Title: SYSTEM AND METHOD FOR TRANSMITTING TIME CAPSULE

Abstract: The present invention relates to a system and method for transmitting a time capsule. The system includes an information provider terminal (200), a first company computer (100), a second company computer (300), and a third company computer (400). The information provider terminal (200) provides information online. The first company computer (100) accesses the information provider terminal via communication means, codes the information input from the information provider terminal (200) and stores the coded information. The second company computer (300) provides various types of coding programs to the first computer. The third company computer (400) receives coded information from the first company computer and materializes the coded information. When information provided by the information provider is input, the first company computer codes the information using any one of various coding types provided by the second company or the second company computer, and stores and outputs the coded information.
Description

Title of Invention: SYSTEM AND METHOD FOR TRANSMITTING TIME CAPSULE

Technical Field

[1] The present invention relates, in general, to a system and method for transmitting information. More particularly, the present invention relates to a system and method which codes specific information that is input online, together with the specific identification information of an information provider, and transmits the coded information to a third party, and which allows the third party to view the received coded information online or to view that information depending on conditions set by the information provider.

Background Art

[2] Generally, the development of wired/wireless Internet or the like has made it possible to provide or receive information actively online. Information that can be open to the public is freely transmitted and received online in the form of electronic documents without being processed. However, information that must be open to the public only under specific conditions has been acquired using a method which acquires such information by coding electronic documents in which the information was recorded, transmitting or storing the coded electronic documents, providing electronic key information enabling the coded information to be decoded to a user having the authority to access the information, and allowing the user having the electronic key to receive or access the coded information and to decode the information using the electronic key.

[3] In particular, pieces of information that must be open to the public only under specific conditions include wills and the like. Methods of making a will online and transmitting the will to a third party to allow the third party to read the will are disclosed.

[4] Korean Patent No. 10-0808650 (date of registration: February 22, 20008) entitled "method and system for registering a will over the Internet" relates to a system and method for registering a will over the Internet, which codes a will itself while making and storing the will, so that the will is encoded into a bitmap barcode and cannot be revised when the will is coded, thus prohibiting the will from being opened or revised until the date of opening the will has been reached.

[5] The system includes a will recording means, an Internet information provision means, and the Internet. The will recording means provides a web-based form to enable a will to be made, hashes input data and code to generate binary code, encodes the binary code into a bitmap barcode, transmits the bitmap barcode to an Internet in-
formation provision means, and converts the bitmap barcode into a binary format at the request of a user. The Internet information provision means stores information acquired by the will recording means and determines data requested by the will recording means. The Internet connects the will recording means to the Internet information provision means.

[6] The invention disclosed in the above patent proposes a scheme for making a will over the Internet and storing the will in the form of a bitmap barcode.

[7] Further, Korean Patent Publication No. 10-2002-79705 (date of publication: October 19, 2002) entitled "method of providing an online will and time capsule management service." In the method, after an operation begins, an accessing user subscribes as a member when the accessing user is not a member. Whether the accessing user intends to make a will or a time capsule is determined. If the accessing user intends to make the will, both the contents of the will and an email address, to which the will is to be transmitted when the user died, are input and stored. Whether the will is to be notarized is determined, and if it is determined that the will is to be notarized, the will is notarized by the server of a notary authority. An email for checking the life or death of the user is sent at regular intervals, and whether a response to the email has been received is determined. If it is determined that a response to the email for checking the life or death of the user has not been received, the contents of the will are output and are sent to the email address of the destination of the will. When the accessing user intends to make a time capsule, the contents of the time capsule and an email address of the destination of the time capsule are input and stored. Whether the current date is the date on which the contents of the time capsule must be output is determined. If the current date is the date of the output of the contents of the time capsule, the contents of the time capsule are output and sent to the email address of the destination of the contents of the time capsule. Further, the above patent discloses the invention related a method of providing a will and time capsule management service online, which is configured to manage a will or a time capsule by a predetermined time point when the accessing user makes a will or a time capsule online, thus allowing the user to conveniently use the will or the time capsule.

[8] The invention disclosed in the above patent relates to a method and system, in which a will input through the website of a company providing a will recording and storage service over the Internet is coded and stored in the form of a barcode, and the stored barcode is decoded, thus enabling the contents of the will to be viewed. The invention disclosed in the above patent is problematic in that when the company disappears, the wills of users that have been stored in the form of formless electronic files are not accessible and so cannot be viewed. Further, since the coding and storage of the wills is performed by one company, there is a problem in that the reliability of that service is
deteriorated. Furthermore, since each will is encoded into a bitmap barcode by generating binary code, there is a concern that the barcode could be easily decoded.

The invention disclosed in the above patent relates to a method of merely making wills and time capsules over the Internet and storing the wills and the time capsules, and thus may result in security problems related to wills or the like.

Therefore, there is the need for a system and method for making wills online based on the Internet or the like, allowing a company which provides an online will input and coding service to code the wills and to have and provide various coding types so that the coded wills cannot be decoded, and providing both documents of the coded wills and objects, which carry the materialized coded wills, to targets who will receive the wills.

**Disclosure of Invention**

**Technical Problem**

Accordingly, the present invention has been made keeping in mind the above problems occurring in the prior art, and an object of the present invention is to provide a system and method for transmitting a time capsule, in which information is made online and is coded using various advanced coding types, the coded information is materialized and carried with a specific object, and the specific object is provided to a user who will receive the information, in order to guarantee the coding of the information and the security of the coded information.

Another object of the present invention is to provide a system and method for transmitting a time capsule, which transmits genetic materials or the like, containing biometric information related to an information providing user, together with the materialized information.

A further object of the present invention is to provide a system and method for transmitting a time capsule, which allows targets who will receive the provided information to access the information in different manners depending on conditions according to which the targets can access the provided information and which are set by the information provider.

**Solution to Problem**

In accordance with a first aspect of the present invention to accomplish the above objects, there is provided a system for transmitting a time capsule, which includes a terminal of an information provider for providing information online; and a computer of a service company including an information input unit for inputting information data, a coding unit for coding the information data input to the information input unit according to a selected coding type, a materialization processing unit for performing processing required to materialize the coded information data, and a condition data
storage unit for storing data provided by the information provider, that is, data about an information recipient who will receive the information data, wherein the service company computer transmits an output of the coded information data and a specific object which carries materialized coded information data to the information recipient stored in the condition data storage unit.

[15] In accordance with a second aspect of the present invention, there is provided a system and method for transmitting a time capsule, which includes a terminal of an information provider for providing information online, a first computer of a first company accessed by the information provider terminal via communication means and provided with various types of coding programs required to code and store the information input from the information provider terminal, and a second computer of a second company for receiving coded information from the first computer and materializing the coded information, wherein when the information provided by the information provider is input, the first computer codes the input information using any one of various coding types, and stores and outputs the coded information, the second computer performs processing required to materialize the coded information data received from the first computer, and the second company manufactures a specific object which will carry materialized coded information data, and transmits the specific object to the first company.

[16] In accordance with a third aspect of the present invention, there is provided a system and method for transmitting a time capsule, which includes a terminal of an information provider for providing information online, a first computer of a first company accessed by the information provider terminal via communication means, and configured to code and store information input from the information provider terminal, a second computer of a second company for providing various types of coding programs to the first computer, and a third computer of a third company for receiving coded information from the first computer and materializing the coded information, wherein when information data provided by the information provider is input, the first computer codes the input information data using any one of various coding types provided by the second computer, and stores and outputs the coded information data, the third computer performs processing required to materialize the coded information data received from the first computer, and the third company manufactures a specific object which will carry materialized coded information data, and transmits the specific object to the first company.

[17] In accordance with a fourth aspect of the present invention, there is provided a system and method for transmitting a time capsule, which causes genetic materials, containing biometric information related to the information provider, for example, DNA, to be carried with a specific object together with the materialized coded in-
formation data, in the system and method according to the first to third aspects of the present invention.

In accordance with a fifth aspect of the present invention, there is provided a system and method for transmitting a time capsule, which is characterized in that the first computer stores data about at least one target who will receive information set by the information provider and data about conditions according to which each individual target who will receive the information can access the information, is characterized in that at least one target who received a document of the coded information data and the specific object, which carries the materialized coded information data, from the first company is authenticated by the second computer of the second company according to the second aspect or the third computer of the third company according to the third aspect, requests the sequencing of the materialized information data carried with the specific object, and determines whether the sequenced information data is identical to the document of the coded information data, and is also characterized in that, when the target requests the first company or the first computer to decode the coded information data, the first company or the first computer determines whether stored conditions according to which the target can access the information data are satisfied, and if it is determined that the information data access conditions are satisfied, the coded information is decoded and provided to the target, in the system and method according to the second to fourth aspects of the present invention.

**Advantageous Effects of Invention**

According to the present invention, there is an advantage in that information about an information provider is coded using advanced coding methods and various coding types, and the coded information can be materialized and transmitted to a user who will receive the information, thus allowing the authenticity of the information to be easily determined without deteriorating the information. Further, the present invention is advantageous in that since the scheme of the present invention is implemented to include a company for coding and recording information, a company for providing coding programs and decoding the coded information, and a company for manufacturing materialized coded information, a user who will receive the coded information can be provided with information decoded by the coding program provision and decoding company and the materialized coded information manufacturing company even if the information coding and recording company disappears.

**Brief Description of Drawings**

Fig. 1 is a diagram schematically showing the construction of a system for transmitting a time capsule according to an embodiment of the present invention;

Fig. 2 is a diagram schematically showing the construction of a system for
transmitting a time capsule according to another embodiment of the present invention;

[22] FIG. 3 is a flowchart showing an artificial nucleic acid sequence coding method applied to the present invention;

[23] FIG. 4 is a flowchart showing a coded artificial nucleic acid sequence decoding method applied to the present invention;

[24] FIG. 5 is a flowchart showing a method of transmitting a time capsule according to an embodiment of the present invention;

[25] FIG. 6 is a flowchart showing a method of transmitting a time capsule according to another embodiment of the present invention;

[26] FIG. 7 is a flowchart showing a method of transmitting a time capsule according to a further embodiment of the present invention; and

[27] FIG. 8 is a flowchart showing a method of transmitting a time capsule according to yet another embodiment of the present invention.

**Best Mode for Carrying out the Invention**

[28] Reference should now be made to the drawings, in which the same reference numerals are used throughout the different drawings to designate the same or similar components.

[29] Hereinafter, the construction of embodiments of the present invention will be described in detail with reference to the attached drawings.

[30] The terms will be defined as follows so as to keep the description of the present invention consistent.

[31] - Decoding of materialized information or materialized information data: this means the simple sequence analysis (sequencing) of information or information data

[32] - Document of coded information or coded information data: this means a document in which an information provider codes information and allows an information recipient to possess the coded information

[33] - Decoding of coded information or coded information data: this means the conversion of information coded depending on various coding types into readable documents

[34] FIG. 1 is a diagram schematically showing a system for transmitting a time capsule according to a first embodiment of the present invention. As shown in FIG. 1, the time capsule transmission system according to the present invention includes information provider terminals 10, a computer 20, and one or more information recipient terminals 40, 50 and 60. Each of the information provider terminals 10 provides information data online and is provided with a service for transmitting the information data to a designated information recipient. The computer 20 includes an information data input unit 21, a coding unit 22, a materialization processing unit 23, a data storage unit 24,
an authentication unit 25, a sequencing unit 26, and a decoding unit 27. The information data input unit 21 can access the information provider terminal 10 via a communication means and can input information data transmitted from the information provider terminal 10. The coding unit 22 stores therein various types of coding programs and codes the received information data using a selected or set coding type. The materialization processing unit 23 performs processing required to materialize the coded information data into an actual article. The data storage unit 24 stores therein data input from the information provider terminal 10, that is, data about information providers, information recipients, conditions for accessing the information data, etc. The authentication unit 25 authenticates the information provider and the information recipient, and authenticates the coding type of the coded information data. The sequencing unit 26 sequences the actual article of the coded information data, resulting from the materialization. The decoding unit 27 decodes the coded information data. Each of the information recipient terminals 40, 50 and 60 can access the computer 20 through a communication means 30 or the like.

[35] The information provider terminal 10 can access a website, related to the recording and coding of information and provided by the computer 20, through the communication means such as the wired/wireless Internet or mobile communication, and is provided with a means capable of inputting information. For example, the information provider terminal 10 may be a terminal such as a Personal Computer (PC), a notebook computer, a mobile phone, a Personal Digital Assistant (PDA), or a smart phone.

[36] When the information provider terminal 10 accesses the computer 20 via the communication means and inputs information data thereto, the coding unit 22 of the computer 20 codes the input information data using a coding type program which has been selected by the information provider terminal or has been selected or randomly set by the computer 20. Further, the information provider may provide various types of data, such as data about information providers, the conditions for transmitting the information data, information recipients and the access conditions of the information data, to the computer 20. In this case, the provided data is stored in the data storage unit 24 of the computer 20. The information data coded by the computer 20 is output and is either notarized by a notary authority, or notarized in real time by a notary server provided by the notary authority, if necessary, and thereafter the notarized information can be stored. The materialization processing unit 23 performs processing required to materialize the coded information data into an actual article, and the actual article resulting from the materialization of the coded information data is carried with and stored in a specific object.

[37] The coding in the above embodiment is performed such that a series of numerals or characters is randomly caused to correspond to artificial combinations of bases of
oxyribonucleic acid (DNA) or ribonucleic acid (RNA), thus representing information. Accordingly, information that can be represented by a sequentially coupled form of information units is coded using any one of various types of coding methods which represent information by the sequentially coupled form of sequence units. The coding types and methods of the present invention will be described in detail later.

[38] The coding unit 22 of the computer 20 is provided with various types of coding programs, and methods of setting coding types required to code input information data can be variously implemented. The computer 20 randomly sets any one of various coding types and can code together both the information data and the coding type information data using the set coding type program. Further, the computer 20 randomly generates a coding type authentication key and provides the key to the information provider. When the information provider inputs the received coding type authentication key to the computer 20, and then inputs the information data, the information data is coded using a coding program corresponding to the input coding type authentication key. In this case, the authentication unit 25 of the computer 20 generates coding type authentication keys required to authenticate various coding types using a standardized method and stores the generated coding type authentication keys, or has a means capable of randomly generating coding type authentication keys.

[39] In the embodiment of the present invention, the computer 20 may belong to a company that provides an online information making service. The computer 20 checks whether conditions presented by the information transmission condition data stored in the data storage unit 24 of the computer 20 are satisfied. When the information transmission conditions are satisfied, the company transmits both a document of the coded information data, which has been output and stored (if necessary, a document notarized by a notary authority) and a specific object, which carries the actual article of the coded information data, to at least one information recipient stored in the data storage unit 24 of the computer 20.

[40] The information recipient accesses the computer 20 using the information recipient terminal 40, 50 or 60 via the communication means 30, is authenticated as a valid user, provides the document of the coded information data and the actual article carried with the specific object to the computer 20, and then requests that the computer 20 decode the coded information data. The computer 20 checks data about the access conditions of information data, stored in the data storage unit 24, at the time of authenticating the information recipient, thus determining whether the information recipient who is requesting sequencing is a user who satisfies the information data access conditions. If the information recipient is not a user satisfying the information data access conditions, the computer 20 notifies the information recipient of non-satisfaction. Further, when the information recipient is a user satisfying the information data access conditions, the
computer 20 sequences the actual article carried with the specific object, and determines whether the document of the received coded information data is identical to the sequenced coded information data. Thereafter, the decoding unit 27 converts the coded information data into decoded information data by decoding the coded information data, and provides the decoded information data to the information recipient.

FIG. 2 is a diagram schematically showing the construction of a time capsule transmission system according to a second embodiment of the present invention. In the second embodiment of the present invention, the time capsule transmission system of the present invention is implemented by dividing companies into an information making service company, a coding program provision company, and an information data materialization service company so as to improve coding-related reliability. As shown in FIG. 2, this embodiment of the present invention includes a first computer 100, information provider terminals 200, a second computer 300, a third computer 400, and one or more information recipient terminals 500, 600 and 700. The first computer 100 is the computer of the company which provides the service for coding and transmitting information. Each of the information provider terminals 200 accesses the first computer 100 via the communication means such as the wired/wireless Internet or mobile communication, inputs information, and then transmits the information to the first computer 100. The second computer 300 provides various types of coding programs to the first computer 100 and decodes information coded using the coding programs. The third computer 400 receives the coded information from the first computer 100 and performs the processing required to materialize the coded information into an actual article. Each of the information recipient terminals 500, 600 and 700 will receive the document of the coded information and a specific object which carries the actual article of the coded information, depending on the set conditions stored in the first computer 100.

The first computer 100 is a server that can be connected to various types of external terminals via wired/wireless Internet communication or the like, and includes an information data input unit 140, an information data storage unit 150, a coding unit 110, a decoding unit 120, and a coding type information storage unit 130. The information data input unit 140 inputs information data transmitted from the information provider terminal 200. The information data storage unit 150 stores coded information data which is obtained by coding and storing the information data received from the information provider, data about users who will receive the information data, and data in which conditions according to which the users can access the information data are set. The coding unit 110 codes input information data using a coding type that has been selected or randomly set. The decoding unit 120 decodes the coded information data. The coding type information storage unit 130 stores information about coding types or
the like.

[43] The information provider terminal 200 can access a website, related to the recording and coding of information and provided by the first computer 100, through the communication means such as the wired/wireless Internet or mobile communication, and is provided with a means capable of inputting information. For example, the information provider terminal 200 may be a terminal such as a Personal Computer (PC), a notebook computer, a mobile phone, a Personal Digital Assistant (PDA), or a smart phone.

[44] The second computer 300 may include a coding program storage unit 310, a coding type information storage unit 330, and a decoding program storage unit 320 which store various types of coding programs to be provided to the first computer 100, information about coding types, and programs for decoding the coded information, respectively. Further, the second computer 300 may also include information stored in the first computer 100, that is, information about information providers, users who will receive the information, and data in which conditions according to which the users can access the information are set.

[45] The third computer 400 may include a storage unit 420 for receiving coded information transmitted from the first computer 100 and storing the received information, a sequencing program storage unit 410 for storing programs required to perform sequencing on materialized coded information, and a nucleic acid sequence materialization program storage unit 430 for storing programs required to materialize coded information data using artificial nucleic acid sequences.

[46] Each of the information recipient terminals 500, 600 and 700 is a terminal which accesses the first computer 100, the second computer 300 and the third computer 400 via the communication means and which is capable of being authenticated and receiving various types of information. Such an information recipient terminal may be, for example, a PC, a notebook computer, a mobile phone, a PDA, or a smart phone.

[47] In the second embodiment of the time capsule transmission system according to the present invention, the information provider terminal 200 accesses the first computer 100, and inputs the information data desired to be transmitted to an information recording means provided by the first computer 100. In this case, the input information data may undergo revision, addition, change, etc. Further, the information provider terminal 100 may input data about users who will receive the input information, and data about conditions according to which each information recipient can access the information data, in addition to the information data, and may store the input data in the first computer 100. The first computer 100 codes the input information data using a coding type program selected by the information provider terminal 200 or randomly set by the first computer 100. Even after the information data has been coded and stored,
the information provider may access the first computer 100, be authenticated, request the decoding of the coded information data, and then view the input information data, and may also revise or change the information data. Even in this case, the first computer 100 codes and stores the revised or changed information. The first computer 100 outputs the coded information in the form of a document, stores the document, and transmits the coded information to the third computer 400 to request the materialization of the coded information and the manufacturing of a specific object which will carry the materialized information. In this case, the first computer 100 may request that the third computer 400 manufacture a number of specific objects which will carry the materialized information, in a number corresponding to the number of information recipients stored in the first computer 100. Further, the first computer 100 may transmit genetic materials (for example, DNA) containing biometric information related to the information provider to the third company, thus enabling the genetic materials to be carried with the specific object, with the genetic materials mixed with the materialized information. When the coded information is materialized, the size of the materialized information is preferably implemented on a nano-size basis.

[48] In the embodiment of the present invention, the first computer 100, the second computer 300, and the third computer 400 may be computers that belong to the first company, the second company, and the third company, respectively. The second company for providing coding programs and the third company for manufacturing specific objects which will carry materialized nucleic acid sequences may be separate companies, or may be the same company. When the second and third companies are the same company, the second computer 300 and the third computer 400 may not be separated from each other.

[49] The coding programs stored in the second computer 300 and provided to the first computer 100 will be described below. The coding programs of the present invention employ a coding method which performs setting so as to represent information in such a way that a series of numerals or characters corresponds to artificial combinations of bases of DNA or RNA, as disclosed in Korean Patent No. 10-0764239 filed by the present applicant, thus representing information, which can be represented by the sequential coupling of information units, by a sequentially coupled form of sequence units. A coding method of representing artificial nucleic acid sequences according to the present invention is described in detail.

[50] FIG. 3 is a flowchart showing a method of coding information according to the present invention. The coding method of the present invention includes steps S10 to S12. At step S10, any one method is selected from among methods that make a plurality of sequence combinations correspond to information units. At step S11, information is set by matching sequence combinations, that is, artificial combinations of
sequence units of bases with the information units according to the selected method. At step S12, the input information data is coded by representing the input information data by a nucleic acid sequence which is a sequentially coupled form of sequence units.

FIG. 4 is a flowchart showing a process for decoding the coded information. The process includes the step S20 of checking a method, which make sequence combinations correspond to information units, in the nucleic acid sequence of the coded information data, and the step S21 of analyzing the nucleic acid sequence using the checked correspondence method, and extracting the information data.

The series of numerals or characters of the information units is not especially limited, but a series of Arabic numerals, Roman numerals, English alphabet letters, Korean consonants and vowels, Japanese Hiragana and Katakana, etc. are preferably used. Value information is not especially limited, but the name, resident registration number and various authentication serial numbers of a human being, which are required to authenticate a specific entity, are preferably used. Further, the information data is data composed of one or more information units provided by the information provider. For example, the information data may be data in which short sentences, long sentences, characters, numerals, alphabet letters, etc. are mixed with one another.

DNA or RNA which is the most basic unit constituting information according to the present invention is a material in which the basic structures of nucleic acids are connected through phosphodiester bonds, and is identical to the material typically defined in genetic engineering fields. Nucleic acids are bonded in the form of a chain via phosphodiester bonds, thus constituting DNA and RNA. The structure of nucleic acids is such that a total of five kinds of compounds may be bonded together to a base coupling portion. Depending on which compounds are bonded, DNA is composed of four kinds of bases, that is, Adenine (A), Thymine (T), Guanine (G) and Cytosine(C), and RNA is composed of Adenine (A), Uracil (U), Guanine (G) and Cytosine(C). The DNA and RNA are distinguished from each other depending on whether a -H or -OH is bonded to a second carbon having a ring shape. In organisms, specific amino acids are represented by three combinations of four kinds of bases in the form of DNA or RNA, and proteins are formed by a specific combination of such amino acids. For reference, one kind of base may be present in two or more of the three combinations. Further, the nucleic acid sequences are configured via phosphodiester bonds which are the methods of bonding bases present in the natural world.

A plurality of setting methods of matching sequence combinations with information units may be classified into, for example, three types, as described below.

As shown in the following table 1, a first setting method is a method that sequentially sets a series of information units according to the number of repetitive connections of one, or two or more bases (sequence units) made up to the predetermined allowable
number of times, and sets a specific base combination as a marker for indicating the coupling of sequence combinations.

<table>
<thead>
<tr>
<th>sequence combination</th>
<th>information unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>AA</td>
<td>2</td>
</tr>
<tr>
<td>AAA</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>4</td>
</tr>
<tr>
<td>CC</td>
<td>5</td>
</tr>
<tr>
<td>CCC</td>
<td>6</td>
</tr>
<tr>
<td>T</td>
<td>7</td>
</tr>
<tr>
<td>TT</td>
<td>8</td>
</tr>
<tr>
<td>TTT</td>
<td>9</td>
</tr>
<tr>
<td>G</td>
<td>0</td>
</tr>
<tr>
<td>ATG</td>
<td>coupling marker</td>
</tr>
</tbody>
</table>

[sequence units are A, T, C and G]

Table 1 indicates an example of a scheme for setting specific information units as artificial combinations of bases and a method of representing value information using the setting scheme. Bases used in Table 1 were A, C, T and G, the predetermined allowable number of times was set to 3, and ATG was used as a marker for indicating coupling. The marker ATG provides directionality at the time of analyzing sequences (sequencing), and can also be used as an index capable of indicating whether the directionality of base analysis is correct. For example, the case where the contents of analysis include a sequence combination GTA means that the sequence combination must be inversely analyzed. As shown in Table 1, when value information '1480632' which is part of a resident registration number is represented, 'A', 'C', and 'TT' were respectively used as corresponding sequence combinations to represent individual information units '1', '4', and '8'. In order to determine a suitable coupled form of the sequence combinations, a coupling marker 'ATG' was used between the individual sequence combinations. Therefore, when individual series of information units are previously set in random combinations of sequence units, and specific information data '1480632' is represented, value information can be easily recognized as follows if the
nucleic acid sequence of the information data is configured.

[59] Information data : 1 4 8 0 6 3 2
[60] Nucleic acid sequence (coding): A ATG C ATG TT ATG G ATG CCC ATG AAA ATG AA

[62] A second setting method is a method of using specific bases (sequence units) as start and/or end markers of sequence combinations and setting sequential information units according to the number of repetitive connections or to the random combinations of one, or two or more of the remaining bases, as shown in Tables 2 and 3.

[64] Table 2 shows another example of a scheme for setting specific information units as artificial combinations of bases, and a method of representing value information using the setting scheme.

[65] Table 2
[Table 2]
[Table ]

<table>
<thead>
<tr>
<th>sequence combination</th>
<th>information unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>1</td>
</tr>
<tr>
<td>AAT</td>
<td>2</td>
</tr>
<tr>
<td>AAAT</td>
<td>3</td>
</tr>
<tr>
<td>AAAAT</td>
<td>4</td>
</tr>
<tr>
<td>AAAAT</td>
<td>5</td>
</tr>
<tr>
<td>CT</td>
<td>6</td>
</tr>
<tr>
<td>CCT</td>
<td>7</td>
</tr>
<tr>
<td>CCCT</td>
<td>8</td>
</tr>
<tr>
<td>CCCCT</td>
<td>9</td>
</tr>
<tr>
<td>CCCCCT</td>
<td>0</td>
</tr>
<tr>
<td>T</td>
<td>end marker</td>
</tr>
</tbody>
</table>

[66] [sequence units are A, C and T]

[67] As shown in Table 2, T is an end marker of sequence combinations, A and C are repetitive sequence units of sequence combinations, and the predetermined allowable number of times is set to 5. When the information data of the latter part "1480632" of the resident registration number is coded using the method of Table 2, the following configuration is given.
[68] Information data: 1 4 8 0 6 3 2
[69] Nucleic acid sequence (coding): AT AAAAT CCCT CCCCCCT CT AAAT AAT
[70] Further, as shown in Table 3, A is the start marker for the sequence combinations, and two combinations of A, T, C, and G are set as sequence combinations. When the information data of "1480632" is coded using the method of Table 3, the following information is obtained.

[72] Table 3

<table>
<thead>
<tr>
<th>sequence combination</th>
<th>information unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>1</td>
</tr>
<tr>
<td>ACT</td>
<td>2</td>
</tr>
<tr>
<td>ACG</td>
<td>3</td>
</tr>
<tr>
<td>ATC</td>
<td>4</td>
</tr>
<tr>
<td>ATT</td>
<td>5</td>
</tr>
<tr>
<td>ATG</td>
<td>6</td>
</tr>
<tr>
<td>AGC</td>
<td>7</td>
</tr>
<tr>
<td>AGT</td>
<td>8</td>
</tr>
<tr>
<td>AGG</td>
<td>9</td>
</tr>
<tr>
<td>AAA</td>
<td>0</td>
</tr>
<tr>
<td>AT</td>
<td>start marker</td>
</tr>
</tbody>
</table>

[73] [sequence units are A, C, T, and G]

[74]

[75] Information data: 1 4 8 0 6 3 2
[76] Nucleic acid sequence (coding): ACC ATC AGT AAA ATG ACG ACT
[77]
[78] A third setting method is a method of setting individual specific information units as two, or three or more sequence combinations of specific bases, and setting value information using specific combinations of the specific information units, as shown in Table 4.

[79] Table 4 shows a further example of a scheme for setting specific information units as artificial combinations of bases, and a method of representing information data using the setting scheme. As shown in Table 4, three bases are combined in the order of a
first base, a second base and a third base, and thus each combination of three bases represents an individual information unit (an alphabet letter). In table 4, the information units are represented by A to Z. For example, a sequence combination 'ATT' is created by a combination of 'A' as the first base, 'T' as the second base, and 'T' as the third base. An information unit 'K' is assigned to such a sequence combination. In order to determine whether a nucleic acid sequence contains perfect information, a sequence combination 'CCC' is set as the end marker. Meanwhile, in order to indicate the perfectibility of the nucleic acid sequence, the sequence combination 'CCC' can be used as the start marker. Alternatively, according to the circumstances, 'CCC' can be simultaneously used as the start marker and as the end marker. When the information data is "JONG IL LEE", the coding of the information data is performed as follows.

<table>
<thead>
<tr>
<th>first base</th>
<th>second base</th>
<th>third base</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>T</td>
<td>C</td>
</tr>
<tr>
<td>A</td>
<td>J</td>
<td>S</td>
</tr>
<tr>
<td>B</td>
<td>K</td>
<td>T</td>
</tr>
<tr>
<td>C</td>
<td>L</td>
<td>U</td>
</tr>
<tr>
<td>T</td>
<td>D</td>
<td>V</td>
</tr>
<tr>
<td>E</td>
<td>N</td>
<td>W</td>
</tr>
<tr>
<td>F</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>G</td>
<td>P</td>
<td>Y</td>
</tr>
<tr>
<td>H</td>
<td>Q</td>
<td>Z</td>
</tr>
<tr>
<td>I</td>
<td>R</td>
<td>end marker</td>
</tr>
</tbody>
</table>

[80] Table 4
[Table 4]
[Table ]

[81] sequence unit: A, T, C
[82]
[83] Information data: J O N G I L L E E
[84] Nucleic acid sequence (coding): ATA TTC TTT CAA CAC ATC ATC TAT TAT CCC
[85]
[86] The coding of information according to the present invention is performed by selecting any one of the above-described methods which make sequence combinations correspond to information units. However, the above-described methods are only part of a large number of methods which make sequence combinations correspond to in-
formation units. Coded information can be decoded by inversely applying the selected correspondence method.

[87] In the second embodiment of the present invention, the first computer 100 can code all of information provided by the information provider and other pieces of data using artificial nucleic acid sequences. Further, even coding type numbers can be coded using artificial nucleic acid sequences, and can also be stored together with such information.

[88] The second computer 300 can share with the first computer 100 the coded information and the data of the information provider, which are stored in the first computer 100, and data about information recipients and data about information access conditions, which are provided by the information provider to the first computer 100. This is to allow the information recipients to prepare for the case where the first company disappears before the set information access conditions are satisfied.

[89] The third computer 400 receives from the first computer 100 data about a request for the materialization of nucleic acid sequences of the coded information and the manufacturing of a specific object which will carry the materialized coded information, and stores the request data. The third company is, for example, a bio-company, which can form, for example, relevant genetic materials using nucleic acid sequences, or can sequence the genetic materials. The third company materializes the received nucleic acid sequences as genetic materials at the request of the first computer 100, causes the genetic materials to be carried with specific objects, and transmits a requested number of specific objects to the first company. In relation to the materialization of nucleic acid sequences into genetic materials, three sequence units are combined to form a base sequence in organisms. For example, when a base sequence is AGC, this matches with a specific protein. Further, only about 20 proteins are coded instead of coding 64 (4^3) proteins in the organisms. The reason for this is that the order of base sequences may each form an individual protein and a plurality of codes may also form one protein.

[90] Here, the term "specific object" refers to an object that an information recipient can possess, for example, a necklace or a ring.

[91] The first company stores a document of information that has been coded using the artificial nucleic acid sequences and has been output, and the specific object that has been received from the third company, and transmits the document and the specific object to an information recipient designated by the information provider when the conditions for transmitting information are satisfied. The information recipient may be one person or a plurality of persons. When the information recipient is a plurality of persons, the information provider can set corresponding conditions according to which the respective information recipients can access the information. For example, when
information provided by the information provider to the first computer 100 is a will, the will maker may designate three will recipients A, B and C, together with the will, in the first computer 100. In this case, when the will maker sets the information access conditions such that a will recipient A can view the contents of the will at any time after the will maker has died, a will recipient B can view the contents of the will on the day corresponding to five years after the will maker has died, and a will recipient C can view the contents of the will on the day corresponding to 10 years after the will maker has died, the will recipients A, B and C receive the document of the will which has been coded using nucleic acid sequences, and specific objects which carry the materialized nucleic acid sequences, from the first company after the will maker has died. In this case, the will recipient A can view the contents of the will at any time, but the will recipients B and C cannot view the contents of the will unless five years and 10 years have passed respectively from the death of the will maker. The process of viewing the contents of the will is performed such that, after the will recipient has been authenticated by a third company, he or she transmits the specific object to the third company, requests the sequencing of the coded information, and then receives the sequenced document of nucleic acid sequences (coded will) from the third company. The will recipient determines whether the document of the coded will that he or she keeps is identical to the sequenced document of the nucleic acid sequences. Thereafter, the will recipient is authenticated by the first computer 100, and thereafter requests the first computer 100 to convert the document of the nucleic acid sequences into the will. The first computer 100 receives the request for the conversion into the will, and checks the conditions of the will recipient related to viewing the will. If the conditions related to the viewing of the will are not satisfied, the first computer 100 sends a decoding denial message to the will recipient. In contrast, when the conditions related to the viewing of the will are satisfied, the first computer 100 checks the coding type of the coded will, decodes the coded will, and transmits the decoded will to the will recipient. Even after viewing the will, the will recipient can continuously possess the materialized will and the will maker-related genetic materials which are carried with the specific object.

[92] FIG. 5 is a flowchart showing an embodiment of a method of transmitting a time capsule according to the present invention.

[93] The time capsule transmission method includes steps S100 to S150. At step S100, information data provided by an information provider and additional data are input to the computer 20. At step S110, the coding unit 22 of the computer 20 codes the input information data using any one of a plurality of coding types. At step S120, the computer 20 outputs coded information data to be transmitted to the information recipient. At step S130, the materialization processing unit 23 of the computer 20 performs
processing required to materialize the coded information data. At step S140, the computer 20 determines whether the conditions for transmitting the coded information data have been satisfied, on the basis of the additional data stored in the data storage unit 24. If it is determined by the computer 200 that the conditions based on the additional data are satisfied, the output coded information data and a specific object, which carries the materialized coded information data, are transmitted to the information recipient at step S150.

[94] The additional data provided to the computer 20 may be, for example, data about information recipients who will receive the information data, the time at which the information data will be transmitted to the information recipients, and the conditions of transmitting the information data.

[95] The output of the coded information data which the information recipient will receive may be a document notarized by a notary authority if necessary.

[96] In this case, the type of coding used in the computer 20 may be implemented such that the authentication unit 25 of the computer 20 assigns a coding type authentication key corresponding to the coding type to the information provider, and the information provider inputs the coding type authentication key to the computer 20 to enable the information data to be coded using the coding type corresponding to the coding type authentication key.

[97] FIG. 6 is a flowchart showing a method whereby an information recipient, who receives the output of the coded information data and the specific object carrying the actual article of the coded information data, accesses the computer 20 and decodes the coded information data in the embodiment of the time capsule transmission method according to the present invention.

[98] The method includes steps S200 to S260. At step S200, the information recipient accesses the computer 20 using an information recipient terminal and is authenticated by the computer 20. At step S210, after the information recipient has been authenticated, the information recipient terminal requests the computer 20 to sequence the actual article carried with the specific object. At step S220, the computer 20 checks the additional data stored in the data storage unit 200, and then determines whether conditions according to which the information recipient can access the information data are satisfied. At step S230, if the conditions according to which the information recipient can access the information data are satisfied, the sequencing unit 26 of the computer 20 performs sequencing on the actual article carried with the specific object. At step S240, the computer 20 determines whether the output of the coded information data provided by the information recipient is identical to the sequenced coded information data. At step S250, if the output of the coded information data is identical to the sequenced coded information data, the decoding unit 27 of the computer 20 checks
the coding type of the coded information data, and then decodes the coded information
data. At step S260, the computer 20 transmits the decoded information data to the information recipient terminal.

[99] The coding type refers to a setting method of matching a plurality of sequence combinations with information units, as described above. The coding of the information data using artificial nucleic acid sequences according to the selected coding type has been described above, and thus a detailed description thereof will be omitted.

[100] FIG. 7 is a flowchart showing a time capsule transmission method according to another embodiment of the present invention.

[101] The method includes steps S300 to S340. At step S300, information data provided by the information provider is input to the first computer. At step S310, the first computer codes the input information data using a coding type which has been selected by the information provider or has been randomly set. At step S320, the first computer outputs the coded information data to be transmitted to an information recipient. At step S330, the first computer accesses the second computer, transmits the coded information data to the second computer, and requests the second computer to materialize the coded information data to be transmitted to the information recipient and to manufacture a specific object which will carry the materialized information data. At step S340, the second computer receives the coded information from the first computer and performs processing required to materialize the coded information data. Accordingly, the information data of the information provider is coded, the coded information data is materialized, and the specific object which will carry the materialized information data is manufactured.

[102] The output of the coded information data can be notarized by a notary authority if necessary.

[103] The coding type refers to a setting method of matching a plurality of sequence combinations with information units, as described above. The coding of the information data using artificial nucleic acid sequences according to the selected coding type has been described above, and thus a detailed description thereof will be omitted.

[104] The first computer, the second computer and the third computer may be computers that belong to the first company, the second company, and the third company, respectively. In this case, the specific object which will carry the actual article of the coded information data and which is manufactured in the second company is transmitted to the first company. The first company stores both the output coded information data and the specific object, and then transmits them to the will recipients designated by the will maker when the conditions for transmitting the information data (for example, when the information data is a will, the conditions related to the death of the will maker) are satisfied.
FIG. 8 is a flowchart showing a method whereby an information recipient who receives the coded information data and the specific object views the information data. The method includes steps S400 to S490. At step S400, the information recipient, who receives the coded information data and the specific object from the first company, accesses the second computer using an information recipient terminal and is authenticated. At step S410, the information recipient terminal requests the second computer to sequence the specific object which carries an actual article resulting from the materialization of the information data coded using nucleic acid sequences. At step S420, the information recipient terminal receives the sequenced coded information data from the second computer. At step S430, the information recipient terminal accesses the first computer and is authenticated. At step S440, the information recipient terminal transmits the sequenced coded information data to the first computer and requests the first computer to convert the information data based on the decoding of the coded information data. At step S450, the first computer determines whether the conditions for accessing the information data, which were set for the information recipient who is requesting the conversion of the information data, are satisfied. If the information data access conditions set for the information recipient are satisfied, the first computer compares the sequenced coded information data transmitted from the information recipient with the coded information data stored in the first computer at step S460. When the first computer determines that the two pieces of information data are identical to each other by way of the comparison, the first computer checks the coding type of the coded information data at step S470. At step S480, the first computer converts the coded information data into decoded information data by decoding the coded information data according to the checked coding type. At step S490, the first computer transmits the decoded information data to the information recipient terminal.

The information data access conditions, which were set for information recipients, are conditions set by the information provider in the first computer, and are related to the time at which a specific information recipient can view the information data and other conditions. For example, it is assumed that information data access conditions which were set for an information recipient A indicate "the passage of 10 years from the death of the information provider." In this case, if the information recipient A requests the computer of the first company to convert the information data, the first computer determines whether the information data access conditions which were set for the information recipient A are satisfied, that is, whether 10 years have passed from the death of the information provider. Therefore, if it is determined that 10 years have not passed, the first computer sends a message to the information recipient A to the effect that it is impossible to convert the information data.

The step S460 of checking the coding type of the coded information data is im-
plemented such that the coding type may be included in the sequenced coded information data or, alternatively, be stored in the first computer with the coding type matched with the coded information data.

[109] Further, the first computer may be provided with coding programs and decoding programs, but may not be provided with information about coding types, and the second computer may store the coding type information. In this case, the step S460 of the first computer checking the coding type may include the step of the first computer transmitting the coded information data to the second computer and requesting the coding type from the second computer, and the step of the second computer receiving the coded information data, inquiring about the relevant coding type and transmitting information about the inquired coding type to the first computer.

[110] At step S470 of the first computer converting the coded information data into the decoded information data by decoding the coded information data according to the checked coding type, the first computer may have only coding programs and information about coding types, and the second computer may have coding type-based decoding programs. In this case, in order for the first computer to convert the coded information data into decoded information data by decoding the coded information data, step S470 may include the step of the first computer checking the coding type of the coded information data, the step of the first computer requesting a decoding program corresponding to the checked coding type, and the step of the first computer converting the coded information data into decoded information data by decoding the coded information data using the decoding program provided by the second computer.

[111] Embodiments of the present invention which have been described above disclose one example of a system and method for materializing information data coded using artificial nucleic acid sequences and transmitting the materialized information data to information recipients, and one example of a system and method for allowing each information recipient who receives the materialized information data to decode the coded information data. It is apparent that the present invention includes various embodiments that can be expected by the above-described technical spirit of the invention.

**Industrial Applicability**

[112] As described above, the present invention is advantageous in that information about an information provider is coded using advanced coding methods and various coding types, and the coded information can be materialized into an actual article and be transmitted to a user who will receive the information, thus allowing the authenticity of the information to be easily determined without deteriorating the information. Further, the present invention is advantageous in that since the scheme of the present invention
is implemented to include a company for coding and recording information, a company for providing coding programs and decoding the coded information, and a company for manufacturing materialized coded information, a user who will receive the coded information can be provided with information decoded by the coding program provision and decoding company and the materialized coded information manufacturing company even if the information coding and recording company disappears.

[113] Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.
Claims

[Claim 1] A system for transmitting a time capsule, comprising:
a terminal of an information provider; and
a computer accessed by the information provider terminal via commu-
nication means and configured to input information data and code the
information data,
wherein the computer comprises:
a coding unit for coding the input information data using any one of a
plurality of coding types,
a materialization processing unit for performing processing required to
materialize the coded information data into an actual article,
a sequencing unit for performing sequencing on the actual article
resulting from the materialization and representing sequenced coded in-
formation data, and
a decoding unit for decoding code of the coded information data.

[Claim 2] The system according to claim 1, wherein the coding type required to
code the information data is selected by the information provider or
randomly set by the computer.

[Claim 3] The system according to claim 1, wherein:
the computer further comprises an authentication unit for storing or
generating a coding type authentication key, and
the computer assigns the coding type authentication key to the in-
formation provider terminal and codes the information data using a
coding type corresponding to the coding type authentication key input
from the information provider terminal when the information data is
coded.

[Claim 4] The system according to claim 1, wherein:
the computer further comprises a data storage unit,
the data storage unit includes data provided by the information
provider, that is, data about an information recipient and conditions
according to which the information recipient can view the information
data.

[Claim 5] A system for transmitting a time capsule, comprising:
a first computer for coding information data provided by an in-
formation provider;
a second computer for providing a coding program to the first
computer; and
a third computer for receiving coded information data at a request of
the first computer and performing processing required to materialize
the coded information data,
wherein the first computer codes the information data provided by the
information provider using any one of a plurality of coding types, and
transmits both coded information data and a specific object, which
carries materialized coded information data, to an information
recipient.

[Claim 6] A system for transmitting a time capsule, comprising:
a first computer for coding information data provided by an information provider; and
a second computer for providing a coding program to the first computer, receiving coded information data at a request of the first computer and performing processing required to materialize the coded information data,
wherein the first computer codes the information data provided by the information provider using any one of a plurality of coding types, and transmits both the coded information data and a specific object, which carries materialized coded information data, to an information recipient.

[Claim 7] The system according to claim 5 or 6, wherein any one of the plurality of coding types is selected by the information provider or by the first computer.

[Claim 8] The system according to any one of claims 1, 5 and 6, wherein the coding types are set depending on a plurality of methods that make artificial sequence combinations of sequence units of bases correspond to information units.

[Claim 9] The system according to claim 6, wherein the sequence combinations of the bases are artificial sequence combinations and the information units are a series of numerals, characters or symbols.

[Claim 10] The system according to any one of claims 1, 5 and 6, wherein the coding is implemented such that the information data is represented by an artificial nucleic acid sequence which is a sequentially coupled form of sequence units.

[Claim 11] The system according to any one of claims 1, 5 and 6, wherein the materialization of the coded information data is configured to materialize information, represented by an artificial nucleic acid sequence, into genetic materials.
[Claim 12] The system according to claim 11, wherein the specific object includes genetic materials containing biometric information related to the information provider.

[Claim 13] The system according to claim 5 or 6, wherein the first computer includes data provided by the information provider, that is, data about the information recipient and conditions according to which the information recipient can view the information data.

[Claim 14] The system according to claim 13, wherein the data about the conditions according to which the information recipient can view the information data includes a time at which the information recipient can view the information data and other conditions.

[Claim 15] A method of transmitting a time capsule, comprising: inputting information data, provided by an information provider, and additional data to a computer; a coding unit of the computer coding the input information data using any one of a plurality of coding types; the computer outputting coded information data to be transmitted to an information recipient; a materialization processing unit of the computer performing processing required to materialize the coded information data; the computer determining, based on the additional data stored in a data storage unit, whether conditions according to which the coded information data can be transmitted are satisfied; and if it is determined by the computer that the conditions based on the additional data are satisfied, transmitting both the output coded information data and a specific object which carries materialized coded information data, to the information recipient.

[Claim 16] The method according to claim 15, wherein the coding type required to code the information data is selected by the information provider or randomly set by the computer.

[Claim 17] The method according to claim 15, wherein: the computer further comprises an authentication unit for storing or generating a coding type authentication key, and the computer assigns the coding type authentication key to a terminal of the information provider and codes the information data using a coding type corresponding to the coding type authentication key input from the information provider terminal when the information data is coded.

[Claim 18] The method according to claim 15, wherein the data storage unit
includes data provided by the information provider, that is, data about
the information recipient and conditions according to which the in-
formation recipient can view the information data.

[Claim 19] A method of transmitting a time capsule, comprising:
inputting information data, desired to be transmitted by an information
provider to an information recipient, to a first computer;
the first computer coding the information data using any one of a
plurality of coding types;
the first computer accessing a second computer, transmitting coded in-
formation data to the second computer, and requesting the second
computer to materialize the coded information data to be transmitted to
the information recipient and to manufacture a specific object which
carries materialized coded information data;
the second computer receiving the coded information data from the first
computer and performing processing required to materialize the coded
information data; and
transmitting both the coded information data and the specific object,
which carries the materialized coded information data, to the in-
formation recipient designated by the first computer.

[Claim 20] The method according to claim 15 or 19, wherein the coding types are
set depending on a plurality of methods that make artificial sequence
combinations of sequence units of bases correspond to information
units.

[Claim 21] The method according to claim 20, wherein the sequence combinations
of the bases are artificial sequence combinations and the information
units are a series of numerals, characters or symbols.

[Claim 22] The method according to claim 15 or 19, wherein the coding is im-
plemented such that the information data is represented by an artificial
nucleic acid sequence which is a sequentially coupled form of sequence
units.

[Claim 23] The method according to claim 15 or 19, wherein the materialization of
the coded information data is configured to materialize information,
represented by an artificial nucleic acid sequence, into genetic
materials.

[Claim 24] The method according to claim 23, wherein the specific object includes
genetic materials containing biometric information related to the in-
formation provider.

[Claim 25] The method according to claim 19, wherein the coding of the in-
formation data is performed to set the coding type required to code the
information data in such a way that the information provider, the first
computer or the computer for providing the plurality of coding types
selects the coding type from among the plurality of coding types.

[Claim 26]
The method according to claim 19, further comprising:
an information recipient terminal of the information recipient, who
receives the coded information data and the specific object, accessing
the second computer and being authenticated;
the information recipient terminal requesting the second computer to
sequence an actual article resulting from the materialization of the in-
formation data coded using nucleic acid sequences;
the second computer transmitting sequenced coded information data to
the information recipient terminal;
the information recipient terminal accessing the first computer and
being authenticated;
the information recipient terminal transmitting the sequenced coded in-
formation data to the first computer and requesting the first computer to
convert the coded information data based on decoding thereof;
the first computer determining whether conditions, according to which
the information recipient can access the information data and which
were set for the information recipient, are satisfied;
if it is determined that the information access conditions set for the in-
formation recipient are satisfied, the first computer comparing the
sequenced coded information data transmitted from the information
recipient with coded information data stored in the first computer;
if it is determined by the first computer that the two pieces of in-
formation data are identical to each other by way of the comparison, the
first computer checking a coding type of the coded information data;
the first computer converting the coded information data into decoded
information data by decoding the coded information data according to
the checked coding type; and
the first computer transmitting the decoded information data to the in-
formation recipient terminal.

[Claim 27]
The method according to claim 26, wherein the first computer checking
the coding type of the coded information data is configured to check
the coding type which is included in the sequenced coded information
data or which is stored in the first computer together with the coded in-
formation data.
[Claim 28] The method according to claim 26, wherein the first computer checking the coding type of the coded information data comprises: the first computer transmitting the coded information data to a computer which provides a plurality of coding types, and then requesting information about the coding type from the computer; and the computer which provides the plurality of coding types receiving the coded information data, inquiring about a relevant coding type, and transmitting information about the acquired coding type to the first computer.

[Claim 29] The method according to claim 26, wherein the converting the coded information data into the decoded information data by decoding the coded information data is performed such that the first computer requests a decoding program corresponding to the coding type of the coded information data from the computer which provides the plurality of coding types, and then decodes the coded information data, or such that the first computer transmits the coded information data to the computer which provides the plurality of coding types, and then requests decoding of the coded information data from the computer.

[Claim 30] The method according to claim 26, wherein the first computer determining whether the conditions according to which the information recipient can access the information data and which were set for the information recipient are satisfied, is performed to determine whether conditions set by the information provider in the first computer, that is, conditions such as a time, at which a specific information recipient can view the information data and other conditions, are satisfied.

[Claim 31] The method according to claim 15, further comprising: the information recipient terminal accessing the computer and being authenticated; after the authentication has been performed, requesting the computer to sequence an actual article of the coded information data, which is carried with the specific object; the computer checking additional data stored in the data storage unit and determining whether conditions according to which the information recipient can access the information data are satisfied; if it is determined that the conditions according to which the information recipient can access the information data are satisfied, a sequencing unit of the computer performing sequencing on the actual article carried with the specific object;
the computer determining whether an output of the coded information data provided by the information recipient is identical to the sequenced coded information data;
when the output of the coded information data is identical to the sequenced coded information data, a decoding unit of the computer checking the coding type of the coded information data and decoding the coded information data; and
the computer transmitting decoded information data to the information recipient terminal.
[Fig. 2]

[Fig. 3]

SELECT METHOD OF MAKING SEQUENCE COMBINATIONS CORRESPOND TO INFORMATION UNITS

PERFORM SETTING BY MATCHING SEQUENCE COMBINATIONS WITH INFORMATION UNITS ACCORDING TO SELECTED METHOD

REPRESENT INFORMATION DATA BY ARTIFICIAL NUCLEIC ACID SEQUENCE
[Fig. 4]

CHECK METHOD OF MAKING SEQUENCE COMBINATIONS OF NUCLEIC ACID SEQUENCE CORRESPOND TO INFORMATION UNITS

ANALYZE NUCLEIC ACID SEQUENCE USING CHECKED METHOD, AND EXTRACTION INFORMATION DATA

[Fig. 5]

INPUT INFORMATION DATA TO COMPUTER

CODE INFORMATION DATA

OUTPUT CODED INFORMATION DATA

PERFORM PROCESSING TO MATERIALIZE CODED INFORMATION DATA

DETERMINE WHETHER CONDITIONS FOR TRANSMITTING CODED INFORMATION DATA AND SPECIFIC OBJECT CARRYING ACTUAL ARTICLE ARE SATISFIED

TRANSMIT OUTPUT OF CODED INFORMATION DATA AND SPECIFIC OBJECT TO INFORMATION RECIPIENT
[Fig. 6]

AUTHENTICATE INFORMATION RECIPIENT ~ S200

REQUEST SEQUENCING OF ACTUAL ARTICLE CARRIED WITH SPECIFIC OBJECT ~ S210

DETERMINE WHETHER INFORMATION DATA ACCESS CONDITIONS FOR INFORMATION RECIPIENT ARE SATISFIED ~ S220

PERFORM SEQUENCING ON ACTUAL ARTICLE ~ S230

DETERMINE WHETHER CODED INFORMATION DATA IS SEQUENCED CODED INFORMATION DATA ~ S240

CHECK CODING TYPE OF CODED INFORMATION DATA AND DECODE CODED INFORMATION DATA ~ S250

TRANSMIT DECODED INFORMATION DATA TO INFORMATION RECIPIENT ~ S260

[Fig. 7]

INPUT INFORMATION DATA TO FIRST COMPANY COMPUTER ~ S300

CODE INPUT INFORMATION DATA ACCORDING TO SELECTED TYPE ~ S310

OUTPUT AND STORE CODED INFORMATION DATA ~ S320

REQUEST SECOND COMPANY COMPUTER TO MATERIALIZE CODED INFORMATION DATA AND MANUFACTURE SPECIFIC OBJECT CARRYING MATERIALIZED CODED INFORMATION DATA ~ S330

SECOND COMPUTER PERFORMS PROCESSING TO MATERIALIZE CODED INFORMATION DATA AND MANUFACTURE SPECIFIC OBJECT CARRYING MATERIALIZED CODED INFORMATION DATA ~ S340
[Fig. 8]

S400  AUTHENTICATE INFORMATION RECIPIENT BY SECOND COMPANY COMPUTER

S410  REQUEST SECOND COMPANY COMPUTER TO SEQUENCE MATERIALIZED CODED INFORMATION DATA

S420  INFORMATION RECIPIENT RECEIVES SEQUENCED CODED INFORMATION DATA

S430  AUTHENTICATE INFORMATION RECIPIENT BY FIRST COMPANY COMPUTER

S440  INFORMATION RECIPIENT REQUESTS FIRST COMPANY COMPUTER TO CONVERT CODED INFORMATION DATA INTO DECODED INFORMATION DATA

S450  FIRST COMPANY COMPUTER DETERMINES WHETHER INFORMATION DATA ACCESS CONDITIONS SET FOR INFORMATION RECIPIENT ARE SATISFIED

S460  COMPARE SEQUENCED CODED INFORMATION DATA WITH STORED CODED INFORMATION DATA

S470  CHECK CODING TYPE OF CODED INFORMATION DATA

S480  DECODE CODED INFORMATION DATA

S490  TRANSMIT DECODED INFORMATION DATA TO INFORMATION RECIPIENT