, the

appraisal server 502 is referenced when determining the prices of the physical trading card body and the digital trading card, and contributes to a process of calculating an appropriate transaction price. The NFT management server 400, the appraisal server 502, and the TC disclosure server 700 may be combined into a single management server.

5 The virtual currency server 500-1 provides a service of accepting, via a second data terminal operated by the buyer, a request to buy or sell digital trading card information linked to NFTs disclosed on the marketplace via the network, on the condition that a fee is paid in a predetermined virtual currency, and confirming the buy or sell transaction in the predetermined virtual currency.

10 [0025]

FIG. 2 is a block diagram describing hardware resources of the data terminal devices 200-1 to 200-N shown in FIG. 1. The embodiment will be described in detail below taking as an example a trading card system in which the data terminal device 200-1 functions as a first data terminal device and the data terminal device 200-N functions as
15 a second data terminal device.

Referring to FIG. 2, a communication unit 201 is connected to the network 100 and executes communication processing with the various server devices shown in FIG. 1 using a predetermined protocol.

[0026]

20 A ROM 202 stores protocols for trading a plurality of virtual currencies, and stores BIOS that controls input/output devices. A RAM 203 is expandable in capacity, and the BIOS and applications read from the ROM 202 are loaded into working memory, enabling various kinds of data processing and service processing. In the present embodiment, the data terminal devices 200-1 to 200-N function as virtual currency payment terminals, but

standalone terminals may be used as wallets.

[0027]

A touch panel display unit 204 includes a touch panel 204-1 and a display device 204-2. A CPU 205 performs overall control of the above-described devices connected
5 to an internal bus. The power supply unit is not illustrated.

[0028]

The RAM 203 stores the NFTs issued for the digital trading cards notified by the appraisal server 502, and is configured such that non-fungible token ((hereinafter, NFT) information (not shown), which is digital trading card information generated from the
10 trading card body and includes the identification number, card name, card owner, card purchase/sales price, and the like) is readable by an application for viewing the digital trading card information.

[0029]

The NFTs are tokens issued in the "ERC721" standard of Ethereum, a blockchain
15 network platform, for example. They are a unit of data recorded on the blockchain network and can represent unique digital assets such as products related to digital information such as image data and video data, and are non-fungible by nature. The blockchain may be referred to as distributed ledger network system 600.

[0030]

20 NFTs are recorded on the blockchain along with smart contracts and are traceable, allowing for verifiable ownership history, details such as trading card information, and valuation information including quoted price history.

[0031]

FIG. 3 is a block diagram describing a hardware configuration of various servers

shown in FIG. 1. The servers here include the virtual currency server, the NFT management server 400, and the TC disclosure server 700 shown in FIG. 1.

Referring to FIG. 3, the appraisal server 502 includes a communication unit 11, a memory unit 19, and a CPU 20, and the communication unit 11 is connected to the
5 network 100 shown in FIG. 1.

[0032]

The memory unit 19 includes a RAM 19-1 and a ROM 19-2. An external memory 14 is made up of a plurality of HDDs and memory slots and functions as a large-capacity storage medium.

10 A display unit 15 displays the state of the server device main body 1, commands input from an input unit 16, and a table list of arithmetic processing results and stored information.

[0033]

The trading card system configured as described above is characterized by
15 communicably connecting the data terminal devices 200-1 to 200-N operated by an appraisal requester and a management server via a predetermined communication medium, the management server including a generation function to generate digital trading card information in which appraisal information is generated by reading a trading card body sent by the appraisal requester and the trading card body are imaged in a laid-
20 out state, and a management function to issue an NFT (including information on the owner and purchase/sales prices) that identifies the digital trading card information generated by the generation function, and to register and manage the NFT in a predetermined database 101 in a state of being linked to the digital trading card information.

[0034]

Then, the appraisal server 502 determines whether to send the NFT that identifies the digital trading card information to the data terminal device 200-1, based on whether to store the trading card body sent from the data terminal devices 200-1 to 200-N operated
5 by the appraisal requester (the owner of the trading card body) in a repository 1000.

The appraisal server 502 is also characterized by disclosing the digital trading card information linked to the NFT registered in the database 101 on a predetermined marketplace provided by the NFT management server 400, for example.

Based on the type of received appraisal information, the NFT trading card is sent to the
10 data terminal devices 200-1 to 200-N operated by the appraisal requester.

[0035]

The appraisal server 502 also provides a service of storing, in the repository 1000, trading card bodies temporarily entrusted thereto by the appraisal requesters. The repository 1000 does not need to be located close to the management server, and may be
15 provided in a separate laboratory that provides an independent safe deposit box service. However, a server system that provides the safe deposit box service can be connected to the management server for communication while ensuring a degree of security.

[0036]

Furthermore, based on receiving notification of the removal of the trading card body
20 from the data terminal devices 200-1 to 200-N operated by the appraisal requester, the appraisal server 502 deletes from the database 101 second appraisal information for proving the value of the digital trading card information and the token to identify the owner.

[0037]

As described below, the appraisal server 502 provides a buying/selling service using virtual currency in which the digital trading card bodies stored in the repository 1000 are paired with digital trading card information generated from the trading card bodies.

[0038]

5 In the buying/selling service using virtual currency in combination with digital trading card information, the NFT management server 400 handles transactions on a specific card buying/selling NFT site.

[0039]

10 When receiving a new appraisal request after the owner has changed due to the selling/buying of the trading card body, the appraisal server 502 generates digital trading card information linked to the trading card body in parallel with the generation of first appraisal information, and provides the function of reissuing the second appraisal information to prove the value of the digital trading card information and the token to identify the owner.

15 In the disclosure of the invention in each embodiment, the present invention includes the following configurations.

20 After the owner of a trading card changes due to selling/buying of the trading card body, the new owner may wish to keep the physical card body and then deposit the card again after a certain period of time. In such a case, if the acrylic plate of the deposited card is not damaged and the deposited card has the same appraisal ID, the appraisal server 502 checks again the trading card and generates digital trading card information linked to the trading card body, and provides the function of reissuing the second appraisal information to prove the value of the digital trading card information and the token to identify the owner.

On the other hand, if the new owner wishes to keep the physical card body and then intentionally destroys the card in some way and removes it from the acrylic plate, not only will the appraisal of the trading card become invalid, but if the owner makes an appraisal request again, the appraisal check will have to be done again from the beginning.

5 Even if the authenticity determination and grading results are the same as before, the trading card will be treated as a different appraised card. Therefore, even if the trading card is converted into an NFT, the trading card will be given a different token ID than before.

[0040]

10 In this case, when the appraisal server 502 reissues the second appraisal information to prove the value of the digital trading card information and the token to identify the owner, new owner information can be added without losing the owner information.

[0041]

As described later, the appraisal server 502 generates digital trading card information
15 linked to the trading card body in parallel with generation of the first appraisal information. When issuing the second appraisal information to prove the value of the digital trading card information and the token to identify the owner, the appraisal server 502 provides the token with the function to record a new transaction price by referring to market price information for the trading card body.

20 [0042]

FIG. 4 is a block diagram illustrating a configuration of the appraisal server 502 shown in FIG. 1.

[0043]

Referring to FIG. 4, a trading card determination/evaluation device 502 that includes

a control unit 2 that comprehensively controls a reading unit 7, an AI determination unit 8, an evaluation unit 9, a generation unit 10, a saving unit 18, and a ranking unit 12, which are connected to an internal bus. A communication unit 5 executes a process of establishing a communicable connection with a transaction system via a network 100.

5 An input unit 3 is constituted of a keyboard, a mouse device, or the like, and is used to input numerical values, specify icons, and the like, on a screen displayed on a display unit 4.

[0044]

10 The reading unit 7 optically reads the fronts, backs and cross-sections of a genuine trading card 7A and a fake trading card 7B, and outputs the read image information to the AI determination unit 8. The AI determination unit 8 accumulates learning results through the authenticity determination of trading cards in a memory unit 8A. In the memory unit 8A, the authenticity determination information shown in FIGS. 2 to 4 is accumulated so as to be identifiable for each evaluated trading card. The memory unit 15 8A also stores, in an updatable manner, authenticity information of trading cards that has been disclosed in the latest transaction.

[0045]

20 The evaluation unit 9 quantifies the evaluation of the centering, corners, edges, and surface conditions of the package, for example. The ranking unit 12 calculates an arithmetic mean of the evaluation values from the evaluation unit 9 and sets the calculated value as the evaluation value. The generation unit 10 generates a transaction image that indicates the transaction amount calculated based on market transaction information of the trading card to be evaluated acquired from a transaction system 17. In this example, the transaction image is formed by a QR code (registered trademark), but is not limited

to this. The saving unit 18 is configured to store the generated transaction image and to respond to an instruction to reissue the image. The QR code (registered trademark) of the transaction image is guaranteed to have a title value (appraised) as an appraised item, as with the NFT digital trading card information described later.

5 [0046]

A printing unit 13 prints the transaction image generated by the generation unit 10 in a predetermined format, an evaluation sheet, and an opening seal on a predetermined seal, by a thermal transfer method, for example. When a package 14 changes from a sealed state to an opened state, the opening seal is peeled off, thereby invalidating the
10 displayed content.

[0047]

In a packaging unit 14, the trading card is placed in a predetermined position, the evaluation sheet and the seal are attached to the top, and then the upper and lower covers are attached and sealed by heat compression. For this reason, under normal storage
15 conditions, the trading card body is not exposed to outside air.

[0048]

In the trading card determination/evaluation device configured as above, the AI determination unit 8 accumulates and learns feature information obtained from fake trading cards in the memory unit 8A, so that when the reading unit 7 reads an image of a
20 predetermined trading card that is the subject of a transaction, the AI determination unit 8 can compare the image of the trading card read with the latest learned feature information and quickly determine the authenticity of the read trading card.

[0049]

At this time, the reading unit 7 optically reads images of the front, back, and cross-

section of the trading card, and detects differences of each image from the learned latest feature information, thereby automating the authenticity determination of the trading card.

The evaluation unit 9 performs a process of determining the deterioration state of the read trading card according to predetermined standards (state parameters 1052 to 1055).

Accordingly, the ranking unit 12 performs a process of evaluating the rank of the read trading card based on the determined deterioration state of the trading card.

[0050]

The generation unit 10 then performs a process of converting the read image into an evaluation image based on the evaluation rank and the transaction information, and generates certification sheet information.

[0051]

At this time, the trading card determination/evaluation device 1 acquires transaction information on circulating trading cards through a network from a server device connected to the Internet. The transaction information managed by the server device also includes transaction information in the secondhand market.

[0052]

The printing unit 13 performs a process of printing, on a predetermined sheet of paper, certification information (including a QR code (registered trademark)) including transaction information for the trading card in the trading card market.

[0053]

The paper used for printing is configured to be damaged if the trading card sealed by a packaging process described later is opened. In other words, a sheet material based

on the principle of anti-counterfeiting seal is used. For this reason, trading cards that have not been recertified and sealed in a package have no proven value in the marketplace.

More specifically, different modes may be used for collectors and players.

[Mode 1]

5 A trading card is covered with an acrylic panel that is not meant to be opened (unless it is intentionally damaged, it will never be opened).

Specifically, a trading card is encased in an acrylic plate like TC-1 shown in FIG. 4. Since the paper with the appraisal results (integrated with a QR code (registered trademark)) is inside the acrylic plate, the paper is not a seal but is expected to contain an
10 anti-counterfeiting hologram or the like, with the authenticity, grade, and card name written on it.

[Mode 2]

A trading card is covered with a material that can be opened (made of resin, not acrylic). However, the opening is sealed with a heat-sensitive seal, and if the seal is
15 removed and the plate is opened, all of the appraisal results will become invalid.

[0054]

In the present embodiment, trading cards made in Japan are printed in Japanese. For trading cards made in foreign countries, the bibliographic information is printed using fonts suited to the respective languages.

20 This will prevent incorrect romanization and increase satisfaction for trading card collectors.

The packaging unit 14 performs a packaging process of sandwiching and sealing a printed evaluation certification sheet and a trading card together in a transparent thin plate material.

Since the printed evaluation certification sheet is marked with a predetermined certification code, the trader can make a judgment later.

[0055]

After a trading card is opened, it can be stored in a sealed container such that it can
5 be taken out and put back in during a match.

As described above, the acrylic plate container for trading cards has a breakable structure. Thus, after the trading card is opened, even if it is resealed in a transparent thin plate, it will no longer have any certification as an appraised item or any appraised value, and will only serve as a plate for storing the card.

10 [0056]

The components 8 to 12 in the trading card determination/evaluation device 1 may be replaced with software processing by one application program.

[0057]

In the repository 1000, a predetermined security level is set, and the locking of
15 trading card bodies entrusted thereto by the card owners is controlled using key information in which personal information and registration information are combined. The database 101 stores digital trading card information that is managed linked to the trading card bodies stored in the repository 1000. The database 101 also registers the NFTs set in the digital trading card information. A camera 102 captures images of the
20 trading card bodies stored in the repository 1000.

[0058]

The digital trading card information captured by the camera 102 is stored in a memory 102A and then registered in the database 101. In the present embodiment, digital trading cards with issued NFTs can be bought and sold on online sites separately

from the trading cards bodies, and digital trading card information registered on the TC disclosure server 700 (including the owner, transaction price, and trading card rank information) is disclosed.

[0059]

5 After digital trading card information TC2 of a trading card body TC-1 is registered in the database 101, the trading card body TC-1 is transported to the repository 1000, stored in a designated storage room, and locked.

[0060]

FIG. 5 is a block diagram illustrating functions of the NFT management server 400
10 shown in FIG. 1.

[0061]

Referring to FIG. 5, a controller unit 450 includes a first communication unit 451 and a second communication unit 452. The second communication unit 452 controls communication with the distributed ledger network system 600, and the first
15 communication unit 451 controls communication with devices connected to the network 100.

[0062]

The controller unit 450 comprehensively controls a user registration unit 453, a distributed ledger processing unit 454, a user information storage unit 455, a content
20 distribution unit 456, a purchase history storage unit 457, a content list search unit 458, an access authentication unit 459, and content storage units 460-1 to 460-N.

[0063]

The access authentication unit 459 strictly manages access to the distributed ledger network system 600 managed by the TC disclosure server 700 based on the content ID,

issue date and time, status, owner ID, usage period, and the like.

[0064]

FIG. 6 is a chart showing an example of a trading card handling process according to the embodiment. As described below, in the present embodiment, it is possible to
5 issue and store NFTs for a target trading card body (physical item) and digital trading card information generated by imaging the physical item and editing the captured image. The NFTs here are managed in the distributed ledger network system 600 managed by the TC disclosure server 700. Steps S01 to S11 are provided.

[0065]

10 Upon receipt of the trading card body TC-1 transmitted from an owner A to an administrator who manages the appraisal server 502 for an appraisal request (S01), the trading card body is appraised by the system shown in FIG. 4, and then is packaged with an evaluation sheet in a prescribed format, which includes rank information evaluating the external appearance of the trading card body, sealed in a plastic case (S02). The
15 trading card body sealed and packaged in the plastic case is then stored in the repository 1000.

[0066]

Thereafter, digital trading card information TC-2 is obtained by imaging the trading card body TC-1 with the camera 102 and is used by the TC disclosure server 700 to issue
20 an NFT.

Here, the NFT issued from the TC disclosure server 700 to the owner A is sent to the data terminal 200-1 via the network 100 (S04).

[0067]

If the owner A wishes to retrieve the physical trading card body TC-1 stored in the

repository 1000 and makes a request to the appraisal server 502 to send the physical item (S05), the administrator of the appraisal server 502 takes out the trading card body TC-1 from the repository 1000 and delivers the same to a delivery company or the like, or the owner A comes to receive the same (S05). At this time, the appraisal server 502 deletes
5 the digital trading card information TC-2 that was generated based on the trading card body TC-1 and is managed in the database 101 (S06).

[0068]

Meanwhile, an owner B can check information on a digital trading card that interests him/her by browsing the TC disclosure server 700 that discloses digital trading cards
10 provided by the TC disclosure server 700. At this time, it is possible to determine that the owner of the trading card body of interest is the owner A, for example.

[0069]

Thereafter, the owner A and the owner B negotiate (by email, SNS, telephone, or other means of communication) via the network 100 (S08 and S09). If an agreement is
15 reached on the transaction price, payment is made by an electronic payment server 501, and the ownership of the physical trading card is transferred from the owner A to the owner B. Specifically, selling/buying through sales systems such as Mercari and Yahoo! Auctions, and original trading card sales systems are assumed.

[0070]

20 As detailed in paragraph 39 above, in this state, since the trading card body TC-1 has no digital trading card information, the owner B makes a new request to the appraisal server 502, which will generate new digital trading card information in accordance with the above procedure, and an NFT will be issued via the TC disclosure server 700.

[0071]

On the other hand, since anyone can view a list of registered digital trading card information on the TC disclosure server 700, enthusiasts who collect digital trading cards are managed in transaction independently from collectors of trading card bodies. Each digital trading card information accompanies a single trading card body. However, while the trading card owner has the physical card deposited in the repository 1000, independent trading card transactions may be actively carried out, and the added value of the trading card may be greatly expanded during transactions, so that it is possible to provide enthusiasts with a new way of enjoying trading cards while satisfying the liquidity of asset value.

Accordingly, appraised cards will be returned as either "appraised physical cards" or "appraised cards and NFT data".

The advantages of possessing trading cards as NFT data are: (1) The NFT data does not take up space. (2) In buying or selling, there is no need to take pictures, pack, and ship the item, unlike in the case of handling a physical item (only data rewriting is required). (3) Even if a trading card is extremely expensive and difficult to find a buyer, the rights can be divided among and owned by a plurality of people and (a physical trading card cannot be owned by a plurality of people).

(4) Since the data owners are clearly defined, a community limited to the data owners can be formed. (5) In the cases of (3) and above, it will also be possible for owners to hold gatherings among them to view the originals, which are exclusive to the owners.

While those who wish to own appraised physical trading cards are mainly collectors, those who wish to own NFT data could be considered speculators.

[0072]

FIG. 7 is a diagram showing an example of a grading evaluation sheet printed and

pressed by the printing unit 13 shown in FIG. 4.

[0073]

Referring to FIG. 7, a grading evaluation sheet 1051 has a value (card rank) 1056 obtained by taking the arithmetic mean of the values of the condition parameters 1052 to 1055 and printed as a rank of "9.5". A QR code (registered trademark) 1057 is generated by obtaining the market price of the trading card that has been read from the transaction system 17.

[0074]

Accordingly, the QR code (registered trademark) on the trading card is read by a trading card service system described later and the market price of the trading card is recognized, so that it is possible to significantly save for trading card collectors the expenses that would previously be incurred by air freighting the trading cards to the United States along with the appraisal fee, and also to avoid the risk of damage or loss during air freight.

[0075]

In addition, the difference between the market price managed by the trading card service system and the US PSA also converges within a certain range, so collectors who collect trading cards can be aware of the fluctuating market price at any time.

[0076]

The grading evaluation sheet 1051 includes the name of the card series, the authenticity result, grading (condition rating), current asset value, and appraisal number.

Displaying the asset value as a QR code (registered trademark) makes it possible to standardize the reading process of the transaction system and speed up the appraisal process.

[0077]

In addition, closely linking with external online trading card buying/selling sites makes it possible to perform asset appraisals that reflect the actual trading market prices, even for the same trading card bodies.

5 [0078]

It is desirable to determine a fair market price for a trading card by closely monitoring information from a plurality of online trading card transaction sites and calculating an average price so as to reflect the latest market prices from a plurality of online trading card transaction sites. This makes it possible to prevent a biased
10 reflection of transaction conditions.

[0079]

FIG. 8 is a flowchart describing a determination/evaluation method of a trading card determination/evaluation device according to the embodiment. Steps (1) to (15) are provided. Each step is implemented by the control unit 2 reading and executing a
15 control program from the memory unit 2a.

[0080]

First, the control unit 2 instructs the reading unit 7 to read a trading card placed therein (1). The control unit 2 issues an instruction to the AI determination unit 8 to perform a determination on the image information of the read trading card output from
20 the reading unit 7. In response to this, the AI determination unit 8 learns the image information of the read trading card and determines whether it is genuine or fake based on data accumulated in the memory unit 8A (2).

[0081]

If the control unit 2 determines that the authenticity determination result by the AI

determination unit 8 is genuine, the control unit 2 proceeds to step (3) and displays the authenticity determination result of the trading card on the display unit 4. Next, the control unit 2 instructs the evaluation unit 9 to start evaluating the state of the trading card. Upon receiving the instruction, the evaluation unit 9 converts a plurality of state variables (state parameters 1052 to 1055) into numerical values (4). Whether all of the state parameters are disclosed or only selected state parameters are disclosed can be determined as appropriate depending on the system design.

[0082]

Next, the control unit 2 instructs the ranking unit 12 to start ranking the trading card.

Upon receiving the instruction, the ranking unit 12 calculates the arithmetic mean of the state parameters 1052 to 1055 to determine the card rank 56 (5).

[0083]

Next, the control unit 2 instructs the generation unit 10 to start investigating the market price of the trading card. Upon receiving the instruction, the generation unit 10 connects to the transaction system 17 on the network 100 via the communication unit 5, acquires market information on the read trading card, and determines the transaction price of the trading card (7).

Next, the generation unit 10 performs a process of converting the read image into an evaluation image based on the evaluation rank and the transaction information, and generates certification sheet information (for example, a QR code (registered trademark)) (8).

[0084]

Next, the control unit 2 determines whether a printing instruction has been issued for the generated transaction information (9), and if the control unit 2 determines that a

printing instruction has been issued, the control unit 2 causes the printing unit 13 to print the evaluation certification sheet including the ranking transaction value and the QR code (registered trademark) (10), and end this process.

[0085]

5 On the other hand, if the control unit 2 determines in step (9) that a print instruction has not been issued, the control unit 2 saves the information of the evaluation certification sheet in the saving unit 18 (11) and ends this process.

[0086]

10 On the other hand, if the AI determination unit 8 determines in step (2) that the read trading card is a fake, the control unit 2 displays the fake determination result on the display unit 4 (12). The value of the trading card determined as a fake displayed on the display unit 4 will be significantly lower than the market price, but since there are collectors who collect trading cards for a different purpose than their asset value, the assessed value will not necessarily always be zero.

15 [0087]

FIG. 9 is a diagram showing a grading process of a trading card service system according to the embodiment.

[0088]

20 A user who owns a trading card and wishes to have it appraised can visit a store that operates this system, submit the trading card at the reception desk, and fill in the necessary information on an appraisal request form to request appraisal. The system subjects the trading card to the processes shown in FIG. 4: the trading card reading process by the reading unit 7, the AI determination process by the AI determination unit 8, the market price checking process by the evaluation unit 9 and the generation unit 10 in cooperation,

and the grade determination process by the ranking unit 12. The system then returns a printout of the appraisal results and the trading card.

[0089]

In the case of sending by mail, a person who wishes to have a card appraised can
5 apply for an appraisal on a website under the jurisdiction of the applicant or authorized by the applicant, and pay the fee. After that, a packing kit for requesting that the card be appraised by domestic mail will be sent by mail.

By enclosing the card to be appraised in a shock-resistant, traceable packing kit and sending it, anyone can make a request for appraisal even from a remote location.

10 [0090]

Providing such a trading card service system allows trading card collectors to recognize the value of their assets, which can fluctuate at any time.

[0091]

It is also possible to add a service by which an organization that trades trading cards
15 issues a document certifying the value and price of a trading card appraised by the trading card service system.

In the reading process shown in FIG. 9, a high-precision microscope is used.

According to the procedure shown in FIG. 9, it is possible to reduce the cost of appraisal processing without requiring an expert to be on-site, and to prevent the
20 knowledge of the expert from becoming personal.

[0092]

[Advantageous Effects of First Embodiment]

According to the present embodiment, the owner of a trading card who has requested appraisal can reliably receive the appraised item in which a physical trading card body of

which the asset value is determined and which is housed in an acrylic case, and an evaluation sheet in a predetermined format containing appraisal result information, are laid out in a sealed plastic case.

[0093]

5 If the owner chooses to deposit the appraised item in the repository 1000 managed by the appraisal server 502, digital trading card information linked to the NFT that creates new asset value will be issued without the owner having to manage the appraised item themselves. The digital trading card information linked to the NFT can be used as a unit for buying and selling trading card information, and the ownership of a digital trading
10 card (NFT content) can be transferred to other enthusiasts by linking the digital trading card information to the market price through a method of making the NFT content available on the online market without physically moving the digital card body.

[0094]

[Second Embodiment]

15 In the above-described first embodiment, as an example, virtual currency payments are enabled using one virtual currency server. However, for users who can use a plurality of virtual currency networks, for example, owners who can operate a wallet terminal and handle a plurality of virtual currency systems connected to Polkadot, the transaction rates of each currency may be linked to enable payments to be made in all
20 virtual currencies.

[0095]

FIG. 10 is a block diagram describing the role of virtual currencies in a trading card system according to the embodiment.

The present embodiment assumes the use of a virtual currency called the Astar

Network. By adding a smart contract function to a blockchain such as Polkadot (relay chain) which has a parachain function, it becomes possible to transcend the boundaries of virtual currencies and conduct virtual currency transactions of complex digital trading card information, including interest fees and the like.

5 [0096]

In the present embodiment, the owned trading card body TC-1 can be used as the core and managed using an NFT linked to a digital trading card generated from the trading card body TC-1, and a virtual currency transaction unique to the issued NFT can be completed in conjunction with the storage status of the trading card body TC-1 requested
10 by the owner.

[0097]

Digital trading card information with an NFT issued is guaranteed to have liquidity in the market economy, and it will continue to be traded by virtual currency transactions independent from the trading card body, with frequent ownership changes.

15 The trading card system according to the present embodiment can provide the following NFT-based functions.

[Owner Information Clarification Function]

This function enables checking of the ownership of digital trading cards (exclusive to each owner).

20 [0098]

In addition, an NFT management server 400 can clarify the total value held by the NFT owner through NFT buying/selling and NFT exchange, and can clearly indicate the amount of assets of the trading card C-NFT. For example, if an owner of NFTs for digital trading card information owns NFT appraisal data for five items, the owner can

also check the asset value of the trading card C-NFT and the ownership ranking of the trading card C-NFT (Soul Bound Token (SBT)), which are information that only the owner can access.

[0099]

- 5 Further, the NFT management server 400 can calculate asset values that reflect the real-time market prices of trading cards on a plurality of TC sites connected to a TC disclosure server 700, and link the calculated asset values to the transaction prices certified by the NFTs.

[0100]

- 10 [NFT Buying/Selling Function]

According to the system, it is possible to acquire the transaction price information of trading card bodies that have not been appraised by an appraisal server 502 from a plurality of TC sites connected to the TC disclosure server 700, and it is also possible to transact NFTs through an automatic price fluctuation system or price-specified sales.

- 15 [0101]

When receiving a request to convert a trading card owned by an owner into an NFT and generate the above-described process digital trading card information, the appraisal server 502 can collect a fee from the owner via an electronic payment server 501.

[0102]

- 20 [Unified Management Function of NFTs, Physical Cards, and Ownership Status]

As described above, an owner of a trading card body can select a trading card ownership mode (1) in which, after appraisal by the appraisal server 502, the owner possesses the physical trading card which is sealed in an acrylic case with an index showing the appraisal result attached thereto, and thereby does not possess the NFT

digital trading card information, or a trading card ownership mode (2) in which the owner keeps the physical trading card sealed in the acrylic case, makes the NFT digital trading card information viewable on the TC disclosure server 700, and allows other owners to buy the NFT digital trading card information.

5 [0103]

[Advantageous Effects of Second Embodiment]

According to the present embodiment, in transaction of appraised trading card bodies, it is possible to avoid a situation where a plurality of cards are held as a single asset, whereas the appraised digital trading card information can be converted into an NFT so
10 that it is possible to make the digital trading card information into an asset that can be circulated in the market as an NFT trading card. That is, a new asset value can be added to NFT trading cards, the ownership of the NFT trading cards can be transferred without physically distributing the items to enthusiasts around the world, so that it is expected that the cards can be used as personal assets while reducing the burden of transactions and
15 simplifying the process of transferring ownership.

[0104]

In addition, while the owners of trading card bodies must store and manage their own rare trading cards, this system securely stores and manages the trading card bodies in a repository guaranteed by the system, making it possible to prevent theft and loss.

20 [0105]

[Third Embodiment]

FIG. 11 is a flowchart describing a trading card appraisal processing method of a first data terminal in a trading card system according to the present embodiment. Steps

(21) to (24) are implemented by a CPU 205 of a data terminal device 200-1 executing a control program stored in a ROM 202.

[0106]

The CPU 205 sends a request for appraisal of a trading card to an appraisal server
5 502 via a network 100 by e-mail or the like (21). Thereafter, the owner of the trading
card sends the trading card body by mail or the like to the administrator of the appraisal
server 502. The request here is configured to allow the user to select between a request
to return the trading card body and a request to store the trading card body in a repository
managed by the appraisal server 502 and to make digital trading card information (an
10 NFT is given) available for viewing and sale during the period in which the trading card
is stored.

[0107]

Next, the CPU 205 determines whether an NFT has been received as the appraisal
result from the appraisal server 502 via the network 100 (22). If it determines that the
15 NFT has been received, the CPU 205 confirms that the trading card body has been
deposited in the repository managed by the appraisal server 502.

[0108]

If the owner wishes to sell the trading card body to another trading card enthusiast,
the owner instructs the appraisal server 502 to collect the appraised trading card container
20 stored in the repository (23).

The owner receives the appraised trading card container from the administrator of
the appraisal server 502 (24), and the process is ended.

[0109]

FIG. 12 is a flowchart describing a trading card appraisal processing method of the appraisal server in the trading card system according to the present embodiment. Steps (31) to (41) are implemented by a control unit 2 of the appraisal server 502 executing a stored control program.

5 [0110]

A request for appraisal of a trading card is received from the data terminal device 200-1 operated by the owner of the trading card shown in FIG. 11 (31), and an administrator of the appraisal server 502 receives the trading card body (the physical item before appraisal) sent by the owner of the trading card. The control unit 2 then manages
10 the appraisal process of the trading card body in accordance with the process shown in FIG. 9 (32). Next, the control unit 2 executes the appraisal process described with reference to FIG. 4 to evaluate (grade) the sent trading card body (33). Thereafter, a packaging unit 14 lays out and houses the evaluation sheet and the trading card body in an acrylic case or the like.

15 [0111]

Next, the control unit 2 controls a camera 102 to capture an image of the trading card container (34). Accordingly, digital trading card information is generated and stored in a database 101 in parallel with the evaluation of the trading card body.

[0112]

20 Next, the control unit 2 issues an NFT for the stored digital trading card information (35), and registers the issued NFT in the database 101 in a state of being linked to the stored digital trading card information (36). The issued NFTs are managed on a distributed ledger network system 600 as shown in FIG. 5.

[0113]

Upon completion of the NFT issuance process for the digital trading card information, the registered digital trading card information is disclosed on a TC disclosure server 700 so that it can be freely viewed by digital trading card enthusiasts who operate a second data terminal device 200-N.

5 [0114]

Next, a digital trading card enthusiast who wishes to trade the viewed digital trading card information makes an offer to buy the desired digital trading card on the TC disclosure server 700. When the purchase request is received (38), the transaction settlement is carried out (39) by operating a wallet that uses a virtual currency server 500-1 shown in FIG. 1.

[0115]

Upon reception of a notification from the virtual currency server 500-1 that the payment for the transaction has been completed (40), the control unit 2 updates the owner information of the digital trading card information for which the transaction was completed on the distributed ledger network system 600 (41), and ends the processing.

15 [0116]

FIG. 13 is a flowchart describing a trading card appraisal processing method of a first data terminal in the trading card system according to the present embodiment. Steps (51) to (55) are implemented by a CPU 205 of the data terminal device 200-N executing a control program stored in a ROM 202.

20 [0117]

An enthusiast who collects digital trading card information by operating the data terminal device 200-N, connects to the content guide provided by TC disclosure server

700 (51) to display a list of registered tradable digital trading card information on the terminal screen (52).

[0118]

Next, the enthusiast operating the data terminal device 200-N selects the digital trading card to be bought from the list of digital trading card information displayed on the screen (53).

[0119]

Then, the enthusiast operating the data terminal device 200-N completes the payment from his/her own wallet using the virtual currency server 500-1 (54). After that, the appraisal server 502 verifies the NFT that has been rewritten and reissued on the distributed ledger network system 600 (55), and ends the process.

[0120]

FIG. 14 is a flowchart describing a trading card return processing method of the data terminal device in the trading card system according to the present embodiment. Steps (61) to (67) are implemented by the CPU 205 of the data terminal device 200-1 executing a control program stored in the ROM 202.

[0121]

The CPU 205 of the data terminal device 200-1 (corresponding to the control unit 2 in the configuration shown in FIG. 4) notifies the appraisal server 502 of a return request from the data terminal device 200-1 operated by the owner of the trading card body stored in a repository 1000 (61). After that, the CPU 205 of the data terminal device 200-1 completes payment of the delivery fee (62) by using an electronic payment service not shown, for example. Then, the appraisal server 502 deletes the NFT of the digital trading card information linked to the trading card body managed in the distributed ledger

network system 600, and deletes the digital trading card information managed in the database 101.

Thereafter, the CPU 205 of the data terminal device 200-1 receives a notification from the appraisal server 502 that the digital trading card information has been deleted
5 (63).

Next, the administrator of the appraisal server 502 returns the trading card body (physical item) stored in the repository 1000 to the owner of the trading card body.

The owner of the trading card body receives the appraised trading card container
(64).

10 [0122]

The owner of the returned appraised trading card container receives inquiries from other trading card enthusiasts and receives a purchase request from the data terminal device 200-N via the network 100 (65), and upon receiving the electronic payment process and confirming that the payment has been completed (66), delivers the returned
15 appraised trading card container to the purchaser (67), and the process is ended.

[0123]

FIG. 15 is a flowchart describing a trading card appraisal processing method of the appraisal server in the trading card system according to the present embodiment. Steps (71) to (77) are implemented by the control unit 2 of the appraisal server 502
20 executing a stored control program.

[0124]

The owner of the trading card body connects to the appraisal server 502 by operating the data terminal device 200-N, and selects the purchase of the trading card container owned by the previous owner from a menu screen not shown (71). The appraisal server

502 then notifies the data terminal device 200-N having requested the purchase that the purchase request has been received (72).

[0125]

Next, in order to register a new trading card container, the appraisal server 502
5 confirms that the owner of the trading card body has completed payment of the registration fee by operating the data terminal device 200-N (73). Then, the trading card container in which the new owner is to be newly registered is delivered. Upon reception of the trading card container (74), the appraisal server 502 captures an image of the trading card container by the camera 102 in accordance with the procedure described
10 above, and generates appraised digital trading card information (contents of the digital trading card) (75).

[0126]

Next, the appraisal server 502 receives the NFT issued by an NFT management server 400 for the contents of the digital trading card, and performs an attachment process
15 of linking the NFT to the contents of the generated digital trading card (76).

Next, the appraisal server 502 registers the contents of the digital trading card in the database 101 (77), and ends the process.

[0127]

The contents of digital trading cards registered in the database 101 can be viewed on
20 the TC disclosure server 700 by wallet owners who are able to make payments with virtual currency, and the contents of digital trading cards with NFTs can be bought and sold by such wallet owners.

In the present embodiment, after the ownership of a trading card changes from the previous owner to a new owner who operates the second data terminal due to the sale and

purchase of the trading card body, upon reception of a new appraisal request from the second data terminal operated by the new owner,

the appraisal server 502 issues a new NFT that identifies the digital trading card information newly generated by the generation function, and performs a new registration
5 process of newly registering the digital trading card information with the new NFT linked thereto in the predetermined database 101.

The appraisal server 502 adjusts the market prices of digital trading cards displayed on the marketplace provided by the TC disclosure server 700 by acquiring the sales prices disclosed on a plurality of buying/selling servers connected to the network 100 where
10 only physical trading card bodies are bought and sold.

[0128]

[Advantageous Effects of Third Embodiment]

According to the present embodiment, it is possible to freely construct a system in which, after a trading card owner requests appraisal from the appraisal server, when a
15 trading card container is created to store the evaluation sheet and the trading card body, an NFT is issued for captured image information of the trading card container in parallel with the creation of the trading card container, allowing the appraised trading card container to be circulated as a new digital asset.

[0129]

20 Moreover, since an NFT for digital trading card information generated by imaging the trading card container only while the trading card container is deposited in the repository managed by the appraisal server, it is possible to develop a new digital asset distribution service in which digital trading card information is traded as NFT contents.

[0130]

[Fourth Embodiment]

In the above embodiments, the appraised items, the trading card body and the evaluation sheet (which may be called appraisal result certificate, for example), are sealed and stored in an acrylic case in which the trading card body may be attached to a hard
5 PVC sheet to prevent the trading card body from bending, and are not used in any card games. However, some trading card enthusiasts may be willing to accept some damage to the trading card through card games, reducing its asset value.

[0131]

For this case, a mechanism is added in which when the mechanically sealed state of
10 the acrylic case is eliminated, the evaluation sheet is peeled off, so that the appraisal information is invalidated and the invalidated information is made visible.

In a preferred example, a tape attached to the evaluation sheet is peeled off at the same time as the mechanical sealing state is eliminated, so that a double line is clearly indicated on the evaluation sheet.

15 Conceptually, a trading card that has been appraised by the trading card system may be configured to be appraised again after it has been opened, thereby to accommodate the need to open the trading card and use it for game play (for example, for a match).

Specifically, as described above in the first embodiment, when a trading card is appraised, the appraised trading card body is sealed and stored in a resin case as described
20 above.

The upper part of the resin case is provided with a lid structure with a partial opening, and the main body of the resin case to engage with the lid structure has a fastener made of the same resin. The protrusion of the lid structure fits into the hole in the fastener so

that the resin case does not open. Accordingly, when the owner wants to remove a sealed trading card in order to play a match, the resin must be shifted to open it.

At this time, it is necessary for the owner to visually recognize that the graded content will be invalidated. Therefore, the upper part of the fastener is wrapped around
5 with a peel-off tape of a predetermined width (that reveals the characters (indicating opened state or voided appraisal status) when peeled off) in a horizontal direction to secure the lid structure on the upper resin part so that it does not open.

By wrapping the seal around the fastener, it is immediately obvious whether the case has been opened or not, so that the open state of the resin part becomes clear when the
10 fastener is covered with the seal and when the seal is peeled off.

[0132]

[Advantageous Effects of Fourth Embodiment]

According to the present embodiment, it is possible to flexibly respond to situations in which trading cards are originally used, such as in card battle games, and it is also
15 possible to issue a certificate that ensures that the result of an appraisal can be invalidated by opening the card.

It is guaranteed that the owner can obtain the appraisal result as described above by making another appraisal request to the appraisal server.

[Fifth Embodiment]

20 In the systems of the above embodiments, the transaction price of a trading card is adjusted based on information about appraised physical trading cards in the market. The system may also be configured to allow for automatic price fluctuation (linked to market price: 1.X times or the like) or sale at a specified price.

This can reduce the risk that trading cards will become overpriced or underpriced

when sold due to price changes of the trading cards.

Specifically, because information on the NFT sales market and information on the secondhand market are linked, the information can be made available to a plurality of stores (secondhand card stores, antique dealers) simultaneously when items are listed for sale.

Since the information can be made available to stores when items are listed for sale, it is easier to find buyers (and easier to find a buyer at a higher price).

For stores, the higher the value of the card, the easier it is to make a profit, and of course it is easier to make a profit on a 10,000,000 yen card than on a 100 yen card.

Therefore, as a function for the purchasing stores, it is also possible to incorporate a notification function into the system that would "notify the stores when a card above a certain price is offered in a system linked to the purchase price".

If all notifications were to be sent when trading cards are listed for sale, it would be overwhelmed, so it is also possible to control the price the store wishes to be notified in the listing information.

[Example of Issue Faced by General Card User Who Sold His/Her Cards]

In the case of considering selling second-hand trading cards offline, the owner will need to have his/her trading card bodies appraised at a second-hand shop and have them appraised one by one. For example, if he/she wants to sell five trading cards (trading cards A to E), the owner goes to a store X and finds that the appraisal value for the trading card A is 1,000 yen and the appraisal value for the trading card B is 500 yen. The total value is 5,000 yen.

At this point, the trading card owner must decide which trading cards to sell and which not, and consider tactics to get his/her cards sold well.

If the owner does not sell his/her trading cards at the store X and then brings them to a store Y, the appraisal value for the trading card A is 800 yen, the appraisal value for the trading card B is 600 yen. The total value is 5,500 yen.

Accordingly, the owner sells his/her trading cards at the store Y, but may be able to
5 sell the trading card A for a higher price at the store X.

Accordingly, the present embodiment has an advantage for the seller (general card user) to be able to list the items for sale on an online site that is viewed by a plurality of second-hand stores.

[Advantageous Effects of Fifth Embodiment]

10 According to the present embodiment, in transactions of physical trading cards, when an owner uses the system to request a sale and there are a plurality of stores willing to buy, the owner discloses information on his/her trading card bodies to all stores at once, so that the owner can find a buyer more easily and select an individual store that will buy at a high price. This provides a service that allows owners who wish to sell their trading
15 card bodies to earn a higher sales profit.

The disclosure of the present invention above can be summarized as at least the following articles.

[0133]

(1) The present disclosure is characterized by connecting in a communicable
20 manner through a predetermined communication medium: a first data terminal operated by an appraisal requester;

a generation function configured to generate digital trading card information by imaging appraisal information generated by reading a trading card body sent by the appraisal requester and the trading card body in a laid-out state; and a management server

including a management function configured to issue an NFT that identifies the digital trading card information generated by the generation function, and register and manage the NFT in a predetermined database in a state of being linked to the digital trading card information.

5 [0134]

(2) The management server determines whether to send the NFT that identifies the digital trading card information to the first data terminal, based on whether an administrator of the management server will store the trading card body sent by the appraisal requester in a repository.

10 [0135]

(3) The management server discloses the digital trading card information linked to the NFT registered in the database on a predetermined marketplace.

[0136]

(4) The management server deletes the digital trading card information and the NFT
15 registered in the database based on receiving notification of removal of the trading card body from the first data terminal.

[0137]

(5) The management server provides a service of accepting, via a second data terminal operated by a buyer, a request for purchase and sale of the digital trading card
20 information linked to the NFT disclosed on the marketplace via the predetermined communication medium on a condition that a fee is paid in a predetermined virtual currency, and settling a purchase and sale transaction in the predetermined virtual currency.

[0138]

(6) After the ownership of a trading card changes from the previous owner to a new owner who operates the second data terminal due to the sale and purchase of the trading card body, upon reception of a new appraisal request from the second data terminal operated by the new owner,

5 the management server issues a new NFT that identifies the digital trading card information newly generated by the generation function, and newly registers the digital trading card information with the new NFT linked thereto in the predetermined database.
[0139]

(7) The management server automatically adjusts a transaction price of a digital
10 trading card displayed on the marketplace based on an instruction issued in advance by a sale requester, with reference to market prices obtained from sales prices disclosed on a plurality of buying and selling servers that are connected to the predetermined communication medium to buy and sell trading card bodies.

[0140]

15 (8) One of the plurality of transaction price modes is adopting a transaction price that automatically changes according to a price in a trading card transaction market.

[0141]

(9) One of the plurality of transaction price modes is adopting a transaction price that automatically changes according to a price in a trading card transaction market.

20 [0142]

(10) An NFT management method for a trading card system in which connected in a communicable manner through a predetermined communication medium are: a first data terminal operated by an appraisal requester; a generation function configured to generate digital trading card information by imaging appraisal information generated by

reading a trading card body sent by the appraisal requester and the trading card body in a laid-out state; and a management server including a management function configured to issue an NFT that identifies the digital trading card information generated by the generation function, and register and manage the NFT in a predetermined database in a state of being linked to the digital trading card information, the NFT management method including: determining whether to accept a request for storing the trading card body in which the trading card body and the appraisal information are laid out and sealed in a predetermined transparent case from the appraisal requester of the first data terminal, and deleting the digital trading card information and the NFT registered in the database.

10 [Industrial Applicability]

[0143]

In the above embodiments, trading cards are taken as an example of trading media and described in detail. However, it is also possible to configure the system to handle cel drawings, game software, comics (manga), and other trading media.

15 Specifically, cel drawings, game software, and comics (manga) all have set sizes, and like trading cards, they are media that contain elements whose value varies greatly depending on authenticity and grading, and it is possible to create a system that handles these comprehensively.

[Reference Signs List]

20 [0144]

- 1 appraisal server
- 7 reading unit
- 8 AI determination unit
- 9 evaluation unit

	10	generation unit
	18	saving unit
	12	ranking unit
	1000	repository
5	400	NFT management server
	501	electronic payment server
	502	appraisal server

CLAIMS

[Claim 1]

A trading card system connecting in a communicable manner through a predetermined communication medium:

5 a first data terminal operated by an appraisal requester; and

a management server, the management server including:

a generation function configured to generate digital trading card information in which appraisal information is generated by reading a trading card body sent by the appraisal requester and the trading card body are imaged in a laid-out; and

10 a management function configured to issue an NFT that identifies the digital trading card information generated by the generation function, and to register and manage the NFT in a predetermined database in a state of being linked to the digital trading card information,

wherein the management server determines whether to send the NFT that identifies
15 the digital trading card information to the first data terminal, based on whether an administrator of the management server will store the trading card body sent by the appraisal requester in a repository.

[Claim 2]

20 The trading card system according to claim 1, wherein the management server discloses the digital trading card information linked to the NFT registered in the database, on a predetermined marketplace.

[Claim 3]

The trading card system according to claim 1, wherein the management server deletes the digital trading card information and the NFT registered in the database based on receiving notification of removal of the trading card body from the first data terminal.

5 [Claim 4]

The trading card system according to claim 2, wherein the management server provides a service of accepting, via a second data terminal operated by a buyer, a request for purchase and sale of the digital trading card information linked to the NFT disclosed on the marketplace via the predetermined communication medium on a condition that a
10 fee is paid in a predetermined virtual currency, and settling a purchase and sale transaction in the predetermined virtual currency.

[Claim 5]

The trading card system according to claim 1, wherein after an ownership of the
15 trading card body changes from the appraisal requester to a new owner who operates the second data terminal due to the sale and purchase of the trading card body, upon reception of a new appraisal request from the second data terminal operated by the new owner, the management server issues a new NFT that identifies digital trading card information newly generated by the generation function, and newly registers the digital trading card
20 information with the new NFT linked thereto in the predetermined database.

[Claim 6]

The trading card system according to claim 2, wherein the management server automatically adjusts a transaction price of a digital trading card displayed on the

marketplace based on an instruction issued in advance by a sale requester, with reference to market prices obtained from sales prices disclosed on a plurality of buying and selling servers that are connected to the predetermined communication medium to buy and sell trading cards.

5

[Claim 7]

The trading card system according to claim 1, wherein the first data terminal comprises a function configured to select a plurality of transaction price modes for the price of the trading card body presented by the management server.

10

[Claim 8]

The trading card system according to claim 7, wherein one of the plurality of transaction price modes is adopting a transaction price that automatically changes according to a price in a trading card transaction market.

15

[Claim 9]

The trading card system according to claim 7, wherein one of the plurality of transaction price modes is adopting a transaction price specified by the owner of the trading card body, without depending on a price in a trading card transaction market.

20

[Claim 10]

A trading card transaction processing method for a trading card system, the a trading card system connecting a first data terminal operated by an appraisal requester and a management server in a communicable manner through a predetermined communication

medium, the management server including a generation function configured to generate digital trading card information in which appraisal information is generated by reading a trading card body sent by the appraisal requester and the trading card body are imaged in a laid-out, and a management function configured to issue an NFT that identifies the digital trading card information generated by the generation function, and to register and manage the NFT in a predetermined database in a state of being linked to the digital trading card information, and to determine whether to send the NFT that identifies the digital trading card information to the first data terminal based on whether an administrator of the management server will store the trading card body sent by the appraisal requester in a repository,

the method comprising determining by the management server whether to accept a request for storing in the repository the trading card body in which the trading card body and the appraisal information are laid out and sealed in a predetermined transparent case from the appraisal requester of the first data terminal, and deleting the digital trading card information and the NFT registered in the database.