

[0028]The data distribution method according to claim 3 constitutes the above-mentioned user recording medium from a magneto-optical disc in the above-mentioned invention.

[0029]Since it will write in the existing personal computer by built-in or a Magnetic-Optical disk drive by which external was carried out and reading will be possible if a user recording medium is constituted from a magneto-optical disc, special-purpose machines, such as a card reader, are not needed, but a data distribution system can be constituted cheaply.

[0030]The data distribution method according to claim 4 is provided with the following.

A communication system which distributes data to a user from an information provider according to a user's demand.

A main data field which records software which a user demands among data distributed by information provider according to a communication system.

A rewritable user recording medium provided with an attached data field which records attached data relevant to the above-mentioned software containing data and billing data peculiar to a user.

A means to permit rewriting from an information provider to attached data recorded on a recording device by the side of an information provider who records the same data as attached data recorded on an attached data field of a user recording medium, and an information provider's recording device, and to regulate rewriting from a user.

[0031]Attached data which furthermore corresponds to user proper data of a user recording medium is searched from an information provider's recording device, A collation means which compares attached data of an information provider's recording device, and attached data of a user recording medium, continues message distribution processing of software when it agrees, and stops message distribution processing of software when not agreeing, When message distribution processing of software is continued by collated result of a collation means, after carrying out accounting according to software distributed, While making software distributed to a user from an information provider record on a main data field of a user recording medium, it has a means on which attached data which contains billing data in an attached data field of a user recording medium and a recording device by the side of an information provider is made to record.

[0032]Since rewriting from a user is regulated as for attached data recorded on a recording device by the side of an information provider, even if a user can change attached data of a user recording medium unjustly, the user cannot change attached data of a recording device by the side of an information provider. Therefore, even if a user recording medium is rewritable, a user recording medium cannot be used, rewriting it unjustly. With an easy structure which records attached data recorded on an attached data field of a user recording medium, and data of an identical content on a recording device by the side of an information provider, even if it uses a rewritable user recording medium, an unauthorized use of a user recording medium by forgery or alteration can be prevented.

[0033]

[Embodiment of the Invention]The embodiment which applied the data distribution method and device of this invention to game software sale distributed through a communication system by the software distribution contractor who is an information provider is described below.

[0034]A system configuration figure book system is faced distributing game software to the user who came to the store in the store from the distribution contractor who distributes the software which is an information provider, Do not stop to record game software but the contents of purchase and billing data of game software are also recorded on the removable user recording medium set to the computer of a store, The contents of purchase and billing data are recorded also on the computer of the distribution contractor who distributes software using a communication system. The past record and the record of a user recording medium which are recorded on the distribution contractor's computer are compared, and an unauthorized use is prevented.

[0035]Drawing 1 is a block diagram of a software selling system. The software distribution contractors 1, 2, and 3 distribute the main data about games, such as added value data for controlling or extending operation of a respectively original software program, image data, voice data, and other machinery. A contractor's original main data is distributed to the computer 24 of the store 4 via the communication systems 6, 8, and 10 from which the cable which uses an ordinary public circuit, CATV, etc., the radio which uses optical communications, a sound wave, satellite broadcasting, etc., etc. get down from the software distribution contractors 1 and 2 and the computers 21, 22, and 23 in three. When the data volume to distribute becomes splenium etc. dramatically at this time, recording media, such as CD-ROM, may be used, it may deliver at the direct-sales store 4, and you may also write in the computer 24 of a store. Since the computers 21, 22, and 23 have managed uniquely the data recorded on these, even if it carries out direct access of them through a network from a user, it is impossible substantially to alter the above-mentioned data or to download. A secret database respectively original with the computers 21-23 is built, and those databases are matched with the write-in equipment item number item of the computer 24 of the store 4, and, specifically, cannot be accessed from other than store 4 registered.

[0036]Here, only the communication function which communicates among the contractors' 1-3 computers 21-23 is given to the computer 24 of the store 4. The computer 24 of the store 4 is installed in the inside of a shop and shop front of stores, such as the place in which users gather easily, for example, a convenience store etc., and is installed in the store doubled with the contents of the software to sell.

[0037]. [whether the user 15 purchases the rewritable user recording medium 13 in the store 4, and] Or a communication interface is carried out to the computers 21-23 in the contractor 1-3 of the distribution origin which carried the already purchased general-purpose user recording medium 13 into the store 4 (numerals 11), and specified game software to purchase using the computer 24 of the store 4. Data communications are performed between the computers 21-23 in a contractor, and the store computer 24, and the game software of the request distributed by the contractors 1-3 is written in the user recording medium 13. A user brings home the user recording medium 13 with which game software was written in (numerals 12), will equip a game main part as it is, and will play. If a user gets bored with a game within the limits of the amount of money which remains in the user recording medium 13, game software can be rewritten any number of times with a described method. The above-mentioned user recording medium 13 is made into the magneto-optical disc which has spread most.

[0038]As shown in drawing 2, the storage area Z of the user recording medium 13 comprises the rewriting fields Z1, such as software and data, the individual data field Z2, and the billing data field Z3. The main data field of this invention is constituted

from the rewriting field Z1, and an attached data field consists of the individual data field Z2 and the billing data field Z3. the communication for which the user used the game machine which it is going to acquire from a distribution contractor, and the personal computer -- a game -- although the data of a game or image data, music data, etc. rewrites and it is written in the field Z1, the other information is written in the individual data field Z2 and the billing data field Z3 as attached data. An individual data field is equivalent to a merchandise management ledger here, and a billing data field is equivalent to a passbook.

[0039]In order that a user may purchase software, when the user recording medium 13 is set to the write-in machine 25 of the store computer 24, the store computer 24, While writing the game software distributed by the distribution contractors 1-3 in the rewriting field Z1 of the user recording medium 13, attached data is written in the individual data field Z2 and the billing data field Z3. At the same time it performs the writing to this user recording medium 13, It sends also to the computers 21-23 of the contractors 1-3 who distribute software via the communication systems 5, 7, and 9 of going up of the same data as the individual data and billing data which were written in in the user recording medium 13 from the store computer 24, The individual data and billing data of an identical content are recorded on the contractor computers 21-23 concerned.

[0040]The distribution contractors 1-3 subtract and do settlement processing of the amount of money of distribution software from the balance in billing data with reference to the billing data of the user's 15 user recording medium 13. Other settlement processings, such as addition and collation, are performed also with reference to individual data.

[0041]The accounting system of the above-mentioned communication system can be used in the cases, such as distribution of added value data to many and unspecified users on satellite broadcasting or the Internet etc. The recording device by the side of the information provider of this invention, a means to regulate, a collation means, and the means made to record comprise the computers 21-23 by the side of an information provider.

[0042]The individual data and billing data (1) individual data drawing 3 which are recorded on a user recording medium are the example of a data format which assigned the part in the storage area Z of the user recording medium 13 which the user 15 can rewrite as the individual data field Z2, and memorized individual data.

[0043]As an individual data field data format, number A5 of the name A1 of purchase software, the amount of money A2 of purchase software, purchased store A3, purchased time A4, and the write-in machine which consists of computers shall be 1 block. Whenever it purchases software, it adds in 1 block (B1 - B5) and a unit (C1-C5). Accumulation record is carried out without updating the past individual data by this. Expansion is possible for the data format of these individual data field by defining specification according to the purpose.

[0044]** As individual data of A1 to A5 at the time of purchasing "the strongest shogi 1997" for 5,800 yen in a ZAKOMBINI Kamata store at example of individual data 16:25 on April 10, 1997, In the field A1, as a name of the purchased software, "the strongest shogi 1997", "5800" which simplified 5,800 yen as the amount of money of the purchased software to A2, To A3, the write-in equipment item number item "00002537" of the store which purchased "9704101625" which simplified the time (16:25 on April 10, 1997) which purchased the "ZAKOMBINI Kamata store" to A4 as a name of the purchased store to A5 is memorized, respectively.

[0045]** As individual data of B1 to B5 at the time of purchasing "best golf Nagano Prefecture" for 4,900 yen in the MARUDAI department store Shinjuku store at 11:38 on May 5, 1997, In the field B1, as a purchased soft name, "best golf Nagano Prefecture", "4900" which simplified 4,900 yen as a purchased soft amount of money to B-2, To B3, the number "00000271" of the write-in machine of the store which purchased "9705051138" which simplified the time (11:38 on May 5, 1997) which purchased the "MARUDAI department store Shinjuku store" to B4 as a name of the purchased store (store) in B5 is memorized, respectively.

[0046]** As individual data of C1 to C5 at the time of purchasing "the mah-jongg reach of one shot" for 5,500 yen in a 4 ** department store Shibuya store at 21:57 on June 20, 1997, "5500" which simplified 5,500 yen as a purchased soft name in the field C1 as a soft amount of money which purchased "the mah-jongg reach of one shot" to C2, "9706202157" which simplified the time (21:57 on June 20, 1997) which purchased "4 ** department store Shibuya store" to C4 as a name of the purchased store is remembered C3 to be a number "00005963" of the write-in machine of the purchased store to C5, respectively.

[0047](2) Billing data drawing 4 is the example of use which assigned the part in the storage area Z of the user recording medium 13 which the user 15 can rewrite as the billing data field Z3, and memorized billing data.

[0048]As a billing data field data format, billing data and amount-of-money billing data are included. Billing data is a user's proper data and consists of a buyer's user ID D1, the password D2, the date of birth D3, and the sex D4. Amount-of-money billing data consists of the fee collection time E1, the amount E2 of payment, the amount contributed E3, the balance E4, and the fee collection store E5. Whenever the amount-of-money billing data E1-E5 shall be 1 block and it carries out cash receipt and disbursement, it adds in 1 block (F1-F5), (G1-G5), and a unit (H1-H5). Accumulation record is carried out without updating the past individual data by this. Expansion is possible also for the data format of these billing data field by defining specification according to the purpose.

[0049]** Register "ST781249" into the example field D1 of billing data as a buyer's user ID number. This is peculiar ID provided in the owner individual. The password "7298" determined by the intention of the person himself/herself as a password is registered into the field D2. When it is a buyer's date of birth, for example, February 23, Showa 34, "1959.2.23" changed to A.D. is registered into the field D3. As a buyer's sex, in the case of a male, "0" is registered, and, in the case of a woman, "1" is registered into the field D4.

[0050]** As billing data of E1 to E5 at the time of purchasing the charge amount of 20,000 yen in a ZAKOMBINI Kamata store at 16:20 on April 10, 1997 (payment), "9704101620" which simplified time 16:20 on April 10, 1997 of the fee collection to E1, To E2, "20000" which simplified 20,000 yen for "0" which simplified 0 yen for "20000" which simplified amount of payment 20,000 yen as the amount contributed to E3 as the balance to E4 is memorized, respectively.

[0051]** As billing data of F5, from F1 at the time of purchasing 5,800 yen software in a ZAKOMBINI Kamata store at 16:25 on April 10, 1997, To F1, "9704101625" which simplified time 16:25 on April 10, 1997 of fee collection, To F2, "14200" which simplified $E4+F2-F3=14,200$ yen for "5800" which simplified 5,800 yen of software wafer purchased amount for "0" which simplified 0 yen as the amount of payment as the amount contributed to E3 as the balance after purchase to F4 is memorized, respectively.

[0052]** As billing data of G1 to G5 at the time of purchasing 4,900 yen software in the MARUDAI department store Shinjuku store at 11:38 on May 5, 1997, "97051138" which simplified time 11:38 on May 5, 1997 of the fee collection to G1, To G2, "9300" which simplified $F4+G2-G3=9,300$ yen for "4900" which simplified 4,900 yen of software purchased amount for "0" which simplified 0 yen as the amount of payment as the amount contributed to G3 as the balance after purchase to G4 is memorized, respectively.

[0053]** As billing data of H1 to H5 at the time of purchasing 5,500 yen software in a 4 ** department store Shibuya store at 21:57 on June 20, 1997, "9706202157" which simplified time 21:57 on June 20, 1997 of the fee collection to H1, To H2, "3800" which simplified $G4+H2-H3=3,800$ yen for "5500" which carried out simple [of the 5,500 yen of software purchased amount] for "0" which simplified 0 yen as the amount of payment to H3 as the amount contributed as the balance after purchasing H4 is memorized, respectively.

[0054]While distributing software using the communication systems 5-10 which connect between the computer 24 installed in a data flow store, and the computer 21-23 installed in the distribution contractors 1-3, the data containing cash data is exchanged. Processing is continued, if the distribution contractors 1-3 compare with the past record and agree about the data sent from a software purchaser's user recording medium 13, if they do not agree, they will stop processing, and they take an appropriate measure.

[0055](1) When writing attached data in the attached data field Z2 of the user recording medium 13, and Z3 regularly via the structure store 4 of forged discovery, the attached data of an identical content is written also in the computers 21-23 simultaneously installed in the distribution contractor 1-3 side. Therefore, the billing data of all the users' registered user recording medium 13 is recorded on the software distribution contractors' 1-3 computers 21-23. As long as there is no unjust writing to the user recording medium 13, the contents of the attached data of the user recording medium 13 and the computers 21-23 are in agreement.

[0056]Now, as shown in drawing 5, at Step 101 from the ID number of the billing data in the user recording medium 13. The billing data which corresponds to an ID number from the billing data in the software distribution contractors' 1-3 computer 21-23 is searched, and collation with the billing data currently recorded on the user recording medium 13 is performed. As a result of comparing at Step 102, when data agrees, it progresses to Step 103, and it is judged that billing data is normal, and it shifts to message distribution processing including accounting. When data does not agree, it progresses to Step 104, and it is judged that billing data is unusual, and message distribution processing is stopped. When required, the user recording medium 13 is compulsorily discharged from the write-in machine of the store computer 24, or the distribution contractors 1-3 specify the unauthorized use person of the user recording medium 13, and take an appropriate measure.

[0057](2) If the flow right collated result after collation comes out, the software distribution contractors 1-3 will distribute to a store the game software for which a user asks using a network. When it is caught in the age limit with reference to the date of birth (D3) (drawing 4) in billing data at this time in the case of game software which has the age limit in a distribution layer, it regulates and distribution is stopped. A message to that effect may be made to output from the computer 24 if needed.

[0058]The game software which received distribution is recorded on the rewriting field Z1 in the user recording medium 13 by computer 24 of the store 4. The required data mentioned above to the individual data field Z2 and the billing data field Z3 of

the user recording medium 13 is recorded. At this time, the same data is recorded also on the individual data field Z2 and the billing data field Z3 of the computers 21-23 of the software distribution contractors 1-3 via the communication systems 5, 7, and 9.

[0059] Thus, he is trying for this embodiment to memorize the same attached data recorded on the computer of the software distribution contractor who cannot carry out direct access from a user by the user recording medium. For this reason, by collation with the attached data by the side of a user, and the attached data by the side of an information provider, since forgery of a user recording medium, and an alteration and also double use of data can also be checked, even if it is a medium which can rewrite a recording medium, it is strong to forgery and reliability can be improved.

[0060] In a store, a special-purpose machine like a card reader is not needed, but since the existing personal computer equipped with a Magnetic-Optical disk drive can be used, a system can be built cheaply. Since capacity is large, unlike an IC card, especially the magneto-optical disc can record mass game software without restrictions. As long as the balance allows, rewriting of game software can be performed any number of times. Since a contract like a credit card which is troublesome and time requires is not needed when purchasing a magneto-optical disc, a user's expansion can be aimed at. And since software and attached data were written in the magneto-optical disc of one sheet, game software and the card for soft purchase can be purchased simultaneously, and it becomes very convenient for a user as compared with the case where it purchases separately.

[0061] Since attached data, such as individual data recorded on the user recording medium, is recorded also on a software distribution contractor's computer, unlike a credit card, it can perform sale/sales management of software, and can also grasp a sales situation in real time. This system is cheaper than introducing a POS terminal, and, moreover, can build POS and a peer system.

[0062] Unlike a prepaid card, a user recording medium is rewritable, and since the attached data field which can be re-filled up there with attached data was provided, it is [usually only being subtracted and], but it can also add. For example, it becomes possible to add a use right to the existing attached data as attached data in a user recording medium by transfer from [from the contractor who has distributed software] the gratitude of a questionnaire, the prize by a lottery, or others. Thus, the side which provides information can add the right of use of the service to a user freely.

[0063] Since the same user recording medium can be used for it any number of times if cash data is written in even if a user recording medium exhausts the cash data in a user recording medium, it can aim at effective use of resources.

[0064] And since the attached data written in as attached data in the user recording medium was used compared with the thing of the conventional system which limited the request for a utilization charge to the person who possesses the credit card, the frame of a credit can be removed. Thus, as an accounting system involved in communication, attached data can be referred to safely and simply in addition to a credit card and a prepaid card. Since attached data is added by a block unit, and it leaves all past payment records and was made not to update a data content except for the balance in particular, even if data is altered, the alteration of data, etc. can be easily discovered by comparing with the past record.

[0065] Although billing data was compared in the above-mentioned embodiment, it may be made to compare about all the attached data. It compares by a software distribution contractor's computer, and the injustice in the store was prevented, and if there is no such fear, it is also possible to give a verification function to a store. For example, the billing data of all the users' user recording medium 13 registered into the

computer 24 of the store 4 is recorded. The billing data which corresponds to an ID number from the billing data in the computer 24 of the store 4 is searched, and it is made to perform collation with the billing data currently recorded on the user recording medium 13 from the ID number of the billing data in the user recording medium 13.

[0066]Although the network is introduced supposing large-scale-izing, it is possible to also build the small-scale system not using a network.

[0067]As a rewritable user recording medium, a game cassette, a floppy disk, There is a magnetic disk, a magneto-optical disc (MO), an optical disc, a removable hard disk (what is called zip, jaz, and PD is included), or a mass IC memory card expected in the future.

[0068]** sale The software to carry out and the thing of time fee collection by the contents of ** added value data, ** the thing of the fee collection by the quantity of added value data, and ** -- the thing of the fee collection by the quality of added value data, etc. are synthetic at one stem again also to that from which a fee collection standard is different -- it is simply and safely manageable. Attached data may be enciphered in order to raise security.

[0069]Although the record section of a user recording medium is divided into an individual data field and a billing data field and it was made to overlap some data in the above-mentioned embodiment, it collects as a data addition field and may be made to avoid the duplication of data. As for the software to distribute, it is needless to say that it is not limited to game software.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to what starts a data distribution method and a device, especially performs distribution and fee collection of data simultaneously using a rewritable recording medium.

[0002]

[Description of the Prior Art]As a typical card used instead of cash, there are a prepaid card, a credit card, and an IC card.

[0003]A prepaid card is a kind of coupon ticket which wrote in required information using magnetism instead of ink.

It is the structure it will become impossible to use if only the part of the purchased amount currently recorded on the magnetic card can be used and it has used.

For example, there are a pachinko card, a telephone card, an IO card, etc. The actual condition is that there is no effective measure to an unauthorized use.

[0004]A credit card can be used by the member's store which deals with this card, carries out fixed time postponement of the payment and payment of a commodity price, and settles a commodity price by automatic accounts transfer from a bank account. Authorization is needed in order to prevent an unauthorized use. The charging method of a system utilization charge for added value data and various control data to come to hand using a wired telephone line, a radio telephone network, satellite broadcasting, etc. has the common settlement of accounts by this credit card.

[0005]An IC card provides the memory part and microprocessor part which are memory storage in IC, and gives logical processing capabilities, such as data creation and judgment, to the card itself. Electronic money etc. hit this. By IC embedded on the card, the check function of truth or falsehood and the rewritable memory storage

function which stores the transmitted electronic money data occur. Since a rewritable memory storage function occurs, an IC card can also be made to pay also from other than a user.

[0006]

[Problem(s) to be Solved by the Invention]However, when it was going to distribute software using these cards, the following problems were among the conventional card systems mentioned above.

[0007](1) Since the prepaid card ** user's individual data was not being interlocked with a management computer, it is weak to forgery of the prepaid card itself. It is well-known that forgery is actually actualizing with the pachinko card.

[0008]** Since readers, such as a card reader for exclusive use, are required, miniaturization, power-saving, and low-pricing cannot be performed.

[0009]** When the cash data or frequency data in a card is exhausted, it becomes impossible to reuse, since it cannot be re-filled up with data.

[0010]** When purchasing software with the software vending machine currently installed in the form of the vending machine, communication -- a game -- when purchasing the communication use type software which acquires picture information and music information using a game or communication, it is necessary to purchase a prepaid card separately from those software, it sees from a user, and is dramatically inconvenient.

[0011](2) Since a credit card ** user will be limited to the possessor of a credit card, it becomes an obstacle in respect of a user's expansion.

[0012]** For the Reasons of it being troublesome and being, the contract of the credit card has been an obstacle in a user's expansion.

[0013]** The communication system of a wire telephone network or a radio telephone network is used for the sales situation of software, and since there is no function which communicates with the computer of the contractor who distributes software, sale/sales management cannot be performed.

[0014](3) Since the IC card IC card has given logical processing capabilities, such as data creation and judgment, there is no fault like the prepaid card and credit card which were mentioned above. However, there is a problem the following point.

[0015]** Since much data of versatility, such as personal data, which needs to be kept secret is contained, in order to secure security, need advanced encoding technology and anti-copying art.

[0016]** A system becomes very large-scale, and also the structure of an IC card also becomes complicated.

[0017]** Since the storage capacity is small, it is difficult to make a mass program like game software record.

[0018]** It is still difficult to realize simply and cheaply by the experimental stage.

[0019]It is (1) as it mentioned above especially, although distribution of software was already begun through the network in the game industry. In the method of - (3), the software distributed by the distribution contractor using cash data cannot be distributed simply and safely.

[0020]In the data distribution art in which SUBJECT of this invention distributes software to a user from an information provider according to a user's demand, It is in providing the data distribution method and device which can be distributed simply and safely, canceling the problem of the conventional technology mentioned above and using a rewritable recording medium.

[0021]

[Means for Solving the Problem]In a data distribution method with which software is distributed to a user from an information provider according to a user's demand as for the data distribution method according to claim 1, A rewritable user recording medium with which attached data relevant to the above-mentioned software containing data and billing data peculiar to a user is recorded is used, Attached data applicable to user proper data of a user recording medium is searched from an information provider's computer, Attached data memorized by an information provider's computer and attached data memorized by user recording medium are compared, When attached data does not agree, stop message distribution processing, and message distribution processing including accounting to software which a user demands when attached data agrees is performed, While recording attached data about software distributed to a user by this message distribution processing from an information provider, and the above-mentioned software containing billing data which carried out [above-mentioned] accounting on a user recording medium, From a user, the above-mentioned attached data is recorded also on an information provider's computer by which data management is carried out so that direct access cannot be carried out.

[0022]When a cause of the forged problem of a prepaid card does not manage any billing data (usable frequency) in a prepaid card but fee collection (usable frequency) in a prepaid card is only set to 0, it is having stopped at a point recognized that the prepaid card is used. It is made for this invention to discover a forged rewritable recording medium at the time of use by managing attached data as the technique of solving this SUBJECT, rather than preventing forgery.

[0023]According to this invention, when regular attached data is recorded on a user recording medium which a user can rewrite, attached data of an identical content is simultaneously recorded also on an information provider's computer. Therefore, when data is unjustly written in a user recording medium or a user recording medium is forged regardless of an information provider's computer. Since incorrect data thru/or the same attached data as a user recording medium are not recorded on an information provider's computer, data of the past recorded on a user recording medium and an information provider's computer becomes inharmonious. As a result, an unauthorized use of a user recording medium with which forgery or data was altered can be effectively prevented by comparing attached data.

[0024]Since attached data relevant to software written in a user recording medium is recorded on a computer of an information provider who distributes software simultaneously with the purchase of software and is accumulated, it can perform sale/sales management of software. Since both sides of software, such as a game, and attached data containing billing data were recorded on a user recording medium of one sheet, It is not necessary to purchase separately a recording medium for software wear, and a prepaid card for software purchase like before, and purchasing a user recording medium of one sheet only serves the purpose.

[0025]Since anyone can receive data distribution service only by not needing contract subscription like a credit card, but purchasing a user recording medium regularly if a user recording medium which anyone can purchase is adopted, a user's expansion can be aimed at.

[0026]When a user fulfills service supply conditions in the above-mentioned invention, in order to supply a user with service from an information provider, the data distribution method according to claim 2, A user recording medium receives a predetermined amount of money from an information provider's computer, and the record is recorded also on an information provider's computer.

[0027] Since a user only purchases products, such as software, when purchasing using a prepaid card, a prepaid card is only reduced. However, in this invention that uses a rewritable user recording medium, since it can access to an information provider's computer to a user recording medium freely, a user recording medium can receive the amount of money corresponding to the above-mentioned service, and billing data can be increased.

[0028] The data distribution method according to claim 3 constitutes the above-mentioned user recording medium from a magneto-optical disc in the above-mentioned invention.

[0029] Since it will write in the existing personal computer by built-in or a Magnetic-Optical disk drive by which external was carried out and reading will be possible if a user recording medium is constituted from a magneto-optical disc, special-purpose machines, such as a card reader, are not needed, but a data distribution system can be constituted cheaply.

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[0032] Since rewriting from a user is regulated as for attached data recorded on a recording device by the side of an information provider, even if a user can change attached data of a user recording medium unjustly, the user cannot change attached data of a recording device by the side of an information provider. Therefore, even if a user recording medium is rewritable, a user recording medium cannot be used, rewriting it unjustly. With an easy structure which records attached data recorded on an attached data field of a user recording medium, and data of an identical content on a recording device by the side of an information provider, even if it uses a rewritable user recording medium, an unauthorized use of a user recording medium by forgery or alteration can be prevented.

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[Embodiment of the Invention]The embodiment which applied the data distribution method and device of this invention to game software sale distributed through a communication system by the software distribution contractor who is an information provider is described below.

[0034]A system configuration figure book system is faced distributing game software to the user who came to the store in the store from the distribution contractor who distributes the software which is an information provider, Do not stop to record game software but the contents of purchase and billing data of game software are also recorded on the removable user recording medium set to the computer of a store, The contents of purchase and billing data are recorded also on the computer of the distribution contractor who distributes software using a communication system. The past record and the record of a user recording medium which are recorded on the distribution contractor's computer are compared, and an unauthorized use is prevented.

[0035]Drawing 1 is a block diagram of a software selling system. The software distribution contractors 1, 2, and 3 distribute the main data about games, such as added value data for controlling or extending operation of a respectively original software program, image data, voice data, and other machinery. A contractor's original main data is distributed to the computer 24 of the store 4 via the communication systems 6, 8, and 10 from which the cable which uses an ordinary public circuit, CATV, etc., the radio which uses optical communications, a sound wave, satellite broadcasting, etc., etc. get down from the software distribution contractors 1 and 2 and the computers 21, 22, and 23 in three. When the data volume to distribute becomes splenium etc. dramatically at this time, recording media, such as CD-ROM, may be used, it may deliver at the direct-sales store 4, and you may also write in the computer 24 of a store. Since the computers 21, 22, and 23 have managed uniquely the data recorded on these, even if it carries out direct access of them through a network from a user, it is impossible substantially to alter the above-mentioned data or to download. A secret database respectively original with the computers 21-23 is built, and those databases are matched with the write-in equipment item number item of the computer 24 of the store 4, and, specifically, cannot be accessed from other than store 4 registered.

[0036]Here, only the communication function which communicates among the contractors' 1-3 computers 21-23 is given to the computer 24 of the store 4. The computer 24 of the store 4 is installed in the inside of a shop and shop front of stores, such as the place in which users gather easily, for example, a convenience store etc., and is installed in the store doubled with the contents of the software to sell.

[0037]. [whether the user 15 purchases the rewritable user recording medium 13 in the store 4, and] Or a communication interface is carried out to the computers 21-23 in the contractor 1-3 of the distribution origin which carried the already purchased general-purpose user recording medium 13 into the store 4 (numerals 11), and specified game software to purchase using the computer 24 of the store 4. Data communications are performed between the computers 21-23 in a contractor, and the store computer 24, and the game software of the request distributed by the contractors 1-3 is written in the user recording medium 13. A user brings home the user recording medium 13 with which game software was written in (numerals 12), will equip a game main part as it is, and will play. If a user gets bored with a game within the limits of the amount of money which remains in the user recording medium 13, game software can be rewritten any number of times with a described method. The above-

mentioned user recording medium 13 is made into the magneto-optical disc which has spread most.

[0038]As shown in drawing 2, the storage area Z of the user recording medium 13 comprises the rewriting fields Z1, such as software and data, the individual data field Z2, and the billing data field Z3. The main data field of this invention is constituted from the rewriting field Z1, and an attached data field consists of the individual data field Z2 and the billing data field Z3. the communication for which the user used the game machine which it is going to acquire from a distribution contractor, and the personal computer -- a game -- although the data of a game or image data, music data, etc. rewrites and it is written in the field Z1, the other information is written in the individual data field Z2 and the billing data field Z3 as attached data. An individual data field is equivalent to a merchandise management ledger here, and a billing data field is equivalent to a passbook.

[0039]In order that a user may purchase software, when the user recording medium 13 is set to the write-in machine 25 of the store computer 24, the store computer 24, While writing the game software distributed by the distribution contractors 1-3 in the rewriting field Z1 of the user recording medium 13, attached data is written in the individual data field Z2 and the billing data field Z3. At the same time it performs the writing to this user recording medium 13, It sends also to the computers 21-23 of the contractors 1-3 who distribute software via the communication systems 5, 7, and 9 of going up of the same data as the individual data and billing data which were written in in the user recording medium 13 from the store computer 24, The individual data and billing data of an identical content are recorded on the contractor computers 21-23 concerned.

[0040]The distribution contractors 1-3 subtract and do settlement processing of the amount of money of distribution software from the balance in billing data with reference to the billing data of the user's 15 user recording medium 13. Other settlement processings, such as addition and collation, are performed also with reference to individual data.

[0041]The accounting system of the above-mentioned communication system can be used in the cases, such as distribution of added value data to many and unspecified users on satellite broadcasting or the Internet etc. The recording device by the side of the information provider of this invention, a means to regulate, a collation means, and the means made to record comprise the computers 21-23 by the side of an information provider.

[0042]The individual data and billing data (1) individual data drawing 3 which are recorded on a user recording medium are the example of a data format which assigned the part in the storage area Z of the user recording medium 13 which the user 15 can rewrite as the individual data field Z2, and memorized individual data.

[0043]As an individual data field data format, number A5 of the name A1 of purchase software, the amount of money A2 of purchase software, purchased store A3, purchased time A4, and the write-in machine which consists of computers shall be 1 block. Whenever it purchases software, it adds in 1 block (B1 - B5) and a unit (C1-C5). Accumulation record is carried out without updating the past individual data by this. Expansion is possible for the data format of these individual data field by defining specification according to the purpose.

[0044]** As individual data of A1 to A5 at the time of purchasing "the strongest shogi 1997" for 5,800 yen in a ZAKOMBINI Kamata store at example of individual data 16:25 on April 10, 1997, In the field A1, as a name of the purchased software, "the strongest shogi 1997", "5800" which simplified 5,800 yen as the amount of

money of the purchased software to A2, To A3, the write-in equipment item number item "00002537" of the store which purchased "9704101625" which simplified the time (16:25 on April 10, 1997) which purchased the "ZAKOMBINI Kamata store" to A4 as a name of the purchased store to A5 is memorized, respectively.

[0045]** As individual data of B1 to B5 at the time of purchasing "best golf Nagano Prefecture" for 4,900 yen in the MARUDAI department store Shinjuku store at 11:38 on May 5, 1997, In the field B1, as a purchased soft name, "best golf Nagano Prefecture", "4900" which simplified 4,900 yen as a purchased soft amount of money to B-2, To B3, the number "00000271" of the write-in machine of the store which purchased "9705051138" which simplified the time (11:38 on May 5, 1997) which purchased the "MARUDAI department store Shinjuku store" to B4 as a name of the purchased store (store) in B5 is memorized, respectively.

[0046]** As individual data of C1 to C5 at the time of purchasing "the mah-jongg reach of one shot" for 5,500 yen in a 4 ** department store Shibuya store at 21:57 on June 20, 1997, "5500" which simplified 5,500 yen as a purchased soft name in the field C1 as a soft amount of money which purchased "the mah-jongg reach of one shot" to C2, "9706202157" which simplified the time (21:57 on June 20, 1997) which purchased "4 ** department store Shibuya store" to C4 as a name of the purchased store is remembered C3 to be a number "00005963" of the write-in machine of the purchased store to C5, respectively.

[0047](2) Billing data drawing 4 is the example of use which assigned the part in the storage area Z of the user recording medium 13 which the user 15 can rewrite as the billing data field Z3, and memorized billing data.

[0048]As a billing data field data format, billing data and amount-of-money billing data are included. Billing data is a user's proper data and consists of a buyer's user ID D1, the password D2, the date of birth D3, and the sex D4. Amount-of-money billing data consists of the fee collection time E1, the amount E2 of payment, the amount contributed E3, the balance E4, and the fee collection store E5. Whenever the amount-of-money billing data E1-E5 shall be 1 block and it carries out cash receipt and disbursement, it adds in 1 block (F1-F5), (G1-G5), and a unit (H1-H5). Accumulation record is carried out without updating the past individual data by this. Expansion is possible also for the data format of these billing data field by defining specification according to the purpose.

[0049]** Register "ST781249" into the example field D1 of billing data as a buyer's user ID number. This is peculiar ID provided in the owner individual. The password "7298" determined by the intention of the person himself/herself as a password is registered into the field D2. When it is a buyer's date of birth, for example, February 23, Showa 34, "1959.2.23" changed to A.D. is registered into the field D3. As a buyer's sex, in the case of a male, "0" is registered, and, in the case of a woman, "1" is registered into the field D4.

[0050]** As billing data of E1 to E5 at the time of purchasing the charge amount of 20,000 yen in a ZAKOMBINI Kamata store at 16:20 on April 10, 1997 (payment), "9704101620" which simplified time 16:20 on April 10, 1997 of the fee collection to E1, To E2, "20000" which simplified 20,000 yen for "0" which simplified 0 yen for "20000" which simplified amount of payment 20,000 yen as the amount contributed to E3 as the balance to E4 is memorized, respectively.

[0051]** As billing data of F5, from F1 at the time of purchasing 5,800 yen software in a ZAKOMBINI Kamata store at 16:25 on April 10, 1997, To F1, "9704101625" which simplified time 16:25 on April 10, 1997 of fee collection, To F2, "14200" which simplified $E4+F2-F3=14,200$ yen for "5800" which simplified 5,800 yen of

software wafer purchased amount for "0" which simplified 0 yen as the amount of payment as the amount contributed to E3 as the balance after purchase to F4 is memorized, respectively.

[0052]** As billing data of G1 to G5 at the time of purchasing 4,900 yen software in the MARUDAI department store Shinjuku store at 11:38 on May 5, 1997, "97051138" which simplified time 11:38 on May 5, 1997 of the fee collection to G1, To G2, "9300" which simplified $F4+G2-G3=9,300$ yen for "4900" which simplified 4,900 yen of software purchased amount for "0" which simplified 0 yen as the amount of payment as the amount contributed to G3 as the balance after purchase to G4 is memorized, respectively.

[0053]** As billing data of H1 to H5 at the time of purchasing 5,500 yen software in a 4 ** department store Shibuya store at 21:57 on June 20, 1997, "9706202157" which simplified time 21:57 on June 20, 1997 of the fee collection to H1, To H2, "3800" which simplified $G4+H2-H3=3,800$ yen for "5500" which carried out simple [of the 5,500 yen of software purchased amount] for "0" which simplified 0 yen as the amount of payment to H3 as the amount contributed as the balance after purchasing H4 is memorized, respectively.

[0054]While distributing software using the communication systems 5-10 which connect between the computer 24 installed in a data flow store, and the computer 21-23 installed in the distribution contractors 1-3, the data containing cash data is exchanged. Processing is continued, if the distribution contractors 1-3 compare with the past record and agree about the data sent from a software purchaser's user recording medium 13, if they do not agree, they will stop processing, and they take an appropriate measure.

[0055](1) When writing attached data in the attached data field Z2 of the user recording medium 13, and Z3 regularly via the structure store 4 of forged discovery, the attached data of an identical content is written also in the computers 21-23 simultaneously installed in the distribution contractor 1-3 side. Therefore, the billing data of all the users' registered user recording medium 13 is recorded on the software distribution contractors' 1-3 computers 21-23. As long as there is no unjust writing to the user recording medium 13, the contents of the attached data of the user recording medium 13 and the computers 21-23 are in agreement.

[0056]Now, as shown in drawing 5, at Step 101 from the ID number of the billing data in the user recording medium 13. The billing data which corresponds to an ID number from the billing data in the software distribution contractors' 1-3 computer 21-23 is searched, and collation with the billing data currently recorded on the user recording medium 13 is performed. As a result of comparing at Step 102, when data agrees, it progresses to Step 103, and it is judged that billing data is normal, and it shifts to message distribution processing including accounting. When data does not agree, it progresses to Step 104, and it is judged that billing data is unusual, and message distribution processing is stopped. When required, the user recording medium 13 is compulsorily discharged from the write-in machine of the store computer 24, or the distribution contractors 1-3 specify the unauthorized use person of the user recording medium 13, and take an appropriate measure.

[0057](2) If the flow right collated result after collation comes out, the software distribution contractors 1-3 will distribute to a store the game software for which a user asks using a network. When it is caught in the age limit with reference to the date of birth (D3) (drawing 4) in billing data at this time in the case of game software which has the age limit in a distribution layer, it regulates and distribution is stopped. A message to that effect may be made to output from the computer 24 if needed.

[0058]The game software which received distribution is recorded on the rewriting field Z1 in the user recording medium 13 by computer 24 of the store 4. The required data mentioned above to the individual data field Z2 and the billing data field Z3 of the user recording medium 13 is recorded. At this time, the same data is recorded also on the individual data field Z2 and the billing data field Z3 of the computers 21-23 of the software distribution contractors 1-3 via the communication systems 5, 7, and 9.

[0059]Thus, he is trying for this embodiment to memorize the same attached data recorded on the computer of the software distribution contractor who cannot carry out direct access from a user by the user recording medium. For this reason, by collation with the attached data by the side of a user, and the attached data by the side of an information provider, since forgery of a user recording medium, and an alteration and also double use of data can also be checked, even if it is a medium which can rewrite a recording medium, it is strong to forgery and reliability can be improved.

[0060]In a store, a special-purpose machine like a card reader is not needed, but since the existing personal computer equipped with a Magnetic-Optical disk drive can be used, a system can be built cheaply. Since capacity is large, unlike an IC card, especially the magneto-optical disc can record mass game software without restrictions. As long as the balance allows, rewriting of game software can be performed any number of times. Since a contract like a credit card which is troublesome and time requires is not needed when purchasing a magneto-optical disc, a user's expansion can be aimed at. And since software and attached data were written in the magneto-optical disc of one sheet, game software and the card for soft purchase can be purchased simultaneously, and it becomes very convenient for a user as compared with the case where it purchases separately.

[0061]Since attached data, such as individual data recorded on the user recording medium, is recorded also on a software distribution contractor's computer, unlike a credit card, it can perform sale/sales management of software, and can also grasp a sales situation in real time. This system is cheaper than introducing a POS terminal, and, moreover, can build POS and a peer system.

[0062]Unlike a prepaid card, a user recording medium is rewritable, and since the attached data field which can be re-filled up there with attached data was provided, it is [usually only being subtracted and], but it can also add. For example, it becomes possible to add a use right to the existing attached data as attached data in a user recording medium by transfer from [from the contractor who has distributed software] the gratitude of a questionnaire, the prize by a lottery, or others. Thus, the side which provides information can add the right of use of the service to a user freely.

[0063]Since the same user recording medium can be used for it any number of times if cash data is written in even if a user recording medium exhausts the cash data in a user recording medium, it can aim at effective use of resources.

[0064]And since the attached data written in as attached data in the user recording medium was used compared with the thing of the conventional system which limited the request for a utilization charge to the person who possesses the credit card, the frame of a credit can be removed. Thus, as an accounting system involved in communication, attached data can be referred to safely and simply in addition to a credit card and a prepaid card. Since attached data is added by a block unit, and it leaves all past payment records and was made not to update a data content except for the balance in particular, even if data is altered, the alteration of data, etc. can be easily discovered by comparing with the past record.

[0065]Although billing data was compared in the above-mentioned embodiment, it may be made to compare about all the attached data. It compares by a software

distribution contractor's computer, and the injustice in the store was prevented, and if there is no such fear, it is also possible to give a verification function to a store. For example, the billing data of all the users' user recording medium 13 registered into the computer 24 of the store 4 is recorded. The billing data which corresponds to an ID number from the billing data in the computer 24 of the store 4 is searched, and it is made to perform collation with the billing data currently recorded on the user recording medium 13 from the ID number of the billing data in the user recording medium 13.

[0066]Although the network is introduced supposing large-scale-izing, it is possible to also build the small-scale system not using a network.

[0067]As a rewritable user recording medium, a game cassette, a floppy disk, There is a magnetic disk, a magneto-optical disc (MO), an optical disc, a removable hard disk (what is called zip, jaz, and PD is included), or a mass IC memory card expected in the future.

[0068]** sale The software to carry out and the thing of time fee collection by the contents of ** added value data, ** the thing of the fee collection by the quantity of added value data, and ** -- the thing of the fee collection by the quality of added value data, etc. are synthetic at one stem again also to that from which a fee collection standard is different -- it is simply and safely manageable. Attached data may be enciphered in order to raise security.

[0069]Although the record section of a user recording medium is divided into an individual data field and a billing data field and it was made to overlap some data in the above-mentioned embodiment, it collects as a data addition field and may be made to avoid the duplication of data. As for the software to distribute, it is needless to say that it is not limited to game software.

[0070]

[Effect of the Invention]Since the attached data of the user recording medium is recorded also on the computer of the information provider who cannot carry out direct access from the (1) user side according to the invention according to claim 1, Since a user recording medium is forged, or a user recording medium is rewritable, even if it is rewritten by the kitchen, By comparing the attached data of a user recording medium, and the attached data of an information provider's computer, the unauthorized use can be prevented effectively and, as a result, software can be distributed simply and safely.

[0071](2) It can register as a club member only by purchasing a user recording medium, and since contract subscription is not needed like a credit card, a user's expansion can be aimed at.

[0072](3) Since the receptacle of software and the function of cash were given to it as software and the attached data containing billing data could be recorded on the user recording medium of one sheet, only by purchasing the user recording medium of one sheet, the purchase of software is attained and simplification of a user's procedure can be attained.

[0073](4) Since the information provider enabled it to manage the attached data recorded on the user recording medium as the attached data of a user recording medium was recorded also on the computer by the side of an information provider, If the contents of software and billing data are included in attached data, sale/sales management of the software distributed can be performed easily.

[0074]According to the invention according to claim 2, since a user recording medium is rewritable, it can also supply a user with service from the information

provider side by not remaining for on the other hand reducing the value thru/or the right of a user recording medium on a target, but paying a user recording medium, and increasing.

[0075]According to the invention according to claim 3, if a magneto-optical disc is used for a user recording medium, the existing personal computer can be used and a system can be built cheaply.

[0076]According to the invention according to claim 4, an attached data field is extended to the user recording medium on which the software which a user is going to purchase is made to record, While making attached data, such as billing data and software associated data, record on an attached data field, this attached data can be made to be able to record also on the recording device by the side of an information provider simultaneously, and a reliable data distribution system can be built with an easy structure of managing both attached data.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]The system configuration figure by an embodiment.

[Drawing 2]The quota figure of the storage area in the user recording medium by an embodiment.

[Drawing 3]The figure showing the data format and the example of data of an individual data field by an embodiment.

[Drawing 4]The figure showing the data format and the example of data of a billing data field by an embodiment.

[Drawing 5]The flow chart of forged discovery of a user recording medium.

[Description of Notations]

1-3 Software distribution contractor

4 Store

5-10 Communication system

13 User recording medium

15 User

21-23 Computer by the side of a distribution contractor

24 The computer by the side of a store

CLAIMS

[Claim(s)]

[Claim 1]In a data distribution method with which software is distributed to a user from an information provider according to a user's demand, A rewritable user recording medium with which attached data relevant to the above-mentioned software containing data and billing data peculiar to a user is recorded is used, Attached data applicable to user proper data of a user recording medium is searched from an information provider's computer, Attached data memorized by an information provider's computer and attached data memorized by user recording medium are compared, When attached data does not agree, stop message distribution processing, and message distribution processing including accounting to software which a user demands when attached data agrees is performed, While recording attached data about software distributed to a user by this message distribution processing from an information provider, and the above-mentioned software containing billing data which carried out [above-mentioned] accounting on a user recording medium, A data distribution method which recorded the above-mentioned attached data also on an

information provider's computer by which data management is carried out so that direct access cannot be carried out from a user.

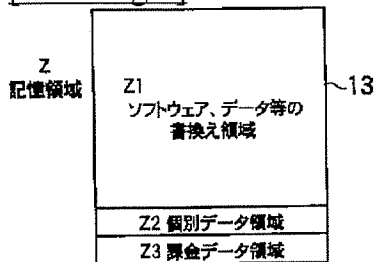
[Claim 2]The data distribution method according to claim 2 which pays a predetermined amount of money to a user recording medium from an information provider's computer and with which the record was recorded also on an information provider's computer in order to supply a user with service from an information provider, when a user fulfills service supply conditions.

[Claim 3]The data distribution method according to claim 1 or 2 whose above-mentioned user recording medium is a magneto-optical disc.

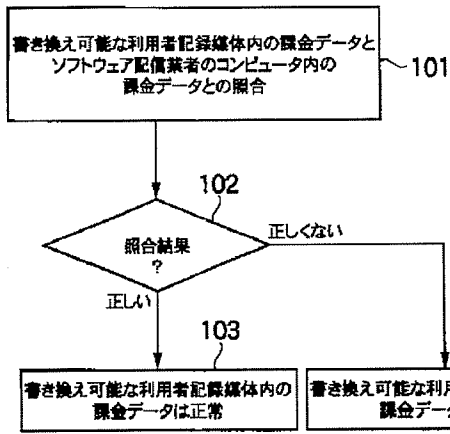
[Claim 4]A communication system which distributes data to a user from an information provider according to a user's demand, A main data field which records software which a user demands among data distributed by information provider according to a communication system, A rewritable user recording medium provided with an attached data field which records attached data relevant to the above-mentioned software containing data and billing data peculiar to a user, A recording device by the side of an information provider who records the same data as attached data recorded on an attached data field of a user recording medium, A means to permit rewriting from an information provider to attached data recorded on an information provider's recording device, and to regulate rewriting from a user, Attached data applicable to user proper data of a user recording medium is searched from an information provider's recording device, A collation means which compares attached data of an information provider's recording device, and attached data of a user recording medium, continues message distribution processing of software when it agrees, and stops message distribution processing of software when not agreeing, When message distribution processing of software is continued by collated result of a collation means, after carrying out accounting according to software distributed, A data distribution device provided with a means on which attached data which contains billing data in an attached data field of a user recording medium and a recording device by the side of an information provider is made to record while making software distributed to a user from an information provider record on a main data field of a user recording medium.

DRAWINGS

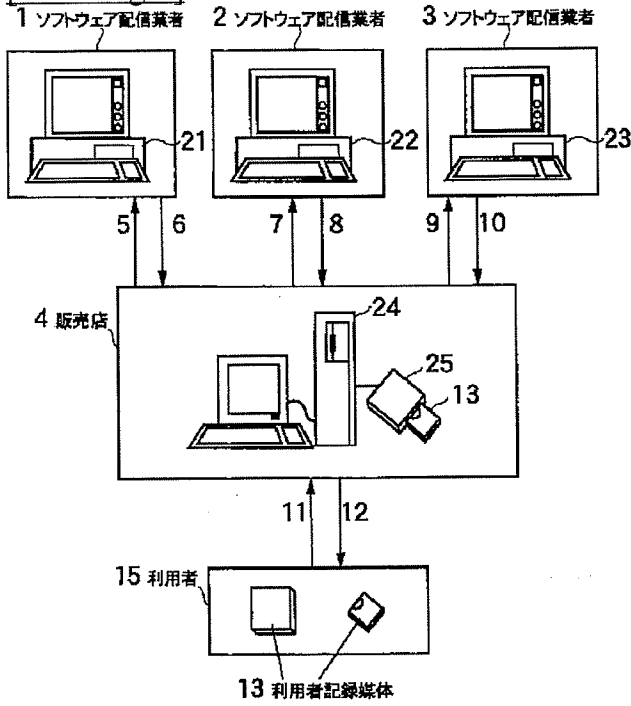
[Drawing 2]



[Drawing 5]



[Drawing 1]



[Drawing 3]

Z2 「個別データ」領域データフォーマット

| | 〈個別データ例〉 |
|-------------|---------------|
| A1.購入ソフトの名称 | a1.最強将棋1997 |
| A2.購入ソフトの金額 | a2.5800 |
| A3.購入した店舗 | a3.ザーコンビニ蒲田店 |
| A4.購入した日時 | a4.9704101625 |
| A5.書き込み機の番号 | a5.00002537 |
| B1.購入ソフトの名称 | b1.ベストゴルフ長野県 |
| B2.購入ソフトの金額 | b2.4800 |
| B3.購入した店舗 | b3.丸大デパート新宿店 |
| B4.購入した日時 | b4.9705051138 |
| B5.書き込み機の番号 | b5.00000271 |
| C1.購入ソフトの名称 | c1.麻雀リーチ一発 |
| C2.購入ソフトの金額 | c2.5500 |
| C3.購入した店舗 | c3.四越デパート渋谷店 |
| C4.購入した日時 | c4.9706202157 |
| C5.書き込み機の番号 | c5.00005963 |
| ⋮ | ⋮ |

[Drawing 4]

Z3 「課金データ」データフォーマット

| | 〈課金データ例〉 |
|---------|---------------|
| D1.ID番号 | d1.ST781249 |
| D2.暗証番号 | d2.7298 |
| D3.生年月日 | d3.1959.2.23 |
| D4.性別 | d4.0 |
| E1.課金日時 | e1.9704101620 |
| E2.入金額 | e2.20000 |
| E3.出金額 | e3.0 |
| E4.残高 | e4.20000 |
| E5.課金店舗 | e5.ザーコンビニ蒲田店 |
| F1.課金日時 | f1.9704101625 |
| F2.入金額 | f2.0 |
| F3.出金額 | f3.5800 |
| F4.残高 | f4.14200 |
| F5.課金店舗 | f5.ザーコンビニ蒲田店 |
| G1.課金日時 | g1.9705051138 |
| G2.入金額 | g2.0 |
| G3.出金額 | g3.4900 |
| G4.残高 | g4.9300 |
| G5.課金店舗 | g5.丸大デパート新宿店 |
| H1.課金日時 | h1.9706202157 |
| H2.入金額 | h2.0 |
| H3.出金額 | h3.5500 |
| H4.残高 | h4.3800 |
| H5.課金店舗 | h5.四越デパート渋谷店 |
| ⋮ | ⋮ |

| | | |
|--------------------------|-------|----------------------|
| (51)Int.Cl. ⁶ | 識別記号 | F I |
| G 0 6 F 9/06 | 5 5 0 | C 0 6 F 9/06 5 5 0 Z |

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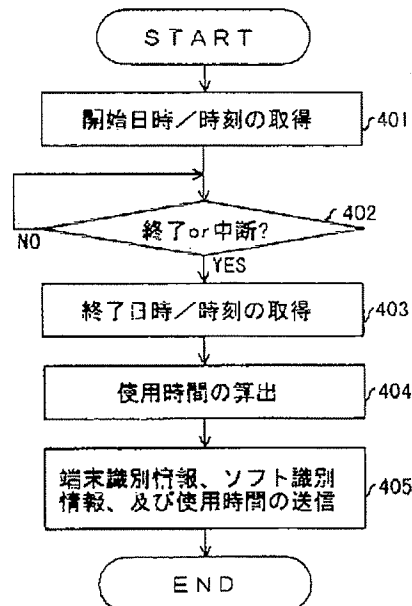
(54) 【発明の名称】 ソフトウェア使用管理方法及びシステム

(57) 【要約】

【課題】 ネットワーク経由でホスト装置から端末装置にダウンロードされて使用されるソフトに対する、使用時間に応じた従量課金を実現することにある。

【解決手段】 端末装置において、ホスト装置からダウンロードされたソフトが起動されると、開始日時/時刻が取得され(401)、その後、ソフトの終了又は中断が監視される(402)。ソフトが終了又は中断されると、終了日時/時刻が取得され(403)、これと開始日時/時刻との差の時間として、ソフトの使用時間が算出される(404)。端末装置からホスト装置に、上記使用時間が送信される(405)。ホスト装置は、端末装置及びソフト種別毎に、端末装置から通知されるソフトの使用時間を累算し、これに対して課金を行う。他の実施の形態では、ソフトの使用可能時間がなくなったときに、ソフトの使用が禁止されるように動作する。

第1の実施の形態におけるソフト使用時間制御処理の動作フローチャート



【特許請求の範囲】

【請求項1】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理方法であって、前記端末装置における前記ホスト装置からダウンロードされたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知し、前記ホスト装置において前記端末装置から通知される使用時間を累算する、ことを特徴とするソフトウェア使用管理方法。

【請求項2】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムであって、前記端末装置は、前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知モジュールを含み、前記ホスト装置は、前記端末装置及びソフトウェア毎に、前記端末装置から通知される使用時間を管理する使用時間管理テーブルと、前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用時間に累算する使用時間累算モジュールと、を含む、ことを特徴とするソフトウェア使用管理システム。

【請求項3】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられる端末装置であって、前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知モジュールを含む、ことを特徴とする端末装置。

【請求項4】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられるホスト装置であって、前記端末装置及びソフトウェア毎に、前記端末装置から通知される使用時間を管理する使用時間管理テーブルと、前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用時間に累算する使用時間累算モジュールと、を含むことを特徴とするホスト装置。

【請求項5】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理方法であって、前記ホスト装置において前記端末装置がダウンロードしたソフトウェアに対して使用可能時間を設定し、前記端末装置における前記ソフトウェアの実行時に、その使用時間を前記ホスト装置に通知し、前記ホスト装置において、前記端末装置から通知される使用時間をそれに対応する前記使用可能時間から減算し、前記ソフトウェアに対応する使用可能時間がなくなったときに、前記端末装置での前記ソフトウェアの実行を禁止する、ことを特徴とするソフトウェア使用管理方法。

【請求項6】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムであって、前記端末装置に、前記ホスト装置からダウンロードしたソフトウェアの実行時に、前記ホスト装置に該ソフトウェアの使用可能時間を問い合わせる使用可能時間問合せモジュールと、該問合せの結果前記使用時間がなくなっていたときに前記ソフトウェアの実行を禁止するソフトウェア実行制御モジュールと、前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知モジュールと、を含み、前記ホスト装置に、前記端末装置及びソフトウェア毎に、前記端末装置がダウンロードしたソフトウェアに対して使用可能時間を設定する使用可能時間管理テーブルと、前記端末装置からの問合せに応じて前記使用可能時間管理テーブル上の使用可能時間を通知する使用可能時間通知モジュールと、前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用可能時間から減算する使用可能時間減算モジュールと、を含む、ことを特徴とするソフトウェア使用管理システム。

【請求項7】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられる端末装置であって、前記ホスト装置からダウンロードしたソフトウェアの実行時に、前記ホスト装置に該ソフトウェアの使用可能時

間を問い合わせる使用可能時間問合せモジュールと、
該問合せの結果前記使用時間がなくなっていたときに前記ソフトウェアの実行を禁止するソフトウェア実行制御モジュールと、
前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知モジュールと、
を含むことを特徴とする端末装置。

【請求項8】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられるホスト装置であって、
前記端末装置及びソフトウェア毎に、前記端末装置がダウンロードしたソフトウェアに対して使用可能時間を設定する使用可能時間管理テーブルと、
前記端末装置からの問合せに応じて前記使用可能時間管理テーブル上の使用可能時間を通知する使用可能時間通知モジュールと、
前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用可能時間から減算する使用可能時間減算モジュールと、
を含むことを特徴とするホスト装置。

【請求項9】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられる端末装置であるコンピュータにより使用されたときにそれによって読み出されるプログラムを記録した記録媒体であって、
前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知機能、
を前記端末装置であるコンピュータに行わせるためのプログラムを記録したコンピュータ読出し可能記録媒体。

【請求項10】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられるホスト装置であるコンピュータにより使用されたときにそれによって読み出されるプログラムを記録した記録媒体であって、
前記端末装置及びソフトウェア毎に、前記端末装置から通知される使用時間を管理する使用時間管理テーブルを記憶する機能と、
前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用時間に累算する使用時間累算機能と、
を前記ホスト装置であるコンピュータに行わせるためのプログラムを記録したコンピュータ読出し可能記録媒

体。

【請求項11】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられる端末装置であるコンピュータにより使用されたときにそれによって読み出されるプログラムを記録した記録媒体であって、
前記ホスト装置からダウンロードしたソフトウェアの実行時に、前記ホスト装置に該ソフトウェアの使用可能時間を問い合わせる使用可能時間問合せ機能と、
該問合せの結果前記使用時間がなくなっていたときに前記ソフトウェアの実行を禁止するソフトウェア実行制御機能と、
前記ホスト装置からダウンロードしたソフトウェアの実行時に、その使用時間を前記ホスト装置に通知する使用時間通知機能と、
を前記端末装置であるコンピュータに行わせるためのプログラムを記録したコンピュータ読出し可能記録媒体、
を含むことを特徴とする端末装置。

【請求項12】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられるホスト装置であるコンピュータにより使用されたときにそれによって読み出されるプログラムを記録した記録媒体であって、
前記端末装置及びソフトウェア毎に、前記端末装置がダウンロードしたソフトウェアに対して使用可能時間を設定する使用可能時間管理テーブルを記憶する機能と、
前記端末装置からの問合せに応じて前記使用可能時間管理テーブル上の使用可能時間を通知する使用可能時間通知機能と、
前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用可能時間から減算する使用可能時間減算機能と、
を前記ホスト装置であるコンピュータに行わせるためのプログラムを記録したコンピュータ読出し可能記録媒体、
を含むことを特徴とするホスト装置。

【請求項12】 ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理システムに用いられるホスト装置であるコンピュータにより使用されたときにそれによって読み出されるプログラムを記録した記録媒体であって、
前記端末装置及びソフトウェア毎に、前記端末装置がダウンロードしたソフトウェアに対して使用可能時間を設定する使用可能時間管理テーブルを記憶する機能と、
前記端末装置からの問合せに応じて前記使用可能時間管理テーブル上の使用可能時間を通知する使用可能時間通知機能と、
前記端末装置から通知される使用時間をそれに対応する前記使用時間管理テーブル上の使用可能時間から減算する使用可能時間減算機能と、
を前記ホスト装置であるコンピュータに行わせるためのプログラムを記録したコンピュータ読出し可能記録媒体、
を含むことを特徴とするホスト装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、ネットワーク経由でホスト装置から端末装置に提供されるソフトウェアの使用を管理する技術に関する。

【0002】

【従来の技術及び発明が解決しようとする課題】インターネットを始めとするネットワークの発達により、アプリケーションソフトウェアを持たないで、必要なソフトウェア（以下、単にソフトと呼ぶ）があると、サービスセンターのホスト装置からネットワークを介してそのソ

フトをダウンロードするシステムが知られている（例えば、特開平7-271697号に開示のもの）。

【0003】しかし、このようなシステムにおいて、使用されるソフトに対して課金を行うためには、従来は、ソフトのダウンロード時にクレジットカード番号等を入力させて、一括してそのソフトの使用料金が請求されていた。

【0004】従って、ダウンロードされて使用されるソフトに対して、使用時間に応じて従量課金を行うシステムは、従来実現されていなかった。本発明の課題は、ネットワーク経由でダウンロードされて使用されるソフトに対する、使用時間に応じた従量課金を実現することにある。

【0005】

【課題を解決するための手段】本発明は、ネットワークに接続され、ソフトウェアのダウンロードサービスを行うホスト装置と、このホスト装置からソフトウェアをダウンロードして実行する端末装置との間のソフトウェアの使用管理技術を前提とする。

【0006】本発明の第1の態様では、端末装置におけるホスト装置からダウンロードされたソフトウェアの実行時に、その使用時間がホスト装置に通知される。これに対して、ホスト装置において、端末装置から通知される使用時間が累算される。

【0007】上述の本発明の第1の態様における端末装置とホスト装置の連携動作により、端末装置において、ホスト装置からダウンロードされたソフトが実行される毎に、その使用時間に関する情報が端末装置からホスト装置に転送されて累算される。従って、ホスト装置では、一定時間（例えば1カ月）間隔で、各端末毎及び各ソフト毎に、使用時間の累算値に応じた従量課金を実現することができる。

【0008】本発明の第2の態様では、まず、ホスト装置において端末装置がダウンロードしたソフトウェアに対して使用可能時間が設定される。次に、端末装置におけるソフトウェアの実行時に、その使用時間がホスト装置に通知される。

【0009】また、ホスト装置において、端末装置から通知される使用時間がそれに対応する使用可能時間から減算される。そして、ソフトウェアに対応する使用可能時間がなくなったときに、端末装置でのソフトウェアの実行が禁止される。

【0010】上述の本発明の第2の態様における端末装置とホスト装置の連携動作により、端末装置において、ホスト装置からダウンロードされたソフトが実行される毎に、使用時間がホスト装置に通知され、ホスト装置が、使用可能時間から各使用時間を減算してゆき、使用可能時間がなくなった時点で、そのソフトの使用が禁止されるように、制御することができる。従って、ホスト装置では、ソフトがダウンロードされる毎に、そのソフ

トとそれに対して設定される使用可能時間に対応する額の一定額を課金するという、従量課金を実現することができる。

【0011】なお、本発明は、コンピュータにより使用されたときに、上述の本発明の端末装置又はホスト装置の構成によって実現される機能と同様の機能を、端末装置であるコンピュータ又はホスト装置であるコンピュータに行わせるためのコンピュータ読出し可能記録媒体として構成することもできる。

【0012】

【発明の実施の形態】以下、図面を参照しながら本発明の実施の形態について詳細に説明する。

本発明の各実施の形態に共通の基本構成

図1は、本発明の実施の形態におけるホスト装置の構成図である。

【0013】このホスト装置は、ソフト使用時間制御に関連する後述する処理プログラムを実行するためのCPU101、RAM102のほか、端末装置とインターネット等のコンピュータネットワークを介して通信するための通信制御部103、及び本発明に特に関連するソフト使用時間管理テーブル104が、それぞれバスによって接続された構成を備える。なお、このソフト使用時間管理テーブル104は、実際には特に図示しないハードディスク装置等に記憶されている。

【0014】また、記録媒体106からソフト使用時間制御に関連する処理プログラムを読み込んでRAM102にロードするためのバスに接続される記録媒体ドライバ105を備える。記録媒体106は、例えばフロッピィディスク、CD-ROMディスク、光ディスク、リムーバブルハードディスク等の可搬型記録媒体である。

【0015】或いは、上記処理プログラムは、ネットワーク回線から通信制御部103を経由して、RAM102にロードされるように構成してもよい。図2は、本発明の実施の形態における端末装置の構成図である。

【0016】この端末装置は、ソフト使用時間制御に関連する後述する処理プログラムを実行するためのCPU201、RAM202のほか、ホスト装置とインターネット等のコンピュータネットワークを介して通信するための通信制御部203、キーボード/マウス（電子ペン等であってもよい）部207、及び時計部204が、それぞれバスにより接続された構成を備える。

【0017】また、記録媒体206からソフト使用時間制御に関連する処理プログラムを読み込んでRAM202にロードするためのバスに接続される記録媒体ドライバ205を備える。記録媒体206は、例えばPCMCIAカード型メモリ、フロッピィディスク等の可搬型記録媒体である。

【0018】なお、端末装置が、携帯型情報端末装置などである場合には、記録媒体ドライバ205は必ずしも実装する必要はなく、上記各処理プログラムは、ネット

ワーク回線から通信制御部203を経由して、RAM202にロードされるように構成してもよい。

本発明の第1の実施の形態

この実施の形態では、端末装置がホスト装置からソフトをダウンロードした後に、そのソフトを使用する毎に、使用時間がホスト装置に通知され、ホスト装置が、その使用時間に基づいて端末装置/ソフト種別毎に課金できるように、構成される。

【0019】図3は、端末装置によるソフト受信処理の動作フローチャート、図5は、端末装置からの各種情報の受信を行う受信処理の動作フローチャートである。まず、端末装置からホスト装置に対し、必要なソフトを選択するためのメニュー送信要求が送信される(図3のステップ301)。この送信要求には、端末識別情報のほか、端末性能及び必要なソフトが属するサービス種別が含まれる。

【0020】ホスト装置は、受信待機状態において、端末装置から上記メニュー送信要求を受信すると(図5のステップ501の判定がYES→502の判定がYES)、それに含まれている端末性能とサービス種別をキーとして、図8に示されるデータ構成を有するソフトウェアアーカイブデータベース(ソフトウェアアーカイブDB)107を検索することにより、要求された端末性能及びサービス種別に属するソフト種別とソフト識別情報を抽出し、そのリストを示すソフトダウンロードメニューを作成する(図5のステップ503)。

【0021】そして、ホスト装置は、作成したソフトダウンロードメニューを、端末装置からのメニュー送信要求とともに受信されている端末識別情報によって識別される端末装置に、送信する(図5のステップ504)。その後、ホスト装置は、図5のステップ501の受信待機ループに戻る。

【0022】端末装置において、上記ソフトダウンロードメニューが受信されると(図3のステップ302)、そのメニュー内の1つのソフトをユーザに選択させるためのソフト選択処理が実行される(図3のステップ303)。

【0023】続いて、端末装置からホスト装置に対して、ユーザによって選択されたメニュー項目情報が送信される(図3のステップ304)。この情報には、端末識別情報と、選択されたメニュー項目に対応するソフト識別情報が含まれる。

【0024】ホスト装置は、受信待機状態において、端末装置から上記メニュー項目情報を受信すると(図5のステップ501の判定がYES→502の判定がNO→505の判定がYES)、それに含まれているソフト識別情報をキーとして、図8に示されるデータ構成を有するソフトウェアアーカイブDB107を検索することによって、要求されたソフトのプログラムデータを抽出する(図5のステップ506)。

【0025】続いて、ホスト装置は、抽出したプログラムデータを、端末装置からのメニュー項目情報とともに受信されている端末識別情報により識別される端末装置に、送信する(図5のステップ507)。

【0026】更にホスト装置は、図9に示されるデータ構成を有するソフト使用時間管理テーブル104に、新たなエントリを作成する(図5のステップ508)。このエントリには、端末装置からのメニュー項目情報とともに受信されている端末識別情報、ソフト識別情報、及び時間情報フィールドに使用時間=0が登録される。その後、ホスト装置は、図5のステップ501の受信待機処理ループに戻る。

【0027】端末装置は、ホスト装置から転送されてくるソフトのプログラムデータを受信して、それに対応するソフト識別情報と共にRAM202にロードするソフトダウンロード処理を実行する(図3のステップ305)。

【0028】次に、図4は、端末装置によるソフト実行時に実行されるソフト使用時間制御処理の動作フローチャートである。端末装置において、図3の動作フローチャートで示される処理によってホスト装置からダウンロードされたソフトが起動されると、まず、時計部204から、開始日時/時刻が取得される(図4のステップ401)。

【0029】その後、ソフトの終了又は中断(サスペンド)を監視する待機状態になる(図4のステップ402のループ処理)。ソフトが終了又は中断されて図4のステップ402の判定がYESとなると、時計部204から、終了日時/時刻が取得される(図4のステップ403)。

【0030】続いて、この終了日時/時刻と図4のステップ401で取得されている開始日時/時刻との差の時間として、ソフトの使用時間が算出される(図4のステップ404)。

【0031】最後に、端末装置からホスト装置に、端末識別情報、上記実行されたソフトに対応するソフト識別情報、及び図4のステップ404で算出された使用時間が送信され(図4のステップ405)、実行されたソフトに対するソフト使用時間制御処理を終了する。

【0032】ホスト装置は、受信待機状態において、端末装置から上記使用時間が含まれるメッセージを受信すると(図5のステップ501の判定がYES→502の判定がNO→505の判定がNO→509の判定がYES)、それに含まれている端末識別情報とソフト識別情報をキーとして、図9に示されるデータ構成を有するソフト使用時間管理テーブル104を検索することによって、該当するエントリの時間情報フィールドに格納されている使用時間に、端末装置からのメッセージに含まれている使用時間を累算する(図5のステップ510)。その後、ホスト装置は、図5のステップ501の受信待

機ループに戻る。

【0033】以上に示した本発明の第1の実施の形態における端末装置とホスト装置の連携動作により、端末装置において、ホスト装置からダウンロードされたソフトが実行される毎に、その使用時間に関する情報が端末装置からホスト装置に転送されて累算される。

【0034】従って、ホスト装置では、一定時間（例えば1カ月）毎に、ソフト使用時間管理テーブル104内の各エントリの時間情報が読み出されることによって、各端末毎及び各ソフト毎に、使用時間に応じた従量課金を実現することができる。

【0035】なお、課金処理が実行される毎に、ソフト使用時間管理テーブル104内の各エントリの時間情報はクリアされる。

本発明の第2の実施の形態

この実施の形態では、端末装置がホスト装置からソフトをダウンロードする際に、そのソフトを使用することのできる使用可能時間が設定され、端末装置がそのソフトを使用する毎に、使用時間がホスト装置に通知され、ホスト装置が、上記使用可能時間から各使用時間を減算してゆき、使用可能時間がなくなった時点で、そのソフトの使用が禁止されるように、構成される。

【0036】まず、端末装置によるホスト装置からのソフトのダウンロード処理は、本発明の第1の実施の形態における図3の動作フローチャートで示される処理と同じであり、また、図7は、端末装置からの各種情報の受信を行う受信処理の動作フローチャートである。

【0037】端末装置からのメニュー送信要求に対するホスト装置による図7のステップ702→703→704の受信処理は、本発明の第1の実施の形態における図5のステップ502→503→504の受信処理と同じである。

【0038】また、端末装置からのメニュー項目の送信に対するホスト装置による図7のステップ705→706→707→708の受信処理は、本発明の第1の実施の形態における図5のステップ505→506→507→508の受信処理と同じである。

【0039】ただし、ホスト装置は、図7のステップ708で、図9に示されるデータ構成を有するソフト使用時間管理テーブル104に、新たなエントリを作成した後、そのエントリの時間情報フィールドに、予め決められている使用可能時間が設定される（図7のステップ709）。なお、使用可能時間が、ソフトアーカイブDB107の各ソフト毎のエントリに記憶され、その情報が上記フィールドに設定されるように構成されてもよい。その後、ホスト装置は、図7のステップ701の受信待機ループに戻る。

【0040】次に、図6は、端末装置によるソフト実行時に実行されるソフト使用時間制御処理の動作フローチャートである。端末装置において、図3の動作フロー

チャートで示される処理によりホスト装置からダウンロードされたソフトが起動されると、端末装置からホスト装置に、使用可能時間の間合せが行われる（図6のステップ601）。この場合に端末装置からホスト装置に送信されるメッセージには、端末識別情報と、これから実行されるソフトに対応するソフト識別情報とが含まれる。

【0041】ホスト装置は、受信待機状態において、端末装置から上記メッセージを受信すると（図7のステップ701の判定がYES→702の判定がNO→705の判定がNO→710の判定がNO→712の判定がYES）、それに含まれている端末識別情報及びソフト識別情報をキーとして、図9に示されるデータ構成を有するソフト使用時間管理テーブル104を検索することによって、検索されたエントリから使用可能時間を取得する（図7のステップ713）。

【0042】そして、ホスト装置から端末装置に、その使用可能時間が送信される（図7のステップ714）。その後、ホスト装置は、図7のステップ701の受信待機ループに戻る。

【0043】端末装置は、上記使用可能時間を受信した後、使用可能時間が0より大きいかな否かを判定する（図6のステップ602）。使用可能時間が0になっていてステップ602の判定がNOの場合には、ソフトの起動が中止され、期限切れを示すエラーメッセージが表示され（図6のステップ615）、ソフト使用時間制御処理を終了する。

【0044】一方、使用可能時間が0になっておらずステップ602の判定がYESの場合には、続いて、時計部204から、開始日時/時刻が取得される（図6のステップ603）。

【0045】その後、図6のステップ604→608→609→610→604の処理ループにおいて、ソフトの終了又は中断と、ソフトの起動時から現在までの使用時間を監視する待機状態になる。

【0046】即ちまず、ソフトの終了又は中断（サスペンド）が行われたか否かが判定される（図6のステップ604）。ソフトの終了又は中断が行われておらずステップ604の判定がNOの場合には、特には図示しないタイミングループにより一定のインターバルがおかれた後に、時計部204から現在日時/時刻が取得される（図6のステップ608）。なお、上記インターバル期間内においてもステップ604と同様のソフトの終了又は中断の監視が行われるものとする。

【0047】次に、この現在日時/時刻と図4のステップ401で取得されている開始日時/時刻との差の時間として、ソフトの起動時から現在までの使用時間が算出される（図6のステップ609）。

【0048】続いて、図6のステップ601でホスト装置から受信されている使用可能時間からステップ609で算出された使用時間を減算して得られる残り時間が、

所定の閾値時間以下になったか否か、即ちソフトを使用することができる時間が残り少なくなったか否かが判定される(図6のステップ610)。

【0049】ステップ610の判定がNOの場合は、ステップ604の判定処理に戻る。ステップ610の判定がYESになった場合には、更にステップ610で算出された残り時間が0以下になっているか否かが判定される(図6のステップ611)。

【0050】ステップ611の判定がNOの場合には、残り時間を示す表示と残り時間経過後にソフトが使用できなくなる旨を示す警告表示がなされる(図6のステップ612)。その後、ステップ604の判定処理に戻る。

【0051】ステップ610の判定がYESとなったのに続いてステップ611の判定もYESとなると、現在実行中のソフトが強制終了され(図6のステップ613)、続いて、端末装置からホスト装置に、そのソフトのタイムオーバーを示すメッセージが送信されて(図6のステップ614)、ソフト使用時間制御処理を終了する。このタイムオーバーメッセージには、端末識別情報とソフト識別情報とが含まれる。

【0052】ホスト装置は、受信待機状態において、端末装置から上記メッセージを受信すると(図7のステップ701の判定がYES→702の判定がNO→705の判定がNO→710の判定がNO→712の判定がNO→715の判定がYES)、それに含まれている端末識別情報及びソフト識別情報をキーとして、図9に示されるデータ構成を有するソフト使用時間管理テーブル104を検索することによって、検索されたエントリの時間情報フィールドに登録されている使用可能時間を0にクリアする(図7のステップ716)。その後、ホスト装置は、図7のステップ701の受信待機ループに戻る。

【0053】一方、図6のステップ604→608→609→610→604の処理ループにおいて、ソフトが終了又は中断されて図6のステップ604の判定がYESとなると、時計部204から、終了日時/時刻が取得される(図6のステップ605)。

【0054】続いて、この終了日時/時刻と図6のステップ601で取得されている開始日時/時刻との差の時間として、ソフトの使用時間が算出される(図6のステップ606)。

【0055】最後に、端末装置からホスト装置に、端末識別情報、上記実行されたソフトに対応するソフト識別情報、及び図6のステップ604で算出された使用時間が送信され(図6のステップ607)、実行されたソフトに対するソフト使用時間制御処理を終了する。

【0056】ホスト装置は、受信待機状態において、端末装置から上記使用時間が含まれるメッセージを受信すると(図7のステップ701の判定がYES→702の

判定がNO→705の判定がNO→710の判定がYES)、それに含まれている端末識別情報とソフト識別情報をキーとして、図9に示されるデータ構成を有するソフト使用時間管理テーブル104を検索することによって、該当するエントリの時間情報フィールドに格納されている使用可能時間から、端末装置からのメッセージに含まれている使用時間を減算する(図7のステップ711)。その後、ホスト装置は、図7のステップ701の受信待機ループに戻る。

【0057】以上に示した本発明の第2の実施の形態における端末装置とホスト装置の連携動作により、端末装置において、ホスト装置からダウンロードされたソフトが実行される毎に、使用時間がホスト装置に通知され、ホスト装置が、上記使用可能時間から各使用時間を減算してゆき、使用可能時間がなくなった時点で、そのソフトの使用が禁止されるように、制御することができる。

【0058】従って、ホスト装置では、ソフトがダウンロードされる毎に、そのソフトとそれに対して設定される使用可能時間に対応する額の一定額を課金するという、従量課金を実現することができる。

他の実施の形態

上述の本発明の第1及び第2の実施の形態の構成において、ホスト装置が算出した使用時間を端末装置に通知するように構成することもできる。

【0059】また、ソフトの使用時間の通知時にネットワークにアクセスできない場合に、その使用時間をRAM202上に保持しておき、次のソフト起動時にまず保持していた使用時間をホスト装置に通知するように構成し、その時点でネットワークにアクセスできない場合にはソフトが起動されないように構成してもよい。

【0060】また、ソフトの一部実行機能をホスト装置側に持ち、ソフトを実行するためには必ずネットワークにアクセスしなければならないように構成してもよい。また、本発明の第2の実施の形態の構成において、使用可能時間が0になってソフトの起動が禁止された後、そのソフトの使用の継続を申請する継続使用メニューが設けられるように構成してもよい。この場合には、ソフト使用時間管理テーブル104の該当エントリの時間情報フィールドに格納されている使用可能時間が新たに設定されて課金される。

【0061】或いは、本発明の第2の実施の形態の構成において、使用可能時間が0になった場合に、ソフトの起動を禁止するだけでなく、そのソフトのプログラムデータがRAM202上からクリアされ、再度ホスト装置からダウンロードしないとそのソフトを使用できないように構成してもよい。

【0062】

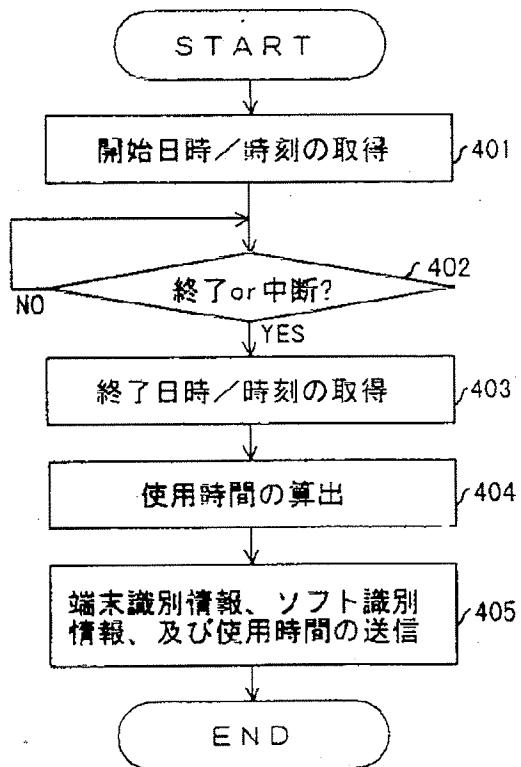
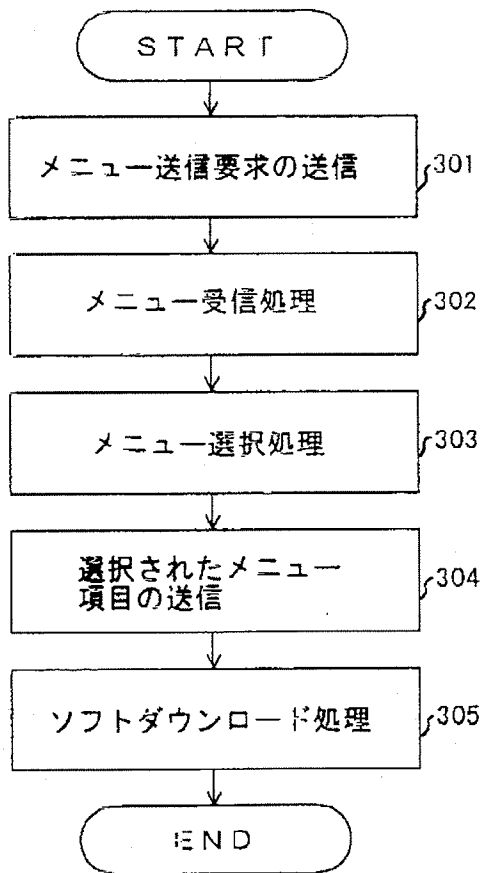
【発明の効果】本発明の第1の態様によれば、端末装置において、ホスト装置からダウンロードされたソフトが実行される毎に、その使用時間に関する情報が端末装置

【図3】

【図4】

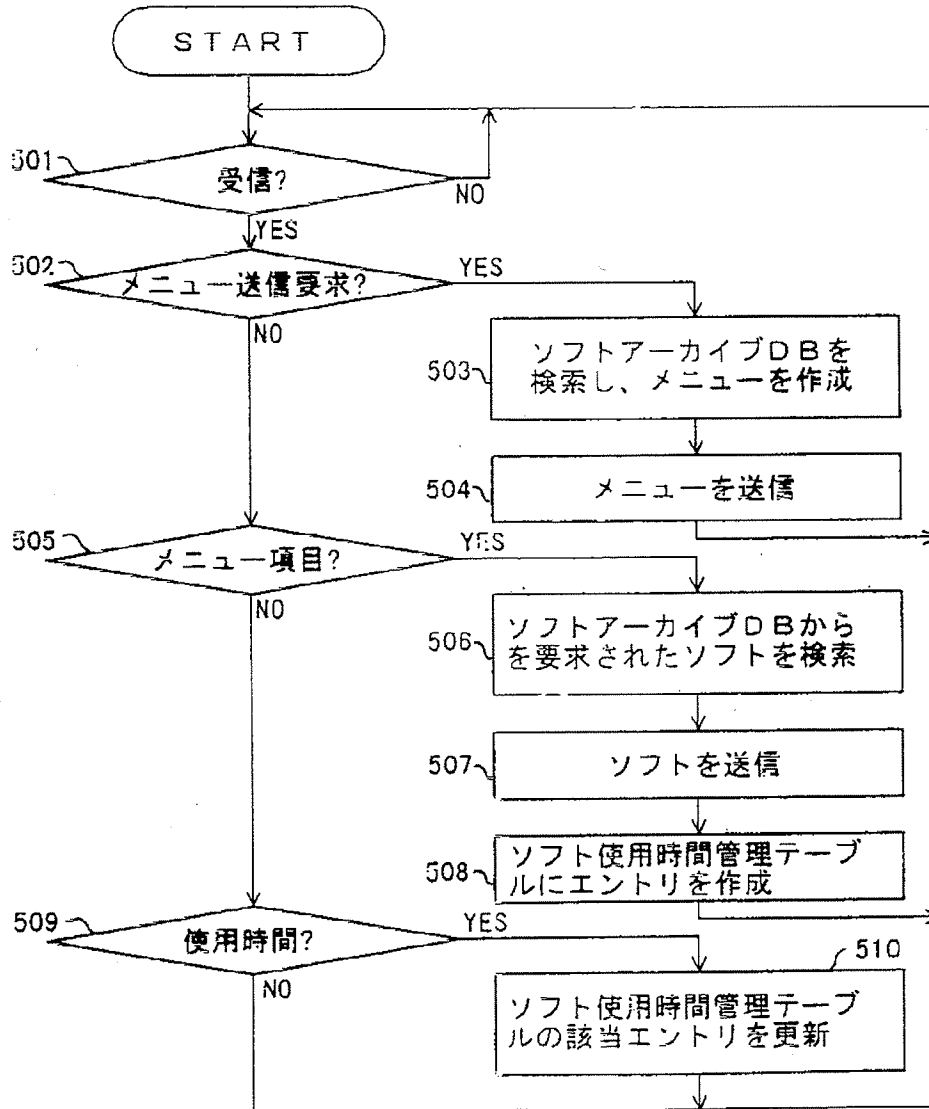
ソフト受信処理の動作フローチャート

第1の実施の形態におけるソフト使用時間制御処理の動作フローチャート



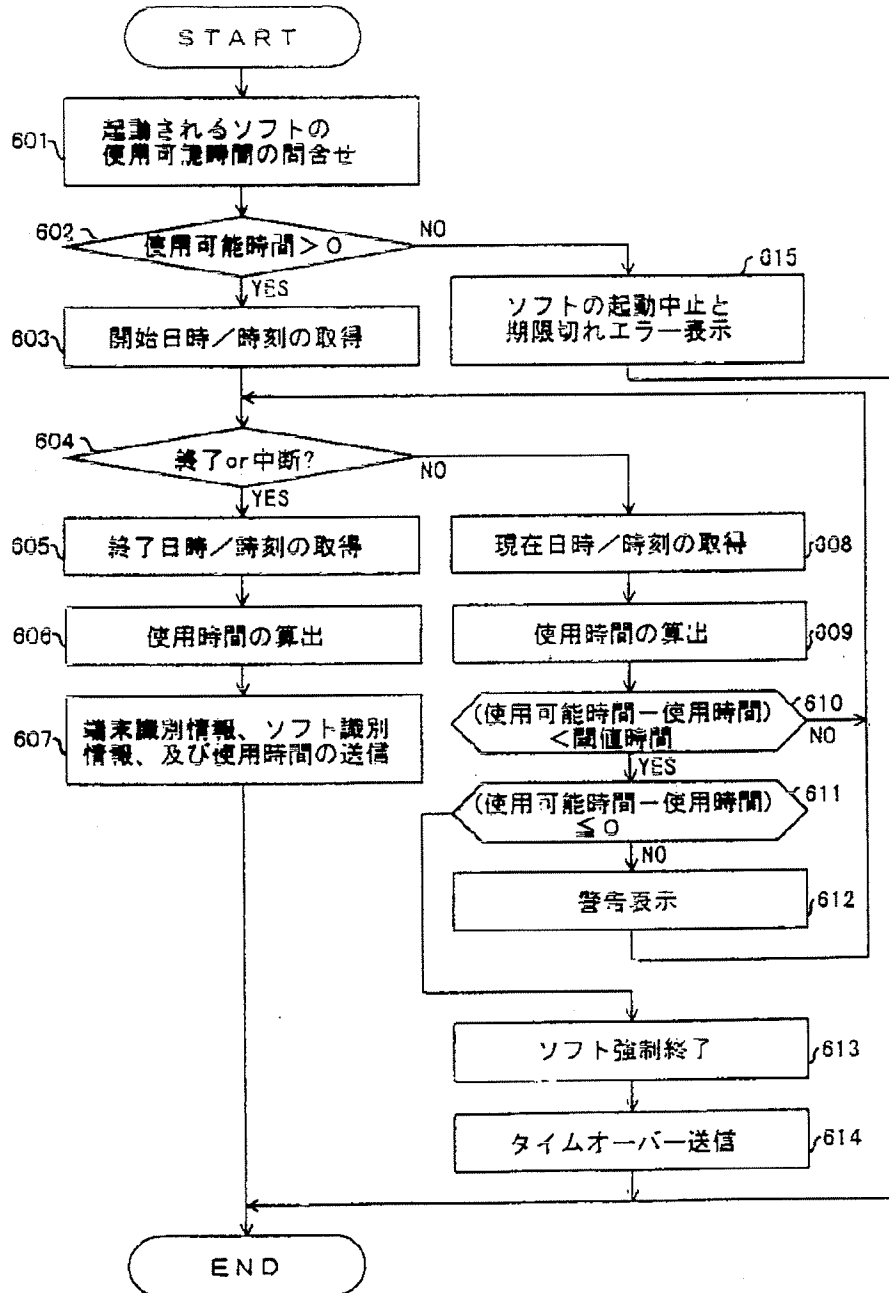
【図5】

第1の実施の形態におけるホスト装置の動作フローチャート



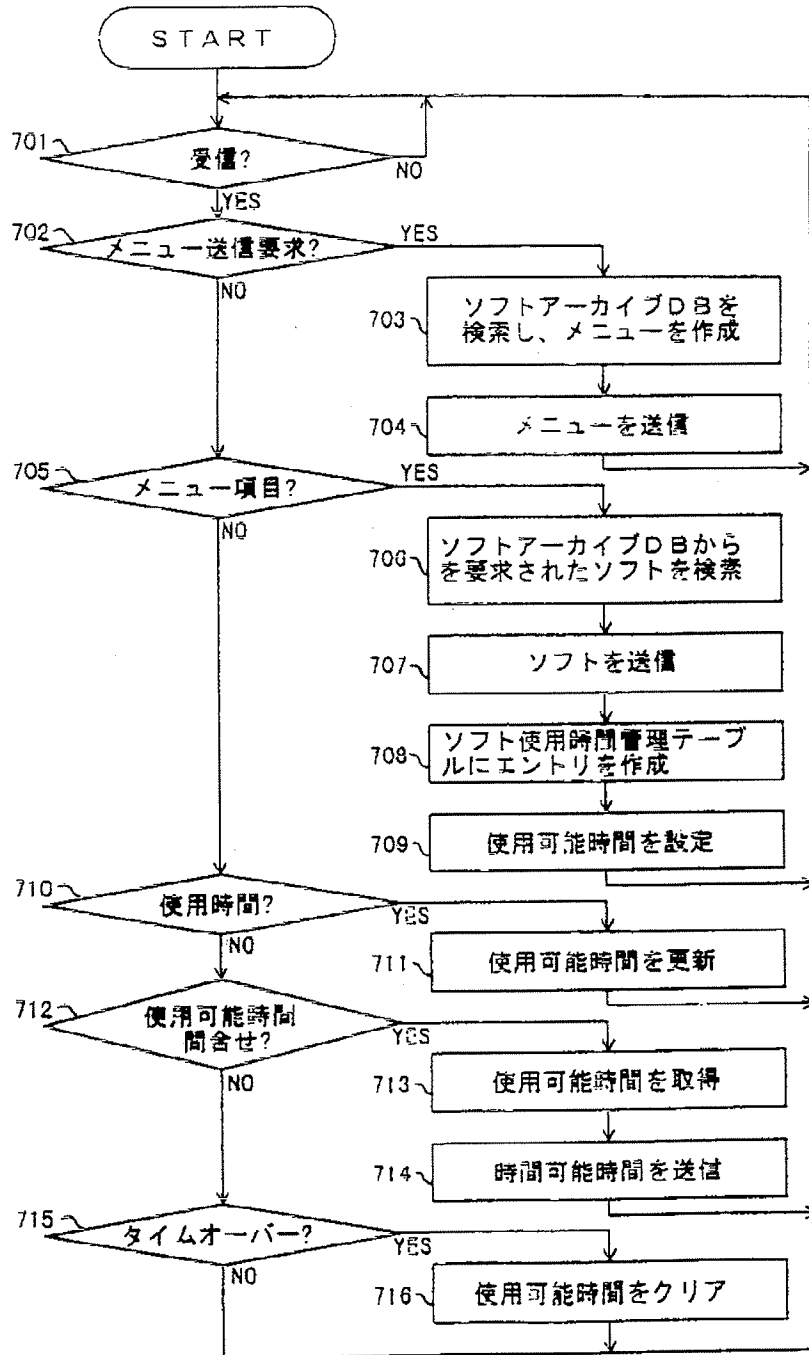
【図6】

第2の実施の形態におけるソフト使用時間制御処理の動作フローチャート



【図7】

第2の実施の形態におけるホスト装置の動作フローチャート



PATENT ABSTRACTS OF JAPAN

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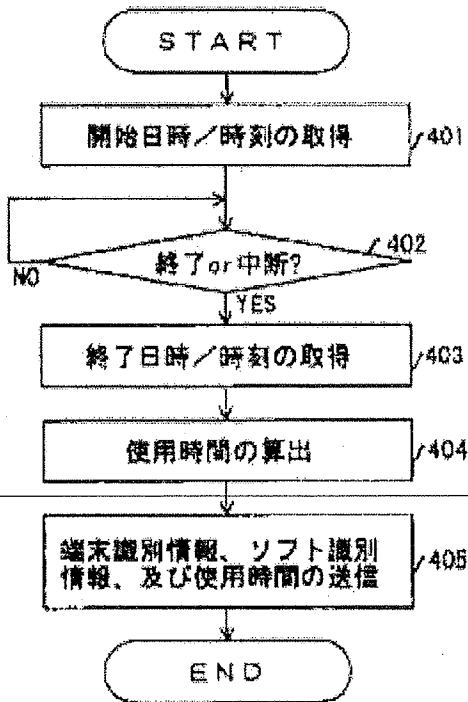
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(22)Date of filing : 27.01.1998

(72)Inventor : MENJU YOSHITSUGU

(54) METHOD AND SYSTEM FOR SOFTWARE USE MANAGEMENT



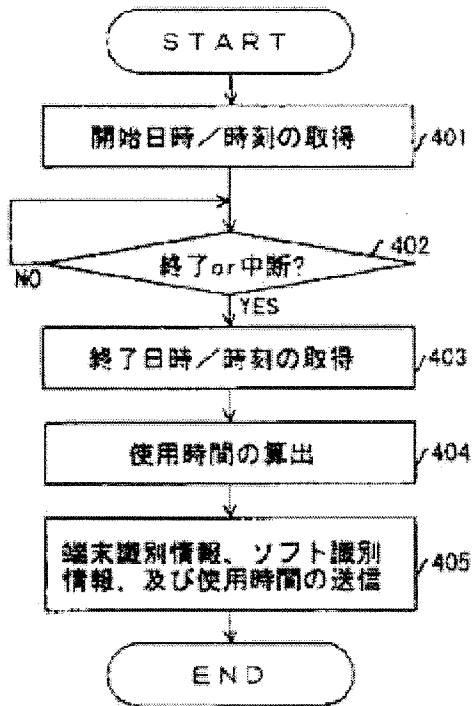
(57)Abstract:

PROBLEM TO BE SOLVED: To obtain meter rate in accordance with an operating time for software which is downloaded from a host device to a terminal by way of a net work and used.

SOLUTION: In a terminal, when software which is downloaded from a host device is activated, a start date/time is obtained 401, then completion or interruption of the software is monitored 402. When the software is completed or interrupted, a completion date/time is obtained, and as a difference between this and the start date/time, an operating time of the software is calculated 404. The operating time is transmitted to the host device from the terminal 405. The host device accumulates the operating time of the software notified of from the terminal by the terminal and the kind of software and performs charge for this. In other configurations of execution, when the operating

possible time of the software is run out, it operates so that the use of the software is prohibited.

(54) METHOD AND SYSTEM FOR SOFTWARE USE MANAGEMENT



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PROBLEM TO BE SOLVED: To obtain meter rate in accordance with an operating time for software which is downloaded from a host device to a terminal by way of a network and used.

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performs charge for this. In other configurations of execution, when the operating possible time of the software is run out, it operates so that the use of the software is prohibited.

TECHNICAL FIELD

[Field of the Invention]This invention relates to the art of managing use of the software with which a terminal unit is provided from a host device via a network.

TECHNICAL PROBLEM

[Description of the Prior Art]By development of networks including the Internet, without having application software, If there is required software (it is only hereafter called software), the system which downloads the software via a network from the host device of a service center is known (for example, thing of the indication to JP,H7-271697,A).

[0003]However, in such a system, in order [which is charged by receiving soft] to be used, the credit card number etc. were made to input at the time of soft download, and the soft usage fee was charged collectively conventionally.

[0004]Therefore, the system which is downloaded and used and which receives soft and performs a specific charge according to a hour of use was not realized conventionally. There is SUBJECT of this invention in realizing the specific charge according to the hour of use which is used downloading via a network and which receives soft.

EFFECT OF THE INVENTION

[Effect of the Invention]Whenever the software downloaded from the host device is performed in a terminal unit according to the 1st mode of this invention, from a terminal unit, the information about the hour of use is transmitted to a host device,

and accumulates. Therefore, in a host device, a fixed time (for example, one month) interval enables it to realize the specific charge according to the accumulation value of the hour of use for every terminal and every software.

[0063]Whenever the software downloaded from the host device is performed in a terminal unit according to the 2nd mode of this invention, When a hour of use is notified to a host device, a host device subtracts each hour of use from available time and available time is lost, it is controllable so that the soft use is forbidden. Therefore, in a host device, whenever software downloads, it becomes possible to realize a specific charge [say / charging the constant sum of the frame corresponding to the available time set to the software to it].

MEANS

[Means for Solving the Problem]It is connected to a network and this invention is premised on management engineering used of software between a host device which performs a download service of software, and a terminal unit which downloads and performs software from this host device.

[0006]In the 1st mode of this invention, the hour of use is notified to a host device at the time of execution of software downloaded from a host device in a terminal unit. On the other hand, in a host device, a hour of use notified from a terminal unit accumulates.

[0007]In a terminal unit, whenever software downloaded from a host device is performed by coordinated movements of a terminal unit in the 1st mode of above-mentioned this invention, and a host device, from a terminal unit, information about the hour of use is transmitted to a host device by them, and accumulates by them. Therefore, in a host device, a specific charge according to an accumulation value of a hour of use is realizable for every terminal and every software at a fixed time (for example, one month) interval.

[0008]In the 2nd mode of this invention, available time is first set up to software which a terminal unit downloaded in a host device. Next, the hour of use is notified to a host device at the time of execution of software in a terminal unit.

[0009]In a host device, a hour of use notified from a terminal unit is subtracted from available time corresponding to it. And when available time corresponding to software is lost, execution of software in a terminal unit is forbidden.

[0010]By coordinated movements of a terminal unit in the 2nd mode of above-mentioned this invention, and a host device. Whenever software downloaded from a host device is performed in a terminal unit, when a hour of use is notified to a host device, a host device subtracts each hour of use from available time and available time is lost, It is controllable so that the soft use is forbidden. Therefore, in a host device, whenever software downloads, a specific charge [say / charging a constant sum of a frame corresponding to available time set to the software to it] is realizable.

[0011]A function realized by the composition of a terminal unit of above-mentioned this invention, or a host device when this invention is used by computer and same function, It can also constitute as computer read-out good signifier recording media for making it carry out to a computer which is a computer or a host device which is a terminal unit.

[0012]

[Embodiment of the Invention]Hereafter, an embodiment of the invention is described in detail, referring to Drawings.

Basic constitution drawing 1 common to each embodiment of this invention is a lineblock diagram of the host device in an embodiment of the invention.

[0013]CPU101 for this host device to execute the processing program relevant to soft hour-of-use control mentioned later, RAM102, etc. The communication control part 103 for communicating via computer networks, such as a terminal unit and the Internet, and the soft hour-of-use management table 104 especially relevant to this invention are provided with the composition connected by bus, respectively. This soft hour-of-use management table 104 is memorized by the hard disk drive etc. which are not illustrated especially actually.

[0014]It has the recording medium driver 105 connected to the bus for reading the processing program relevant to soft hour-of-use control from the recording medium 106, and loading to RAM102. The recording media 106 are portability type recording media, such as a floppy disk, a CD-ROM disc, an optical disc, and a removable hard disk, for example.

[0015]Or the above-mentioned processing program may be constituted so that it may be loaded to RAM102 via the communication control part 103 from a network line. Drawing 2 is a lineblock diagram of the terminal unit in an embodiment of the invention.

[0016]CPU201 for this terminal unit to execute the processing program relevant to soft hour-of-use control mentioned later, RAM202, etc. The communication control part 203 for communicating via computer networks, such as a host device and the Internet, the keyboard / mouse (it may be electronic pencil etc.) part 207, and the clock part 204 are provided with the composition connected by bus, respectively.

[0017]It has the recording medium driver 205 connected to the bus for reading the processing program relevant to soft hour-of-use control from the recording medium 206, and loading to RAM202. The recording media 206 are portability type recording media, such as a PCMCIA card type memory and a floppy disk, for example.

[0018]It is not necessary to necessarily mount the recording medium driver 205, and when a terminal unit is a personal digital assistant device etc., it may constitute each above-mentioned processing program so that it may be loaded to RAM202 via the communication control part 203 from a network line.

After a terminal unit downloads software from a host device, whenever it uses the software, a hour of use is notified to a host device, and a host device comprises an embodiment of ***** of operation of the 1st of this invention so that it can charge for every terminal unit / soft classification based on the hour of use.

[0019]The operation flow chart of the soft reception according [drawing 3] to a terminal unit and drawing 5 are operation flow charts of reception which receive the variety of information from a terminal unit. First, the menu Request to Send for choosing required software from a terminal unit to a host device is transmitted (Step 301 of drawing 3). The types of services to which terminal performance and required software besides terminal identification information belong are contained in this Request to Send.

[0020]In a reception standby condition, a host device will use as a key the terminal performance and types of services which are contained in it, if the above-mentioned menu Request to Send is received from a terminal unit (the judgment of YES->502 is YES in the judgment of Step 501 of drawing 5), By searching the soft archive database (soft archive DB) 107 which has a data configuration shown in drawing 8, The soft classification and soft identification information belonging to the terminal performance and types of services which were demanded are extracted, and the soft download menu in which the list is shown is created (Step 503 of drawing 5).

[0021]And a host device transmits the created soft download menu to the terminal unit identified by the terminal identification information received with the menu

Request to Send from a terminal unit (Step 504 of drawing 5). Then, a host device returns to the receiving waiting machine loop of Step 501 of drawing 5.

[0022]In a terminal unit, reception of the above-mentioned soft download menu will perform the soft selection process for making a user choose one software in the menu (Step 303 of drawing 3). (Step 302 of drawing 3)

[0023]Then, the menu item information chosen from the terminal unit by the user to the host device is transmitted (Step 304 of drawing 3). Terminal identification information and the soft identification information corresponding to the selected menu item are contained in this information.

[0024]In a reception standby condition, if the above-mentioned menu item information is received from a terminal unit (the judgment of NO->505 is [the judgment of Step 501 of drawing 5] YES in the judgment of YES->502), a host device, The demanded soft program data is extracted by searching soft archive DB107 which has a data configuration shown in drawing 8 by using as a key soft identification information contained in it (Step 506 of drawing 5).

[0025]Then, a host device transmits the extracted program data to the terminal unit identified by the terminal identification information received with the menu item information from a terminal unit (Step 507 of drawing 5).

[0026]A host device creates a new entry to the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 (Step 508 of drawing 5). Hour-of-use =0 is registered into the terminal identification information received with the menu item information from a terminal unit by this entry, soft identification information, and the hour entry field. Then, a host device returns to the receiving waiting machine processing loop of Step 501 of drawing 5.

[0027]A terminal unit receives the soft program data transmitted from a host device, and performs soft download processing loaded to RAM202 with the soft identification information corresponding to it (Step 305 of drawing 3).

[0028]Next, drawing 4 is an operation flow chart of the soft hour-of-use control management performed at the time of the soft execution by a terminal unit. In a terminal unit, starting of the software downloaded from the host device by processing shown by the operation flow chart of drawing 3 will acquire /time from the clock part 204 first at the time of an opening day (Step 401 of drawing 4).

[0029]Then, it will be in the waiting state which supervises a soft end or discontinuation (suspension) (loop processing of Step 402 of drawing 4). If software is ended or interrupted and the judgment of Step 402 of drawing 4 serves as YES, /time will be acquired from the clock part 204 at the time of an end date (Step 403 of drawing 4).

[0030]Then, a soft hour of use is computed as time of a difference with /time at the time of /time and the opening day acquired at Step 401 of drawing 4 at the time of this end date (Step 404 of drawing 4).

[0031]Finally, it is transmitted (Step 405 of drawing 4) and the hour of use computed by the host device from the terminal unit at terminal identification information, the soft corresponding soft identification information performed [above-mentioned], and Step 404 of drawing 4 ends the performed soft hour-of-use control management which receives soft.

[0032]If the message in which the above-mentioned hour of use is included from a terminal unit is received in a reception standby condition (the judgment of NO->509 is [the judgment of Step 501 of drawing 5 / the judgment of YES->502] YES in the judgment of NO->505), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the

terminal identification information and soft identification information which are contained in it, The hour of use included in the hour of use stored in the hour entry field of an applicable entry at the message from a terminal unit is accumulated (Step 510 of drawing 5). Then, a host device returns to the receiving waiting machine loop of Step 501 of drawing 5.

[0033]In a terminal unit, whenever the software downloaded from the host device is performed by the coordinated movements of the terminal unit in a 1st embodiment of this invention shown above, and a host device, from a terminal unit, the information about the hour of use is transmitted to a host device by them, and accumulates by them.

[0034]Therefore, in a host device, the specific charge according to a hour of use is realizable for every terminal and every software by reading the hour entry of each entry in the soft hour-of-use management table 104 to every fixed time (for example, one month).

[0035]Whenever accounting is performed, the hour entry of each entry in the soft hour-of-use management table 104 is cleared.

In the embodiment of ***** of operation of the 2nd of this invention. When a terminal unit downloads software from a host device, the available time which can use the software is set up, Whenever a terminal unit uses the software, when a hour of use is notified to a host device, a host device subtracts each hour of use from the above-mentioned available time and available time is lost, it is constituted so that the soft use may be forbidden.

[0036]First, the soft download processing from the host device by a terminal unit is the same as the processing shown by the operation flow chart of drawing 3 in a 1st embodiment of this invention, and drawing 7 is an operation flow chart of reception which receives the variety of information from a terminal unit.

[0037]The reception of Step 702->703->704 of drawing 7 by the host device to the menu Request to Send from a terminal unit is the same as that of Step 502->503->504 of drawing 5 in a 1st embodiment of this invention.

[0038]The reception of Step 705->706->707->708 of drawing 7 by the host device to transmission of the menu item from a terminal unit is the same as that of Step 505->506->507->508 of drawing 5 in a 1st embodiment of this invention.

[0039]However, after creating a new entry to the soft hour-of-use management table 104 which has a data configuration which a host device is Step 708 of drawing 7, and is shown in drawing 9, the available time beforehand decided to be the hour entry field of the entry is set as it (Step 709 of drawing 7). Available time may be memorized by the entry for every software of soft archive DB107, and it may be constituted so that the information may be set as the above-mentioned field. Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0040]Next, drawing 6 is an operation flow chart of the soft hour-of-use control management performed at the time of the soft execution by a terminal unit. In a terminal unit, starting of the software downloaded from the host device by processing shown by the operation flow chart of drawing 3 will perform an inquiry of available time to a host device from a terminal unit (Step 601 of drawing 6). In this case, terminal identification information and the soft corresponding soft identification information performed from now on are contained in the message transmitted to a host device from a terminal unit.

[0041]In a reception standby condition, if the above-mentioned message is received from a terminal unit (the judgment of NO->712 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702 / the judgment of NO->705] YES in the

judgment of NO->710), a host device, Available time is acquired from the searched entry by searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it (Step 713 of drawing 7).

[0042]And the available time is transmitted to a terminal unit from a host device (Step 714 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0043]It is judged whether after a terminal unit receives the above-mentioned available time, its available time is larger than zero (Step 602 of drawing 6). Available time is 0, when the judgment of Step 602 is NO, soft starting is stopped, the error message which shows expiration is displayed (Step 615 of drawing 6), and soft hour-of-use control management is ended.

[0044]On the other hand, available time is not set to 0, but when the judgment of Step 602 is YES, /time is acquired from the clock part 204 at the time of an opening day (Step 603 of drawing 6).

[0045]Then, in the processing loop of Step 604->608->609->610->604 of drawing 6, it will be in the waiting state which supervises a soft end or discontinuation, and the hour of use from a soft starting time to the present.

[0046]That is, it is judged whether a soft end or discontinuation (suspension) was performed first (Step 604 of drawing 6). A soft end or discontinuation is not performed, but especially when the judgment of Step 604 is NO, after a fixed interval sets by the timing loop which is not illustrated, a present date/time is acquired from the clock part 204 (Step 608 of drawing 6). The surveillance of the same soft end as Step 604 or discontinuation shall be performed within the above-mentioned interval period.

[0047]Next, the hour of use from a soft starting time to the present is computed as time of a difference with /time at the time of this present date/time, and the opening day acquired at Step 401 of drawing 4 (Step 609 of drawing 6).

[0048]Then, the residual time acquired from the available time received from the host device at Step 601 of drawing 6 by subtracting the hour of use computed at Step 609, It is judged whether the time which can use whether it became below predetermined threshold time and software drew to an end (Step 610 of drawing 6).

[0049]When the judgment of Step 610 is NO, it returns to the decision processing of Step 604. When the judgment of Step 610 is set to YES, it is judged whether the residual time further computed at Step 610 has become zero or less (Step 611 of drawing 6).

[0050]When the judgment of Step 611 is NO, the alarm display which shows the display which shows residual time, and the purport that it becomes impossible to use software after residual time progress is made (Step 612 of drawing 6). Then, it returns to the decision processing of Step 604.

[0051]If the judgment of Step 611 also serves as YES after the judgment of Step 610 was set to YES, The message which the software under present execution is forced to terminate (Step 613 of drawing 6), then shows the soft time over to a host device from a terminal unit is transmitted (Step 614 of drawing 6), and soft hour-of-use control management is ended. Terminal identification information and soft identification information are contained in this time exaggerated message.

[0052]In a reception standby condition, if the above-mentioned message is received from a terminal unit (the judgment of NO->715 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702 / the judgment of NO->705 / the judgment of

NO->710] YES in the judgment of NO->712), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it, The available time registered into the hour entry field of the searched entry is cleared to 0 (Step 716 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0053]On the other hand, in the processing loop of Step 604->608->609->610->604 of drawing 6, if software is ended or interrupted and the judgment of Step 604 of drawing 6 serves as YES, /time will be acquired from the clock part 204 at the time of an end date (Step 605 of drawing 6).

[0054]Then, a soft hour of use is computed as time of a difference with /time at the time of /time and the opening day acquired at Step 601 of drawing 6 at the time of this end date (Step 606 of drawing 6).

[0055]Finally, it is transmitted (Step 607 of drawing 6) and the hour of use computed by the host device from the terminal unit at terminal identification information, the soft corresponding soft identification information performed [above-mentioned], and Step 604 of drawing 6 ends the performed soft hour-of-use control management which receives soft.

[0056]If the message in which the above-mentioned hour of use is included from a terminal unit is received in a reception standby condition (the judgment of NO->710 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702] YES in the judgment of NO->705), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it, The hour of use included in the message from [from the available time stored in the hour entry field of an applicable entry] a terminal unit is subtracted (Step 711 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0057]By the coordinated movements of the terminal unit in a 2nd embodiment of this invention shown above, and a host device. Whenever the software downloaded from the host device is performed in a terminal unit, when a hour of use is notified to a host device, a host device subtracts each hour of use from the above-mentioned available time and available time is lost, It is controllable so that the soft use is forbidden.

[0058]Therefore, in a host device, whenever software downloads, a specific charge [say / charging the constant sum of the frame corresponding to the available time set to the software to it] is realizable.

In the composition of 1st and 2nd embodiments of other embodiment above-mentioned this inventions, it can also constitute so that the hour of use which the host device computed may be notified to a terminal unit.

[0059]When a network cannot be accessed at the time of the notice of a soft hour of use, It may constitute so that the hour of use which holds the hour of use on RAM202, and was first held at the time of next soft starting may be notified to a host device, and it may constitute so that software may not be started, when a network cannot be accessed at the time.

[0060]It has a partial execution function of software in the host device side, and in order to perform software, it may constitute so that a network may be accessed. In the composition of a 2nd embodiment of this invention, after available time is set to 0 and soft starting is forbidden, it may constitute so that the continuous use menu which applies for continuation of the soft use may be provided. In this case, the available

time stored in the hour entry field of the applicable entry of the soft hour-of-use management table 104 is newly set up, and it is charged.

[0061]Or when available time is set to 0 in the composition of a 2nd embodiment of this invention, It may constitute so that the software cannot be used, unless the soft program data is cleared from RAM202 and it not only forbids soft starting, but it downloads from a host device again.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a lineblock diagram of the host device in an embodiment of the invention.

[Drawing 2]It is a lineblock diagram of the terminal unit in an embodiment of the invention.

[Drawing 3]It is an operation flow chart of soft reception.

[Drawing 4]It is an operation flow chart of the soft hour-of-use control management in a 1st embodiment.

[Drawing 5]It is an operation flow chart of the host device in a 1st embodiment.

[Drawing 6]It is an operation flow chart of the soft hour-of-use control management in a 2nd embodiment.

[Drawing 7]It is an operation flow chart of the host device in a 2nd embodiment.

[Drawing 8]It is a data configuration figure of the soft archive DB.

[Drawing 9]It is a data configuration figure of a soft hour-of-use management table.

[Description of Notations]

101, 201 CPU

102, 202 RAM

103 and 203 Communication control part

104 Soft hour-of-use management table

105, 205 recording medium drivers

106 and 206 Recording medium

204 Fingerprint detecting part

107 and 207 A keyboard/mouse part

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the art of managing use of the software with which a terminal unit is provided from a host device via a network.

[0002]

[Description of the Prior Art]By development of networks including the Internet, without having application software, If there is required software (it is only hereafter called software), the system which downloads the software via a network from the host device of a service center is known (for example, thing of the indication to JP,H7-271697,A).

[0003]However, in such a system, in order [which is charged by receiving soft] to be used, the credit card number etc. were made to input at the time of soft download, and the soft usage fee was charged collectively conventionally.

[0004]Therefore, the system which is downloaded and used and which receives soft and performs a specific charge according to a hour of use was not realized conventionally. There is SUBJECT of this invention in realizing the specific charge

according to the hour of use which is used downloading via a network and which receives soft.

[0005]

[Means for Solving the Problem]It is connected to a network and this invention is premised on management engineering used of software between a host device which performs a download service of software, and a terminal unit which downloads and performs software from this host device.

[0006]In the 1st mode of this invention, the hour of use is notified to a host device at the time of execution of software downloaded from a host device in a terminal unit. On the other hand, in a host device, a hour of use notified from a terminal unit accumulates.

[0007]In a terminal unit, whenever software downloaded from a host device is performed by coordinated movements of a terminal unit in the 1st mode of above-mentioned this invention, and a host device, from a terminal unit, information about the hour of use is transmitted to a host device by them, and accumulates by them. Therefore, in a host device, a specific charge according to an accumulation value of a hour of use is realizable for every terminal and every software at a fixed time (for example, one month) interval.

[0008]In the 2nd mode of this invention, available time is first set up to software which a terminal unit downloaded in a host device. Next, the hour of use is notified to a host device at the time of execution of software in a terminal unit.

[0009]In a host device, a hour of use notified from a terminal unit is subtracted from available time corresponding to it. And when available time corresponding to software is lost, execution of software in a terminal unit is forbidden.

[0010]By coordinated movements of a terminal unit in the 2nd mode of above-mentioned this invention, and a host device. Whenever software downloaded from a host device is performed in a terminal unit, when a hour of use is notified to a host device, a host device subtracts each hour of use from available time and available time is lost, It is controllable so that the soft use is forbidden. Therefore, in a host device, whenever software downloads, a specific charge [say / charging a constant sum of a frame corresponding to available time set to the software to it] is realizable.

[0011]A function realized by the composition of a terminal unit of above-mentioned this invention, or a host device when this invention is used by computer and same function, It can also constitute as computer read-out good signifier recording media for making it carry out to a computer which is a computer or a host device which is a terminal unit.

[0012]

[Embodiment of the Invention]Hereafter, an embodiment of the invention is described in detail, referring to Drawings.

Basic constitution drawing 1 common to each embodiment of this invention is a lineblock diagram of the host device in an embodiment of the invention.

[0013]CPU101 for this host device to execute the processing program relevant to soft hour-of-use control mentioned later, RAM102, etc. The communication control part 103 for communicating via computer networks, such as a terminal unit and the Internet, and the soft hour-of-use management table 104 especially relevant to this invention are provided with the composition connected by bus, respectively. This soft hour-of-use management table 104 is memorized by the hard disk drive etc. which are not illustrated especially actually.

[0014]It has the recording medium driver 105 connected to the bus for reading the processing program relevant to soft hour-of-use control from the recording medium

106, and loading to RAM102. The recording media 106 are portability type recording media, such as a floppy disk, a CD-ROM disc, an optical disc, and a removable hard disk, for example.

[0015]Or the above-mentioned processing program may be constituted so that it may be loaded to RAM102 via the communication control part 103 from a network line. Drawing 2 is a lineblock diagram of the terminal unit in an embodiment of the invention.

[0016]CPU201 for this terminal unit to execute the processing program relevant to soft hour-of-use control mentioned later, RAM202, etc. The communication control part 203 for communicating via computer networks, such as a host device and the Internet, the keyboard / mouse (it may be electronic pencil etc.) part 207, and the clock part 204 are provided with the composition connected by bus, respectively.

[0017]It has the recording medium driver 205 connected to the bus for reading the processing program relevant to soft hour-of-use control from the recording medium 206, and loading to RAM202. The recording media 206 are portability type recording media, such as a PCMCIA card type memory and a floppy disk, for example.

[0018]It is not necessary to necessarily mount the recording medium driver 205, and when a terminal unit is a personal digital assistant device etc., it may constitute each above-mentioned processing program so that it may be loaded to RAM202 via the communication control part 203 from a network line.

After a terminal unit downloads software from a host device, whenever it uses the software, a hour of use is notified to a host device, and a host device comprises an embodiment of ***** of operation of the 1st of this invention so that it can charge for every terminal unit / soft classification based on the hour of use.

[0019]The operation flow chart of the soft reception according [drawing 3] to a terminal unit and drawing 5 are operation flow charts of reception which receive the variety of information from a terminal unit. First, the menu Request to Send for choosing required software from a terminal unit to a host device is transmitted (Step 301 of drawing 3). The types of services to which terminal performance and required software besides terminal identification information belong are contained in this Request to Send.

[0020]In a reception standby condition, a host device will use as a key the terminal performance and types of services which are contained in it, if the above-mentioned menu Request to Send is received from a terminal unit (the judgment of YES->502 is YES in the judgment of Step 501 of drawing 5), By searching the soft archive database (soft archive DB) 107 which has a data configuration shown in drawing 8, The soft classification and soft identification information belonging to the terminal performance and types of services which were demanded are extracted, and the soft download menu in which the list is shown is created (Step 503 of drawing 5).

[0021]And a host device transmits the created soft download menu to the terminal unit identified by the terminal identification information received with the menu Request to Send from a terminal unit (Step 504 of drawing 5). Then, a host device returns to the receiving waiting machine loop of Step 501 of drawing 5.

[0022]In a terminal unit, reception of the above-mentioned soft download menu will perform the soft selection process for making a user choose one software in the menu (Step 303 of drawing 3). (Step 302 of drawing 3)

[0023]Then, the menu item information chosen from the terminal unit by the user to the host device is transmitted (Step 304 of drawing 3). Terminal identification information and the soft identification information corresponding to the selected menu item are contained in this information.

[0024]In a reception standby condition, if the above-mentioned menu item information is received from a terminal unit (the judgment of NO->505 is [the judgment of Step 501 of drawing 5] YES in the judgment of YES->502), a host device, The demanded soft program data is extracted by searching soft archive DB107 which has a data configuration shown in drawing 8 by using as a key soft identification information contained in it (Step 506 of drawing 5).

[0025]Then, a host device transmits the extracted program data to the terminal unit identified by the terminal identification information received with the menu item information from a terminal unit (Step 507 of drawing 5).

[0026]A host device creates a new entry to the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 (Step 508 of drawing 5). Hour-of-use =0 is registered into the terminal identification information received with the menu item information from a terminal unit by this entry, soft identification information, and the hour entry field. Then, a host device returns to the receiving waiting machine processing loop of Step 501 of drawing 5.

[0027]A terminal unit receives the soft program data transmitted from a host device, and performs soft download processing loaded to RAM202 with the soft identification information corresponding to it (Step 305 of drawing 3).

[0028]Next, drawing 4 is an operation flow chart of the soft hour-of-use control management performed at the time of the soft execution by a terminal unit. In a terminal unit, starting of the software downloaded from the host device by processing shown by the operation flow chart of drawing 3 will acquire /time from the clock part 204 first at the time of an opening day (Step 401 of drawing 4).

[0029]Then, it will be in the waiting state which supervises a soft end or discontinuation (suspension) (loop processing of Step 402 of drawing 4). If software is ended or interrupted and the judgment of Step 402 of drawing 4 serves as YES, /time will be acquired from the clock part 204 at the time of an end date (Step 403 of drawing 4).

[0030]Then, a soft hour of use is computed as time of a difference with /time at the time of /time and the opening day acquired at Step 401 of drawing 4 at the time of this end date (Step 404 of drawing 4).

[0031]Finally, it is transmitted (Step 405 of drawing 4) and the hour of use computed by the host device from the terminal unit at terminal identification information, the soft corresponding soft identification information performed [above-mentioned], and Step 404 of drawing 4 ends the performed soft hour-of-use control management which receives soft.

[0032]If the message in which the above-mentioned hour of use is included from a terminal unit is received in a reception standby condition (the judgment of NO->509 is [the judgment of Step 501 of drawing 5 / the judgment of YES->502] YES in the judgment of NO->505), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it, The hour of use included in the hour of use stored in the hour entry field of an applicable entry at the message from a terminal unit is accumulated (Step 510 of drawing 5). Then, a host device returns to the receiving waiting machine loop of Step 501 of drawing 5.

[0033]In a terminal unit, whenever the software downloaded from the host device is performed by the coordinated movements of the terminal unit in a 1st embodiment of this invention shown above, and a host device, from a terminal unit, the information

about the hour of use is transmitted to a host device by them, and accumulates by them.

[0034]Therefore, in a host device, the specific charge according to a hour of use is realizable for every terminal and every software by reading the hour entry of each entry in the soft hour-of-use management table 104 to every fixed time (for example, one month).

[0035]Whenever accounting is performed, the hour entry of each entry in the soft hour-of-use management table 104 is cleared.

In the embodiment of ***** of operation of the 2nd of this invention. When a terminal unit downloads software from a host device, the available time which can use the software is set up, Whenever a terminal unit uses the software, when a hour of use is notified to a host device, a host device subtracts each hour of use from the above-mentioned available time and available time is lost, it is constituted so that the soft use may be forbidden.

[0036]First, the soft download processing from the host device by a terminal unit is the same as the processing shown by the operation flow chart of drawing 3 in a 1st embodiment of this invention, and drawing 7 is an operation flow chart of reception which receives the variety of information from a terminal unit.

[0037]The reception of Step 702->703->704 of drawing 7 by the host device to the menu Request to Send from a terminal unit is the same as that of Step 502->503->504 of drawing 5 in a 1st embodiment of this invention.

[0038]The reception of Step 705->706->707->708 of drawing 7 by the host device to transmission of the menu item from a terminal unit is the same as that of Step 505->506->507->508 of drawing 5 in a 1st embodiment of this invention.

[0039]However, after creating a new entry to the soft hour-of-use management table 104 which has a data configuration which a host device is Step 708 of drawing 7, and is shown in drawing 9, the available time beforehand decided to be the hour entry field of the entry is set as it (Step 709 of drawing 7). Available time may be memorized by the entry for every software of soft archive DB107, and it may be constituted so that the information may be set as the above-mentioned field. Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0040]Next, drawing 6 is an operation flow chart of the soft hour-of-use control management performed at the time of the soft execution by a terminal unit. In a terminal unit, starting of the software downloaded from the host device by processing shown by the operation flow chart of drawing 3 will perform an inquiry of available time to a host device from a terminal unit (Step 601 of drawing 6). In this case, terminal identification information and the soft corresponding soft identification information performed from now on are contained in the message transmitted to a host device from a terminal unit.

[0041]In a reception standby condition, if the above-mentioned message is received from a terminal unit (the judgment of NO->712 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702 / the judgment of NO->705] YES in the judgment of NO->710), a host device, Available time is acquired from the searched entry by searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it (Step 713 of drawing 7).

[0042]And the available time is transmitted to a terminal unit from a host device (Step 714 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0043]It is judged whether after a terminal unit receives the above-mentioned available time, its available time is larger than zero (Step 602 of drawing 6). Available time is 0, when the judgment of Step 602 is NO, soft starting is stopped, the error message which shows expiration is displayed (Step 615 of drawing 6), and soft hour-of-use control management is ended.

[0044]On the other hand, available time is not set to 0, but when the judgment of Step 602 is YES, /time is acquired from the clock part 204 at the time of an opening day (Step 603 of drawing 6).

[0045]Then, in the processing loop of Step 604->608->609->610->604 of drawing 6, it will be in the waiting state which supervises a soft end or discontinuation, and the hour of use from a soft starting time to the present.

[0046]That is, it is judged whether a soft end or discontinuation (suspension) was performed first (Step 604 of drawing 6). A soft end or discontinuation is not performed, but especially when the judgment of Step 604 is NO, after a fixed interval sets by the timing loop which is not illustrated, a present date/time is acquired from the clock part 204 (Step 608 of drawing 6). The surveillance of the same soft end as Step 604 or discontinuation shall be performed within the above-mentioned interval period.

[0047]Next, the hour of use from a soft starting time to the present is computed as time of a difference with /time at the time of this present date/time, and the opening day acquired at Step 401 of drawing 4 (Step 609 of drawing 6).

[0048]Then, the residual time acquired from the available time received from the host device at Step 601 of drawing 6 by subtracting the hour of use computed at Step 609, It is judged whether the time which can use whether it became below predetermined threshold time and software drew to an end (Step 610 of drawing 6).

[0049]When the judgment of Step 610 is NO, it returns to the decision processing of Step 604. When the judgment of Step 610 is set to YES, it is judged whether the residual time further computed at Step 610 has become zero or less (Step 611 of drawing 6).

[0050]When the judgment of Step 611 is NO, the alarm display which shows the display which shows residual time, and the purport that it becomes impossible to use software after residual time progress is made (Step 612 of drawing 6). Then, it returns to the decision processing of Step 604.

[0051]If the judgment of Step 611 also serves as YES after the judgment of Step 610 was set to YES, The message which the software under present execution is forced to terminate (Step 613 of drawing 6), then shows the soft time over to a host device from a terminal unit is transmitted (Step 614 of drawing 6), and soft hour-of-use control management is ended. Terminal identification information and soft identification information are contained in this time exaggerated message.

[0052]In a reception standby condition, if the above-mentioned message is received from a terminal unit (the judgment of NO->715 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702 / the judgment of NO->705 / the judgment of NO->710] YES in the judgment of NO->712), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it, The available time registered into the hour entry field of the searched entry is cleared to 0 (Step 716 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0053]On the other hand, in the processing loop of Step 604->608->609->610->604 of drawing 6, if software is ended or interrupted and the judgment of Step 604 of

drawing 6 serves as YES, /time will be acquired from the clock part 204 at the time of an end date (Step 605 of drawing 6).

[0054]Then, a soft hour of use is computed as time of a difference with /time at the time of /time and the opening day acquired at Step 601 of drawing 6 at the time of this end date (Step 606 of drawing 6).

[0055]Finally, it is transmitted (Step 607 of drawing 6) and the hour of use computed by the host device from the terminal unit at terminal identification information, the soft corresponding soft identification information performed [above-mentioned], and Step 604 of drawing 6 ends the performed soft hour-of-use control management which receives soft.

[0056]If the message in which the above-mentioned hour of use is included from a terminal unit is received in a reception standby condition (the judgment of NO->710 is [the judgment of Step 701 of drawing 7 / the judgment of YES->702] YES in the judgment of NO->705), a host device, By searching the soft hour-of-use management table 104 which has a data configuration shown in drawing 9 by using as a key the terminal identification information and soft identification information which are contained in it, The hour of use included in the message from [from the available time stored in the hour entry field of an applicable entry] a terminal unit is subtracted (Step 711 of drawing 7). Then, a host device returns to the receiving waiting machine loop of Step 701 of drawing 7.

[0057]By the coordinated movements of the terminal unit in a 2nd embodiment of this invention shown above, and a host device. Whenever the software downloaded from the host device is performed in a terminal unit, when a hour of use is notified to a host device, a host device subtracts each hour of use from the above-mentioned available time and available time is lost, It is controllable so that the soft use is forbidden.

[0058]Therefore, in a host device, whenever software downloads, a specific charge [say / charging the constant sum of the frame corresponding to the available time set to the software to it] is realizable.

In the composition of 1st and 2nd embodiments of other embodiment above-mentioned this inventions, it can also constitute so that the hour of use which the host device computed may be notified to a terminal unit.

[0059]When a network cannot be accessed at the time of the notice of a soft hour of use, It may constitute so that the hour of use which holds the hour of use on RAM202, and was first held at the time of next soft starting may be notified to a host device, and it may constitute so that software may not be started, when a network cannot be accessed at the time.

[0060]It has a partial execution function of software in the host device side, and in order to perform software, it may constitute so that a network may be accessed. In the composition of a 2nd embodiment of this invention, after available time is set to 0 and soft starting is forbidden, it may constitute so that the continuous use menu which applies for continuation of the soft use may be provided. In this case, the available time stored in the hour entry field of the applicable entry of the soft hour-of-use management table 104 is newly set up, and it is charged.

[0061]Or when available time is set to 0 in the composition of a 2nd embodiment of this invention, It may constitute so that the software cannot be used, unless the soft program data is cleared from RAM202 and it not only forbids soft starting, but it downloads from a host device again.

[0062]

[Effect of the Invention]Whenever the software downloaded from the host device is performed in a terminal unit according to the 1st mode of this invention, from a

terminal unit, the information about the hour of use is transmitted to a host device, and accumulates. Therefore, in a host device, a fixed time (for example, one month) interval enables it to realize the specific charge according to the accumulation value of the hour of use for every terminal and every software.

[0063]Whenever the software downloaded from the host device is performed in a terminal unit according to the 2nd mode of this invention, When a hour of use is notified to a host device, a host device subtracts each hour of use from available time and available time is lost, it is controllable so that the soft use is forbidden. Therefore, in a host device, whenever software downloads, it becomes possible to realize a specific charge [say / charging the constant sum of the frame corresponding to the available time set to the software to it].

CLAIMS

[Claim(s)]

[Claim 1]A host device which is connected to a network and performs a download service of software, It is the controlling method used of software between terminal units which download and perform software from this host device, A software using controlling method characterized by what a hour of use which notifies the hour of use to said host device, and is notified from said terminal unit in said host device at the time of execution of software downloaded from said host device in said terminal unit is accumulated for.

[Claim 2]A host device which is connected to a network and performs a download service of software, From this host device, are software the managerial system used of software between terminal units downloaded and performed, and said terminal unit, At the time of execution of software downloaded from said host device, the hour of use including a notice module of a hour of use notified to said host device said host device, A hour-of-use management table which manages a hour of use notified from said terminal unit for every said terminal unit and software, A software using managerial system characterized by what a hour-of-use accumulation module which accumulates a hour of use notified from said terminal unit to a hour of use on said hour-of-use management table corresponding to it is included for.

[Claim 3]A host device which is connected to a network and performs a download service of software, It is a terminal unit used for managerial system used of software between terminal units which download and perform software from this host device, A terminal unit characterized by what a notice module of a hour of use which notifies the hour of use to said host device is included for at the time of execution of software downloaded from said host device.

[Claim 4]A host device which is connected to a network and performs a download service of software, It is a host device used for managerial system used of software between terminal units which download and perform software from this host device, A hour-of-use management table which manages a hour of use notified from said terminal unit for every said terminal unit and software, A host device containing a hour-of-use accumulation module which accumulates a hour of use notified from said terminal unit to a hour of use on said hour-of-use management table corresponding to it.

[Claim 5]A host device which is connected to a network and performs a download service of software, It is the controlling method used of software between terminal units which download and perform software from this host device, Available time is

set up to software which said terminal unit downloaded in said host device, In [at the time of execution of said software in said terminal unit, notify the hour of use to said host device, and] said host device, A software using controlling method characterized by what execution of said software in said terminal unit is forbidden for when a hour of use notified from said terminal unit is subtracted from said available time corresponding to it and available time corresponding to said software is lost.

[Claim 6]A host device which is connected to a network and performs a download service of software, It is the managerial system used of software between terminal units which download and perform software from this host device, An available time inquiry module which asks said host device available time of this software at the time of execution of software downloaded from said host device to said terminal unit, A software implementation control module which forbids execution of said software when said hour of use is lost as a result of this inquiry, A notice module of a hour of use which notifies the hour of use to said host device at the time of execution of software downloaded from said host device, An usable time management table which sets available time as an implication and said host device to software which said terminal unit downloaded for every said terminal unit and software, A notice module of available time which notifies available time on said usable time management table according to an inquiry from said terminal unit, An usable time subtraction module which subtracts from available time on said hour-of-use management table corresponding to it a hour of use notified from said terminal unit, *****, a software using managerial system characterized by things.

[Claim 7]A host device which is connected to a network and performs a download service of software, It is a terminal unit used for managerial system used of software between terminal units which download and perform software from this host device, An available time inquiry module which asks said host device available time of this software at the time of execution of software downloaded from said host device, A software implementation control module which forbids execution of said software when said hour of use is lost as a result of this inquiry, A terminal unit by which a notice module of a hour of use which notifies the hour of use to said host device being included at the time of execution of software downloaded from said host device.

[Claim 8]A host device which is connected to a network and performs a download service of software, It is a host device used for managerial system used of software between terminal units which download and perform software from this host device, An usable time management table which sets up available time to software which said terminal unit downloaded for every said terminal unit and software, A notice module of available time which notifies available time on said usable time management table according to an inquiry from said terminal unit, A host device containing an usable time subtraction module which subtracts from available time on said hour-of-use management table corresponding to it a hour of use notified from said terminal unit.

[Claim 9]A host device which is connected to a network and performs a download service of software, It is the recording medium which recorded a program read by it when used by computer which is a terminal unit used for managerial system used of software between terminal units which download and perform software from this host device, Computer read-out good signifier recording media which recorded a program for making a hour-of-use notice function which notifies the hour of use to said host device perform to a computer which is said terminal unit at the time of execution of software downloaded from said host device.

[Claim 10]A host device which is connected to a network and performs a download service of software, It is the recording medium which recorded a program read by it

when used by computer which is a host device used for managerial system used of software between terminal units which download and perform software from this host device, A function to memorize a hour-of-use management table which manages a hour of use notified from said terminal unit for every said terminal unit and software, Computer read-out good signifier recording media which recorded a program for making a hour-of-use accumulation function which accumulates a hour of use notified from said terminal unit to a hour of use on said hour-of-use management table corresponding to it perform to a computer which is said host device.

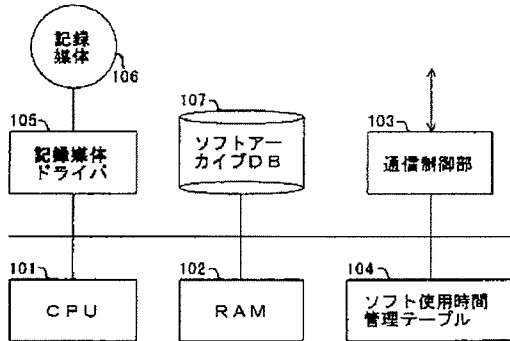
[Claim 11]A host device which is connected to a network and performs a download service of software, It is the recording medium which recorded a program read by it when used by computer which is a terminal unit used for managerial system used of software between terminal units which download and perform software from this host device, An available time inquiry function to ask said host device available time of this software at the time of execution of software downloaded from said host device, A software implementation control facility which forbids execution of said software when said hour of use is lost as a result of this inquiry, Computer read-out good signifier recording media which recorded a program for making a hour-of-use notice function which notifies the hour of use to said host device perform to a computer which is said terminal unit at the time of execution of software downloaded from said host device. ***** -- a terminal unit characterized by things.

[Claim 12]A host device which is connected to a network and performs a download service of software, It is the recording medium which recorded a program read by it when used by computer which is a host device used for managerial system used of software between terminal units which download and perform software from this host device, A function to memorize an usable time management table which sets up available time to software which said terminal unit downloaded for every said terminal unit and software, An available time notice function which notifies available time on said usable time management table according to an inquiry from said terminal unit, Computer read-out good signifier recording media which recorded a program for making an usable time subtraction function which subtracts from available time on said hour-of-use management table corresponding to it a hour of use notified from said terminal unit perform to a computer which is said host device.

DRAWINGS

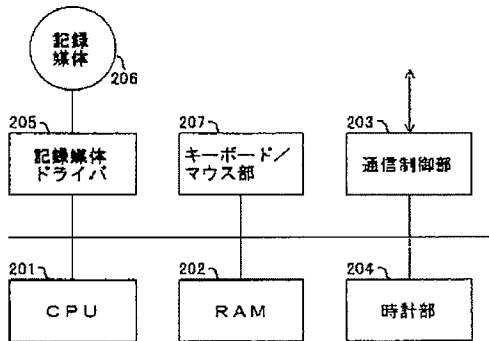
[Drawing 1]

本発明の実施の形態におけるホスト装置の構成図



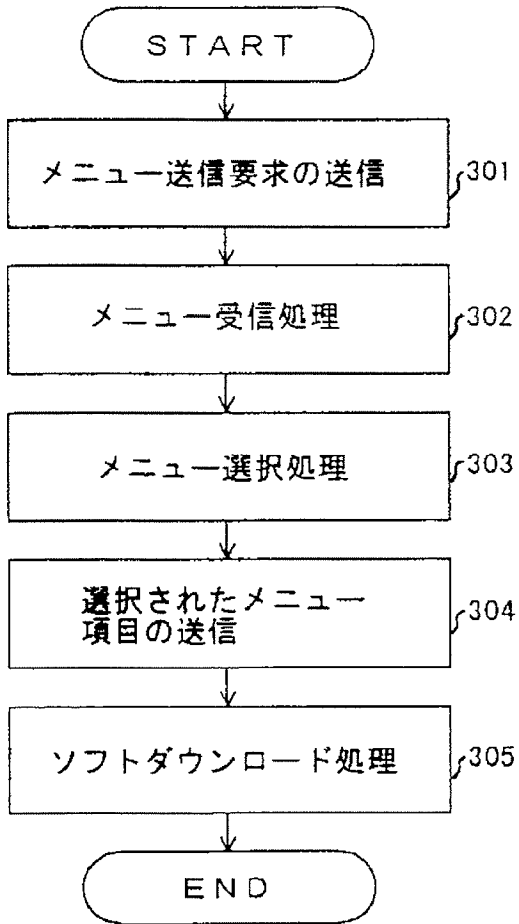
[Drawing 2]

本発明の実施の形態における端末装置の構成図



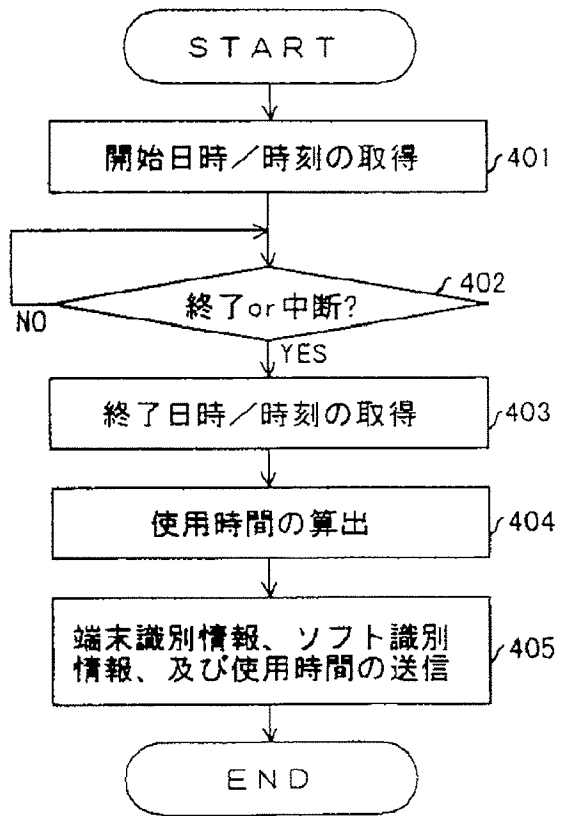
[Drawing 3]

ソフト受信処理の動作フローチャート



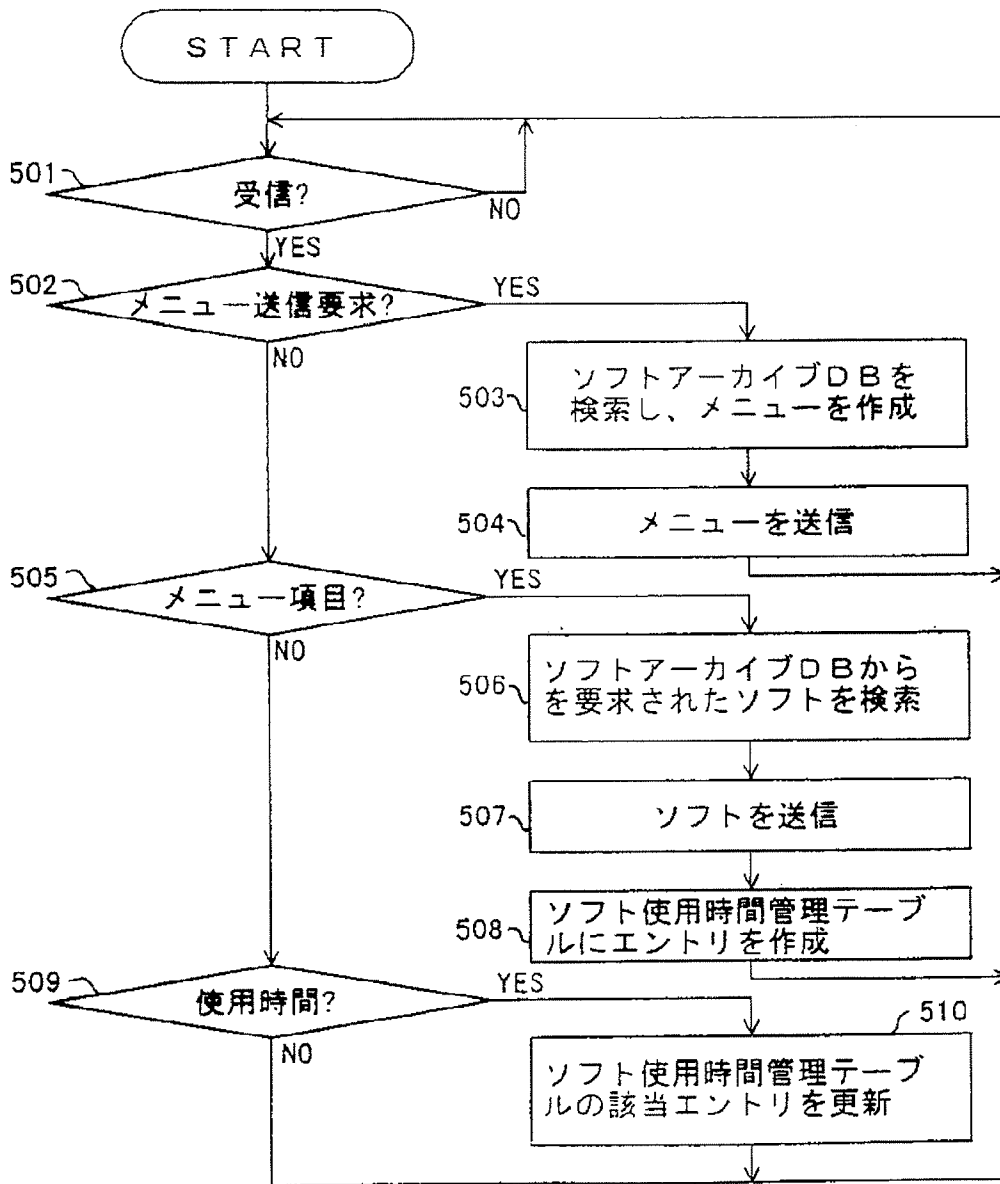
[Drawing 4]

第1の実施の形態におけるソフト使用時間制御処理の動作フローチャート



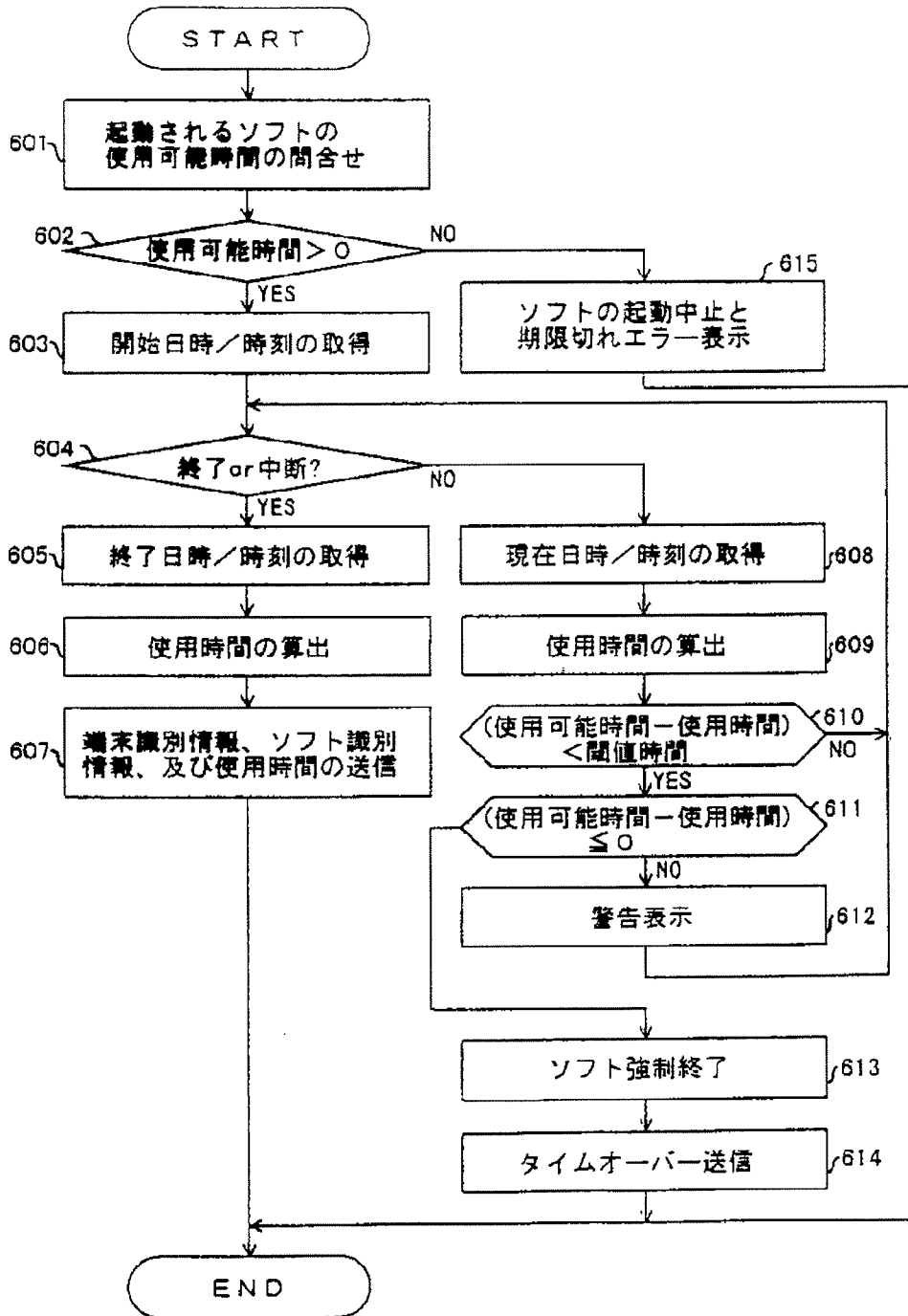
[Drawing 5]

第1の実施の形態におけるホスト装置の動作フローチャート



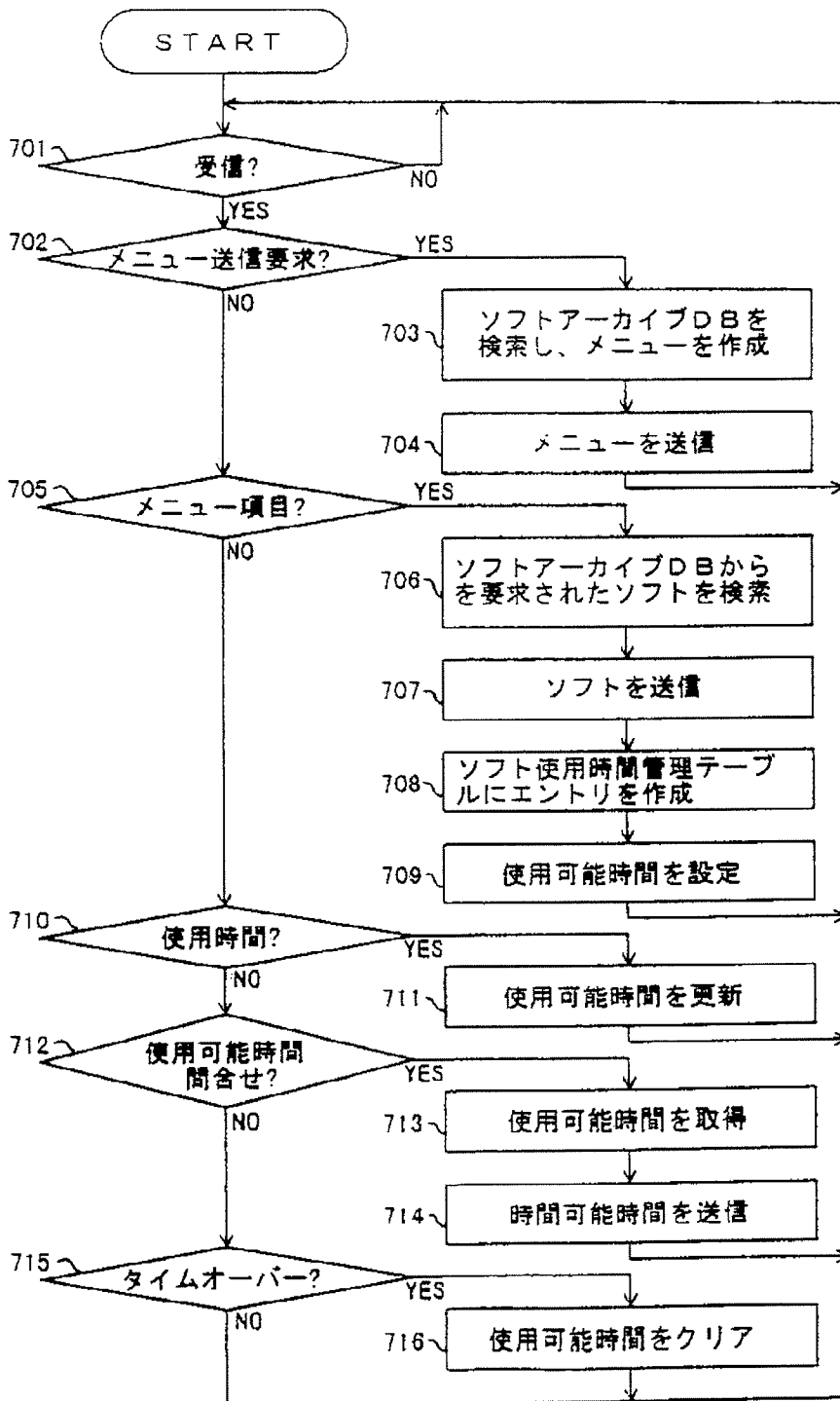
[Drawing 6]

第2の実施の形態におけるソフト使用時間制御処理の動作フローチャート



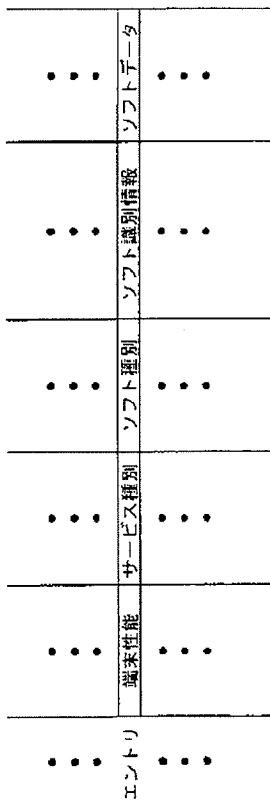
[Drawing 7]

第2の実施の形態におけるホスト装置の動作フローチャート



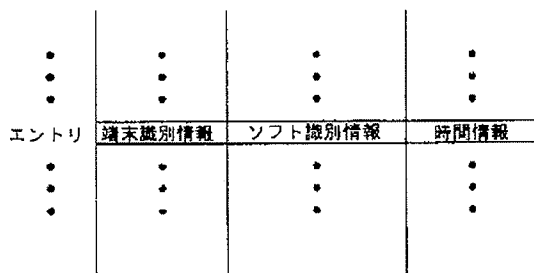
[Drawing 8]

ソフトウェアカイブIDのデータ構成図



[Drawing 9]

ソフト使用時間管理テーブルのデータ構成図



| (51)Int.Cl. ⁵ | 識別記号 | F I | |
|--------------------------|-------|---------|---------------|
| G 0 6 F | 17/30 | C 0 6 F | 15/40 3 1 0 F |
| | 17/60 | | 15/21 Z |
| | | | 15/40 3 2 0 B |

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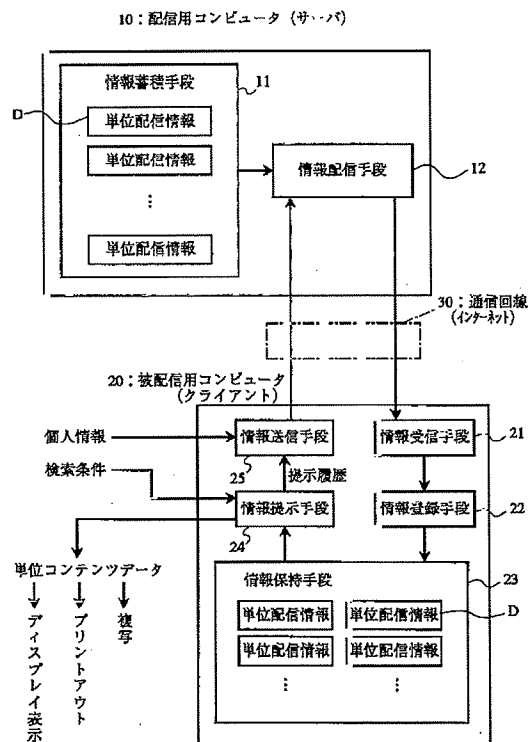
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(54)【発明の名称】 デジタルコンテンツの配信システム

(57)【要約】

【課題】 配信されたコンテンツの管理を効率的に行うとともに、任意の利用条件に基づく運用を可能にする。

【解決手段】 配信用コンピュータ10内に、多数の単位配信情報Dを用意する。各単位配信情報Dは、配信すべき本来のコンテンツデータと、このコンテンツデータについての検索用情報と、このコンテンツデータについての利用条件と、から構成される。通信回線30を介して配信された単位配信情報Dは、被配信用コンピュータ20内の情報受信手段21で受信され、情報登録手段22によって情報保持手段23にデータベースの形式で登録される。ユーザが、情報提示手段24に対して、所定の検索条件を与えると、検索用情報に基づいて特定のコンテンツデータが検索されて提示される。この提示は、単位配信情報D内の利用条件の制約を受ける。利用条件として、所定料金の支払い、プリントアウト回数の制限、利用期限などの条件が設定できる。



【特許請求の範囲】

【請求項1】 サーバとして機能する配信用コンピュータから、クライアントとして機能する被配信用コンピュータへ、通信回線を介してデジタルコンテンツを配信するシステムであって、

ひとまとまりの情報として配信すべき単位コンテンツデータと、前記単位コンテンツデータについての検索用情報と、前記単位コンテンツデータについての利用条件を示す情報と、を有する単位配信情報を複数用意し、前記配信用コンピュータに、前記複数の単位配信情報を蓄積する情報蓄積手段と、ユーザからの要求に応じた所定の単位配信情報を前記情報蓄積手段から読出し、これを前記通信回線を介して前記被配信用コンピュータへと送信する情報配信手段と、を設け、

前記被配信用コンピュータに、複数の単位配信情報を保持することができる情報保持手段と、前記通信回線を介して送信されてきた単位配信情報を受信する情報受信手段と、受信した単位配信情報を、検索用情報に基づく検索が可能な態様で前記情報保持手段内に登録する情報登録手段と、配信を受けるユーザから入力された所定の検索条件に基づいて、前記情報保持手段内の単位配信情報を検索し、前記検索条件に合致する検索用情報を有する単位配信情報内の単位コンテンツデータを、その利用条件に基づいてユーザに提示する情報提示手段と、を設け、

前記情報保持手段内に保持されている単位コンテンツデータのユーザによる利用が、前記情報提示手段を介してのみもしくは前記情報提示手段の監督下においてのみ可能となるように構成したことを特徴とするデジタルコンテンツの配信システム。

【請求項2】 請求項1に記載のシステムにおいて、ユーザが入力した個人情報を通信回線を介して配信用コンピュータへと送信する情報送信手段を、被配信用コンピュータに更に設け、配信用コンピュータ内の情報配信手段が、この情報送信手段から送信されてきた情報を受信する機能を有するようにしたことを特徴とするデジタルコンテンツの配信システム。

【請求項3】 請求項1に記載のシステムにおいて、情報提示手段によるユーザに対するコンテンツデータの提示履歴を通信回線を介して配信用コンピュータへと送信する情報送信手段を、被配信用コンピュータに更に設け、配信用コンピュータ内の情報配信手段が、この情報送信手段から送信されてきた情報を受信する機能を有するようにしたことを特徴とするデジタルコンテンツの配信システム。

【請求項4】 請求項1に記載のシステムにおいて、個々のユーザごとにそれぞれ配信を希望するデジタルコンテンツの条件を予め決めておき、情報配信手段が、前記条件に合致するデジタルコンテンツを含む単位配信情報を情報蓄積手段から自動的に読出し、これを個々のユ

ーザの被配信用コンピュータへと自動的に送信する機能を有することを特徴とするデジタルコンテンツの配信システム。

【請求項5】 請求項1～4のいずれかに記載のシステムにおいて、

単位コンテンツデータについての利用条件として、利用料金に関する条件を設定し、ユーザがこの利用料金の支払いを承諾することを条件として、情報提示手段による当該単位コンテンツデータの提示が行われるようにしたことを特徴とするデジタルコンテンツの配信システム。

【請求項6】 請求項1～5のいずれかに記載のシステムにおいて、

単位コンテンツデータについての利用条件として、プリントアウトもしくは複写の回数を制限する条件を設定し、情報提示手段が、前記制限回数を越える利用形態に対しては、当該単位コンテンツデータの提示を拒否することを特徴とするデジタルコンテンツの配信システム。

【請求項7】 請求項1～6のいずれかに記載のシステムにおいて、

単位コンテンツデータについての利用条件として、利用期限を制限する条件を設定し、情報提示手段が、前記利用期限を越える利用形態に対しては、当該単位コンテンツデータの提示を拒否することを特徴とするデジタルコンテンツの配信システム。

【請求項8】 請求項1～7のいずれかに記載のシステムにおいて、

配信用コンピュータが、検索用情報もしくは利用条件を暗号化して単位コンテンツデータに埋め込む処理を施すことにより得られる単位配信情報を送信する機能を有し、

被配信用コンピュータが、受信した単位配信情報に埋め込まれていた検索用情報もしくは利用条件を抽出した上で登録を行う機能を有することを特徴とするデジタルコンテンツの配信システム。

【請求項9】 コンピュータに、請求項1～8のいずれかに記載のシステムにおける被配信用コンピュータとして機能させるためのプログラムを記録したコンピュータ、読取り可能な記録媒体。

【発明の詳細な説明】**【0001】**

【発明の属する技術分野】本発明はデジタルコンテンツの配信システムに関し、特に、データベースの形態で所望のコンテンツを利用することができるデジタルコンテンツの配信システムに関する。

【0002】

【従来の技術】コンピュータ技術の急速な進歩により、文字情報、画像情報、音声情報といったあらゆる情報がデジタルコンテンツとして利用され、CD-ROMをはじめとする様々な記録媒体を介して配布されるようになってきている。また、インターネットの普及により、通

信回線を介したオンラインによりデジタルコンテンツを配布する手法も一般化しつつあり、ユーザはパーソナルコンピュータを利用して、様々なデジタルコンテンツをオンラインで入手することができるようになってきている。

【0003】このように、ユーザ側にデジタルコンテンツを受け入れる環境が普及するにしたがって、種々のデジタルコンテンツを提供するサービスも拡充してきている。現在では、種々のニュース、解説記事、株式市況、ソフトウェアの操作マニュアルなどの文字を主体としたコンテンツ、写真や絵画などの画像を主体としたコンテンツ、MIDIデータ、カラオケデータなどの音を主体としたコンテンツ、そしてアプリケーションソフトウェア、ユーティリティソフトウェア、プラグインソフトウェア、アップデート用ソフトウェアなどのプログラムを含むコンテンツなどが、種々の配信業者からオンラインで提供されている。

【0004】オンラインによりデジタルコンテンツの配信を行うシステムは、通常、サーバとして機能する配信用コンピュータと、クライアントとして機能する被配信用コンピュータとによって構成される。配信用コンピュータは、コンテンツの配信業者側が設置するコンピュータであり、一般に大容量の記憶手段を備えたサーバコンピュータが利用される。これに対して、被配信用コンピュータは、一般のユーザが設置するコンピュータであり、種々のパーソナルコンピュータを利用するのが一般的である。両コンピュータは種々の通信回線を介して接続され、所定の通信プロトコルに基づいてデータの送受が行われる。現在では、インターネットのプロトコルを利用してデータの送受を行うのが一般的であり、ユーザがWWWブラウザを用いて配信業者のWebページにアクセスし、所望のデジタルコンテンツをダウンロードする手法が広く利用されている。

【0005】

【発明が解決しようとする課題】上述したように、デジタルコンテンツの配信システムを利用すれば、各ユーザは所望の時間に、所望の場所で、所望の情報を入手することができ、しかも、デジタルデータの形式で情報を入手することができるため、コンピュータにより種々の形態で利用することが可能になる。しかしながら、従来のデジタルコンテンツの配信システムによる配信形態は、必ずしも利用勝手の良いものではない。

【0006】第1の問題点は、入手したコンテンツの管理が煩雑になるという点である。これまで、インターネットを利用したコンテンツの配信は、ユーザ側が必要なデータを積極的に収集するタイプのいわゆるプル技術に基づくものであったが、今後は、予めユーザ側から提示された条件に合致するデータを、配信業者側が集めて積極的に配信するタイプのいわゆるプッシュ技術に基づくものが主流になると予想される。このようなプッシュ技

術に基づく配信が行われると、ユーザの積極的な収集行為がなくても、配信業者側から一方的にコンテンツの配信が行われることになり、被配信用コンピュータには次第に膨大な量のコンテンツが蓄積されることになる。従来のデジタルコンテンツの配信システムは、このように被配信用コンピュータに蓄積された膨大なコンテンツを管理する機能を有しておらず、コンテンツの管理はユーザ自身の責任において行われなければならない。

【0007】第2の問題点は、任意の利用条件に基づくコンテンツの提供事業が困難であるという点である。コンテンツの配信業者は、ビジネスとして配信業務を行っているわけであるから、ユーザがコンテンツを利用するたびに、その利用形態に見合った料金を課金する処理を行う必要がある。また、ディスプレイ表示という利用形態は自由に許可するが、プリントアウトという利用形態については回数制限を課す、というような所定の利用制限を設けたい場合もあるし、プリントアウトという利用形態については付加料金を徴収するという条件で配信したい場合もある。もちろん、配信されたコンテンツの複製行為などは、著作権法や配信契約に基づいて法的に制限することが可能であるが、配信システムにおける物理的な制限機能が働かないと、必ずしも実効ある制限は保証されない。このため、従来の配信形態では、著作権法や配信契約に基づく利用制限が有効に機能していないのが現状である。

【0008】そこで本発明は、入手したコンテンツの管理を効率的に行うことができ、しかも任意の利用条件に基づくコンテンツの提供事業が可能なデジタルコンテンツの配信システムを提供することを目的とする。

【0009】

【課題を解決するための手段】(1) 本発明の第1の態様は、サーバとして機能する配信用コンピュータから、クライアントとして機能する被配信用コンピュータへ、通信回線を介してデジタルコンテンツを配信するデジタルコンテンツの配信システムにおいて、ひとまとまりの情報として配信すべき単位コンテンツデータと、この単位コンテンツデータについての検索用情報と、この単位コンテンツデータについての利用条件を示す情報と、を有する単位配信情報を複数用意し、配信用コンピュータに、複数の単位配信情報を蓄積する情報蓄積手段と、ユーザからの要求に応じた所定の単位配信情報を情報蓄積手段から読出し、これを通信回線を介して被配信用コンピュータへと送信する情報配信手段と、を設け、被配信用コンピュータに、複数の単位配信情報を保持することができる情報保持手段と、通信回線を介して送信されてきた単位配信情報を受信する情報受信手段と、受信した単位配信情報を、検索用情報に基づく検索が可能な態様で情報保持手段内に登録する情報登録手段と、配信を受けるユーザから入力された所定の検索条件に基づいて、情報保持手段内の単位配信情報を検索し、検索条件に合

致する検索用情報を有する単位配信情報内の単位コンテンツデータを、その利用条件に基づいてユーザに提示する情報提示手段と、を設け、情報保持手段内に保持されている単位コンテンツデータのユーザによる利用が、情報提示手段を介してのみもしくは情報提示手段の監督下においてのみ可能となるように構成するようにしたものである。

【0010】(2) 本発明の第2の態様は、上述の第1の態様に係るデジタルコンテンツの配信システムにおいて、ユーザが入力した個人情報を通信回線を介して配信用コンピュータへと送信する情報送信手段を、被配信用コンピュータ側に更に設け、配信用コンピュータ内の情報配信手段に、この情報送信手段から送信されてきた情報を受信する機能をもたせるようにしたものである。

【0011】(3) 本発明の第3の態様は、上述の第1の態様に係るデジタルコンテンツの配信システムにおいて、情報提示手段によるユーザに対するコンテンツデータの提示履歴を通信回線を介して配信用コンピュータへと送信する情報送信手段を、被配信用コンピュータ側に更に設け、配信用コンピュータ内の情報配信手段に、この情報送信手段から送信されてきた情報を受信する機能をもたせるようにしたものである。

【0012】(4) 本発明の第4の態様は、上述の第1の態様に係るデジタルコンテンツの配信システムにおいて、個々のユーザごとにそれぞれ配信を希望するデジタルコンテンツの条件を予め定めておき、情報配信手段に、個々のユーザの配信希望条件に合致するデジタルコンテンツを含む単位配信情報を情報蓄積手段から自動的に読出し、これを個々のユーザの被配信用コンピュータへと自動的に送信する機能をもたせるようにしたものである。

【0013】(5) 本発明の第5の態様は、上述の第1～4の態様に係るデジタルコンテンツの配信システムにおいて、単位コンテンツデータについての利用条件として、利用料金に関する条件を設定し、ユーザがこの利用料金の支払いを承諾することを条件として、情報提示手段による当該単位コンテンツデータの提示が行われるようにしたものである。

【0014】(6) 本発明の第6の態様は、上述の第1～5の態様に係るデジタルコンテンツの配信システムにおいて、単位コンテンツデータについての利用条件として、プリントアウトもしくは複写の回数を制限する条件を設定し、情報提示手段が、この制限回数を越える利用形態に対しては、当該単位コンテンツデータの提示を拒否するようにしたものである。

【0015】(7) 本発明の第7の態様は、上述の第1～6の態様に係るデジタルコンテンツの配信システムにおいて、単位コンテンツデータについての利用条件として、利用期限を制限する条件を設定し、情報提示手段が、この利用期限を越える利用形態に対しては、当該単

位コンテンツデータの提示を拒否するようにしたものである。

【0016】(8) 本発明の第8の態様は、上述の第1～7の態様に係るデジタルコンテンツの配信システムにおいて、配信用コンピュータが、検索用情報もしくは利用条件を暗号化して単位コンテンツデータに埋め込む処理を施すことにより得られる単位配信情報を送信する機能を有し、被配信用コンピュータが、受信した単位配信情報に埋め込まれていた検索用情報もしくは利用条件を抽出した上で登録を行う機能を有するようにしたものである。

【0017】(9) 本発明の第9の態様は、上述の第1～8の態様に係るデジタルコンテンツの配信システムにおける被配信用コンピュータとして機能させるためのプログラムを、コンピュータ読み取り可能な記録媒体に記録して配布できるようにしたものである。

【0018】

【発明の実施の形態】以下、本発明を図示する実施形態に基づいて説明する。図1は、この実施形態に係るデジタルコンテンツの配信システムの基本構成を示すブロック図である。この配信システムの大きな構成要素は、サーバとして機能する配信用コンピュータ10と、クライアントとして機能する被配信用コンピュータ20と、両者を接続する通信回線30と、である。

【0019】この実施形態では、配信用コンピュータ10は、コンテンツの配信業者の事業所に設置されたサーバ用コンピュータによって構成されており、比較的大容量の外部記憶装置を有している。この配信用コンピュータ10は、機能ブロックとしてとらえると、図示のとおり、情報蓄積手段11と情報配信手段12とによって構成されている。情報蓄積手段11には、複数の単位配信情報Dが蓄積されている。この単位配信情報Dの構成は後に詳述するが、本配信システムでは、単位配信情報Dをひとまとまりのデータとする配信が行われることになる。この情報蓄積手段11は、具体的には、ハードディスク装置などの外部記憶装置によって実現される。一方、情報配信手段12は、ユーザからの要求に応じた所定の単位配信情報Dを情報蓄積手段11から読出し、これを通信回線30を介して被配信用コンピュータ20へと送信する機能を果たす。

【0020】一方、被配信用コンピュータ20は、コンテンツの配信を受ける一般ユーザのもとに設置されたクライアント用コンピュータによって構成されており、実際には、汎用のパーソナルコンピュータに専用のソフトウェアを組み込むことにより実現される。この被配信用コンピュータ20も、ここでは機能ブロックとして示されており、図示のとおり、情報受信手段21、情報登録手段22、情報保持手段23、情報提示手段24、情報送信手段25によって構成されている。

【0021】通信回線30を介して送信されてきた単位

配信情報Dは、情報受信手段21によって受信され、情報登録手段22によって情報保持手段23へと登録される。後述するように、情報保持手段23内には、配信された多数の単位配信情報Dがデータベースの形式で保存される。このように、ユーザ側の被配信用コンピュータ20内にデータベースが構築されるようにコンテンツ配信が行われる点が、本発明の第1の特徴である。こうして、データベースの形式で保存された多数の単位配信情報D内のコンテンツは、情報提示手段24によってユーザに提示される。また、必要に応じて、この提示履歴やユーザの個人情報が、情報送信手段25によって、通信回線30を介して配信用コンピュータ10側へと送信される。情報配信手段12は、単位配信情報Dを送信する機能とともに、情報送信手段25から送信されてきたデータを受信し、必要な処理を行う機能を有する。

【0022】ここでは、本発明の一般的な実施形態として、配信用コンピュータ10と被配信用コンピュータ20とをインターネットの通信プロトコルで接続した例を示す。したがって、通信回線30としては、インターネットで利用されている一般的な専用回線や電話回線を用いればよい。もちろん、通信回線30は物理的な信号線である必要はなく、必要に応じて、衛星を利用した無線回線などを利用してかまわない。また、図1には、配信用コンピュータ10と被配信用コンピュータ20とが1対1に接続された状態が示されているが、実際のシステムでは、1台の配信用コンピュータ10には多数台の被配信用コンピュータ20が接続されるのが一般的であり、配信用コンピュータ10は複数台の被配信用コンピュータ20に対してコンテンツの配信を行うことになる。もちろん、配信用コンピュータ10を複数台設置したシステムを構成してもかまわない。

【0023】なお、図1に示すシステムは、情報送信手段25によって、提示履歴や個人情報を配信用コンピュータ10側へ送信する機能を有しているが、提示履歴や個人情報を送信する必要がない場合は、情報送信手段25を省略してもかまわない。また、図1において、情報配信手段12と情報受信手段21との間に示した矢印や、情報送信手段25と情報配信手段12との間に示した矢印は、単位配信情報D、提示履歴、個人情報といった概念的な情報の流れを示すものであって、必ずしも具体的なデータや信号の流れを示すものではない。したがって、実際には、情報配信手段12と情報受信手段21との間には、双方向にデータや信号がやりとりされ、その結果として、ユーザが希望する単位配信情報Dの配信が行われることになり、情報送信手段25と情報配信手段12との間にも、双方向にデータや信号がやりとりされ、その結果として、提示履歴や個人情報が送信されることになる。

【0024】続いて、各単位配信情報Dの構成を図2を参照して説明する。本実施形態では、個々の単位配信情

報Dは、単位コンテンツデータと、検索用情報と、利用条件という3つのタイプの情報から構成されている。図2の図表には、これら3つのタイプの情報の構成例が示されている。

【0025】単位コンテンツデータは、ひとまとまりの情報として配信すべき本来の配信情報というべきものであり、たとえば、文字データ、画像データ、音声データなどから構成されている。配信対象となるコンテンツがニュース記事である場合には、単位コンテンツデータはひとまとまりの文字データから構成されることになり、配信対象となるコンテンツが1枚の写真である場合には、単位コンテンツデータはこの写真の画像データから構成されることになり、配信対象となるコンテンツがカラオケの1曲目である場合には、単位コンテンツデータはこの曲目の音声データから構成されることになる。もちろん、複数枚の写真に関するデータを1つの単位コンテンツデータとしてもかまわないし、複数曲の音声データを1つの単位コンテンツデータとしてもかまわない。あるいは、文字、画像、音声の混合データを1つの単位コンテンツデータとしてもよい。要するに、配信業者がひとまとまりの配信対象と考えているデータが、単位コンテンツデータとして取り扱われることになる。

【0026】一方、検索用情報は、この単位コンテンツデータを検索するために利用される情報であり、たとえば、コンテンツの題名、分野、キーワード、発行日などの情報が検索用情報として利用できる。前述したように、本発明の第1の特徴は、ユーザ側の被配信用コンピュータ20内にデータベースが構築されるような形式でコンテンツ配信が行われる点にある。検索用情報は、このデータベースにおいて、単位コンテンツデータを検索するために利用される情報になる。どのような情報を検索用情報として設定するかは、配信業者が、単位コンテンツデータの内容を吟味しながら決定しておく。

【0027】利用条件は、この単位コンテンツデータを利用するにあたって設定された条件であり、ユーザがコンテンツを利用する際に配信業者側に支払うべき利用料金や、コンテンツを利用する上で、その利用形態を制限する情報になる。利用形態の具体的な制限としては、たとえば、プリントアウト回数、複写の回数、利用期限などの条件を設定することができる。また、利用料金については、配信が行われるたびに支払うべき対価のみを決めておく単純な設定を行うことも可能であるし、個々の利用形態に応じて細かな対価を設定しておくことも可能である。本発明の第2の特徴は、このように各単位コンテンツデータごとに予め所定の利用条件を設定しておくことにより、任意の利用条件に基づいてコンテンツの提供ができるようにした点にある。

【0028】図3は、単位配信情報Dの具体例を示す図である。この例は、特定の地域の地図の情報に基づいてデジタルコンテンツを構成したものであり、単位コンテ

ンツデータは、図示のような地図の画像データおよびこれに関連した文字データから構成されている。デジタルコンテンツの配信システムにおいて、本来配信すべきデータは、この単位コンテンツデータであり、ユーザが直接利用するのも、この単位コンテンツデータである。しかしながら、本発明は、この単位コンテンツデータに、検索用情報および利用条件を付加して、ひとまとまりの単位配信情報Dを形成し、この単位配信情報Dの形式でユーザへの配信を行うようにしている。単位コンテンツデータに検索用情報を付加しておけば、ユーザ側のシステムにデータベースを構築することができるようになり、上述した本発明の第1の特徴を実現することができる。また、単位コンテンツデータに利用条件を付加しておけば、この利用条件に基づくコンテンツ管理が可能になり、上述した本発明の第2の特徴を実現することができる。

【0029】図3に示す例では、検索用情報として、題名、分野、キーワード、発行日なる4つの項目を設定している。すなわち、題名としては「青森県北津軽郡マップ」なる文字列を設定しており、この単位コンテンツデータが「青森県北津軽郡」の地図であることが示されている。分野としては、階層構造をもった分類を行っており、この例では、「社会」なる大分類内の「地理」なる中分類内の「日本地図」なる小分類に属する分野であることが示されている。更に、キーワードとしては、「青森、龍飛、青函トンネル、リンゴ」なる文字列が設定されており、これらの文字列に基づく検索が可能になっている。また、発行日として「1998年4月1日」なる日付が設定されており、発行日に基づく検索も可能になっている。

【0030】一方、利用条件としては、この図3の例では、利用料金、プリントアウト回数、複写の回数、利用期限なる4つの項目を設定している。すなわち、利用料金としては「20円」なる料金設定がなされており、プリントアウト回数は「1回（2回目以降のプリントアウトは禁止される）」、複写の回数は「0回（複写は禁止される）」、利用期限は「1998年12月31日まで（それ以後の利用は一切禁止される）」なる制限が設けられている。もちろん、この設定条件は一例を示すものであり、「1回のプリントアウトごとに10円」あるいは「1999年1月1日以降の利用は半額」といったように、利用形態に関連した利用料金を設定することも可能である。なお、図3には、「青森県北津軽郡マップ」なる題名の単位コンテンツデータを含んだ1つの単位配信情報Dのみを示したが、配信用コンピュータ10側の情報蓄積手段11内には、このようなマップに関する単位配信情報Dをはじめとして、種々の分野の情報が多数用意されることになる。

【0031】続いて、本発明に係るシステムをユーザが実際に利用する場合の動作手順を順を追って説明する。

まず、配信業者は、図3に示すような単位配信情報Dを大量に情報蓄積手段11内に用意する。通常、配信業者は常に新しいコンテンツを追加する作業を行うので、情報蓄積手段11内の単位配信情報Dは徐々に増加してゆくことになるであろう。また、地図のようなコンテンツの場合、随時新しいものに改訂してゆく必要がある。このように、配信業者は、情報蓄積手段11内の単位配信情報Dに対するメンテナンス作業を随時行う必要があるが、ここではそのようなメンテナンス作業についての説明は省略する。

【0032】さて、情報配信手段12は、情報蓄積手段11内の単位配信情報Dを、適宜、所定のユーザの被配信用コンピュータ20に配信する処理を行う。いわゆるプル技術による配信を行うのであれば、情報配信手段12は、被配信用コンピュータ20からアクセスがあった時点で、ユーザがそのアクセス時に希望する特定の単位配信情報Dを配信する処理を行えばよい。情報蓄積手段11内にもデータベースの形式で各単位配信情報Dを蓄積しておくようにすれば、ユーザから提示された検索条件に基づく検索を行い、ヒットした単位配信情報Dのみを被配信用コンピュータ20へと送信することができる。

【0033】一方、プッシュ技術による配信を行うのであれば、個々のユーザごとにそれぞれ配信を希望するデジタルコンテンツの条件を予め定めておくようにする。たとえば、特定のジャンルに属するコンテンツや、特定のキーワードを含むコンテンツについての定期購読契約を各ユーザと締結して運用するのであれば、情報配信手段12は定期的に、情報蓄積手段11内の単位配信情報Dを検索し、各ユーザの購読範囲に入るデジタルコンテンツを配信対象としてピックアップする処理を行い、この配信対象となるデジタルコンテンツを含む単位配信情報を情報配信手段12から自動的に読出し、これを当該ユーザの被配信用コンピュータ20へと自動的に送信する処理を実施すればよい。

【0034】ここでは、あるユーザが、「日本地図」というジャンルに属するコンテンツについての定義購読をしていた場合を考えよう。この場合、図3に示す「青森県北津軽郡マップ」なるコンテンツを含む単位配信情報Dがピックアップされ、当該ユーザの被配信用コンピュータ20へ自動的に送信されることになる。もちろん、この他にも同じジャンルに属するコンテンツの単位配信情報Dが多数送信されることになる。なお、情報配信手段12が単位配信情報Dを送信する際に、配信日などのデータを検索用情報に付加するようにしてもよい。たとえば、図3に示す例の場合、検索用情報として、発行日の他に更に配信日の情報が加わることになる。

【0035】こうして通信回線30を介して送信されてきた単位配信情報Dは、情報受信手段21によって受信され、情報登録手段22へと与えられる。情報登録手段

22は、この単位配信情報Dを、検索用情報に基づく検索が可能な態様で情報保持手段23内に登録する処理を行う。いわばこの登録処理は、情報保持手段23内にデータベースを構築する処理であり、単位配信情報Dはデータベースを構成するデータとして、情報保持手段23内に格納されることになる。この情報登録手段22による登録処理は、情報受信手段21による受信処理に引き続いて自動的に行われるため、ユーザは特に登録のための作業を行う必要はない。別言すれば、ユーザが意識しないうちに、配信されたコンテンツのデータベースが情報保持手段23内に構築されることになり、このデータベースは、配信が行われるたびに自動的に改訂されることになる。

【0036】このように、情報保持手段23内に自動的にデータベースが構築される点が本発明の第1の特徴であり、この特徴により、入手したコンテンツの管理を効率的に行うことができるというメリットが得られる。すなわち、ユーザは、配信されたコンテンツを利用しようと考えた場合、情報提示手段24に対して所定の検索条件を入力すればよい。たとえば、「青函トンネル」なるキーワードを検索条件として入力して検索を試みれば、図3に示す「青森県北津軽郡マップ」なるコンテンツがヒットすることになる。情報提示手段24は、このように、ユーザから入力された所定の検索条件に基づいて、情報保持手段23内の単位配信情報Dを検索し、入力された検索条件に合致する検索用情報を有する単位配信情報D内の単位コンテンツデータをユーザに提示する処理を行う。

【0037】ただし、ユーザに対する単位コンテンツデータの提示は、単位配信情報D内の利用条件に基づいて行われる。たとえば、図3に示す例の場合、「利用料金：20円」なる条件設定がなされているので、ユーザがこの利用料金の支払いを承諾することを条件として、単位コンテンツデータの提示が行われることになる。具体的には、ディスプレイ画面上に料金表示を行うとともに、「Yes/No」の選択ボタンを表示させ、「Yes」ボタンがクリックされた場合のみ提示が行われるようにすればよい。単位コンテンツデータの提示方法（別言すれば、コンテンツの利用形態）としては、この例では、ディスプレイ表示する方法、プリントアウトする方法、複写を許可する方法の3とおりを設定している。ユーザが、情報提示手段24に対して好みの利用形態を指定すれば、指定された形態での利用が可能になるように、単位コンテンツデータが提示されることになる。たとえば、ディスプレイ表示を指定した場合、図3左に示すような地図がディスプレイ画面上に表示されることになり、プリントアウトを指定した場合、この地図がプリンタから出力されることになり、複写を指定した場合、この地図の画像データおよび文字データが、所望の媒体に複写されることになる。

【0038】もちろん、情報提示手段24は、当該単位コンテンツデータについて設定された利用条件に反するような提示処理は拒否することになる。たとえば、単位コンテンツデータについての利用条件として、プリントアウトもしくは複写の回数を制限する情報が設定されている場合、情報提示手段24は、この制限回数を越える利用形態に対しては、当該単位コンテンツデータの提示を拒否することになる。図3に示す例では、プリントアウト回数は1回に制限されており、複写の回数は0回に制限されている。したがって、ユーザがプリントアウトの利用形態を指定した場合は、情報提示手段24は、その回数を記録しておき、2回目以降のプリントアウトは拒否する処理を行うことになる。また、ユーザが複写の利用形態を指定した場合は、情報提示手段24はこのような利用形態での提示を拒否する処理を行うことになる。同様に、単位コンテンツデータについての利用条件として、利用期限を制限する情報が設定されている場合、情報提示手段24は、この利用期限を越える利用形態に対しては、当該単位コンテンツデータの提示を拒否することになる。図3に示す例では、利用期限は1998年12月31日までに制限されており、この期限以降に利用要求があった場合は、情報提示手段24は提示を拒否することになる。

【0039】また、図3に示す例とは若干異なるが、利用条件として、たとえば、「1回プリントアウトするごとに利用料5円を徴収する」というような設定がなされている場合、提示履歴を配信用コンピュータ10側に送信することにより課金処理が可能になる。すなわち、情報提示手段24は、ユーザからプリントアウトという形態による利用要求があった場合、要求どおりの利用形態でコンテンツの提示を行うとともに、「プリントアウトという利用形態での利用が1回あった」旨を示す利用履歴を、情報送信手段25へと伝達する。情報送信手段25は、この利用履歴を通信回線30を介して情報配信手段12へと送信する。情報配信手段12は、この利用履歴に基づいて必要な課金処理（たとえば、当該ユーザの銀行口座からの自動引落処理など）を行うことができる。もちろん、課金情報そのもの（上述の例では、5円分の課金をすべき情報）を情報配信手段12へ送信しても等価である。

【0040】図示の実施形態では、情報送信手段25は、ユーザが入力した個人情報を、通信回線30を介して配信用コンピュータ10へと送信する機能も有している。たとえば、ユーザが課金された利用料をクレジットカードで決済したいような場合、クレジットカード番号などの個人情報を情報送信手段25に対して入力し、これを配信用コンピュータ10側へと送信すればよい。一方、情報配信手段12には、このような個人情報を受信して必要な処理（たとえば、クレジット口座への課金処理など）を行う機能を設けておけばよい。

【0041】なお、各单位コンテンツデータのユーザによる利用を、単位配信情報D内の利用条件に基づいて物理的に制限するためには、情報保持手段23内に保持されている単位コンテンツデータのユーザによる利用が、情報提示手段24を介してのみもしくは情報提示手段24の監督下においてのみ可能となるようにシステムを構成しておく必要がある。既に述べたように、被配信用コンピュータ20としては、汎用のパーソナルコンピュータをそのまま利用するのが実用的である。この場合、情報保持手段23としては、この汎用パーソナルコンピュータ用の磁気ディスク装置などがそのまま利用されることになる。したがって、この磁気ディスク装置などに格納された単位コンテンツデータに対してユーザが自由にアクセスできる状況にあると、利用条件に基づく利用形態が実効的に確保されないおそれがある。そこで、この汎用パーソナルコンピュータ用の磁気ディスク装置のうち、情報保持手段23として機能する部分に格納されたデータに関しては、情報提示手段24を介してアクセスした場合もしくはその監督下でアクセスした場合にのみ正しい読出しが可能ないように構成しておくのが好ましい。また、同様の理由から、情報受信手段21によって受信した単位配信情報Dに対しては、情報登録手段22によって直ちに情報保持手段23への登録が行われるようにし、受信した単位配信情報Dを不正な手段によって別な記録媒体などへ格納することができないよう配慮するのが好ましい。

【0042】実用上は、本発明に係る被配信用コンピュータ20は、汎用のWebブラウザソフトウェアや、汎用のビューアソフトウェアを組み込んだ一般的なパーソナルコンピュータに、更に、本発明実施のために特別に作成したプラグインソフトウェアやヘルパーアプリケーションソフトウェアなどを付加することにより実現すると、良好なコストパフォーマンスが得られる。

【0043】以下、被配信用コンピュータ20の具体的な構成例を述べておく。まず、図1に示す被配信用コンピュータ20における情報受信手段21は、汎用のWebブラウザソフトウェアを流用して実現することができる。ただし、汎用のWebブラウザソフトウェアをそのまま用いた場合、受信した単位配信情報Dを不正な手段で本システムの系外にある記録媒体などにダウンロードすることが物理的に可能になる。そこで、情報登録手段22として、この汎用のWebブラウザソフトウェアが受信したデータを情報保持手段23に登録するためのヘルパーアプリケーションを用意しておき、この汎用のWebブラウザソフトウェアが、配信用コンピュータ10からデータの配信を受けたときに、自動的にこのヘルパーアプリケーションが起動するような構成にしておけばよい。このような構成にしておけば、情報受信手段21として汎用のWebブラウザソフトウェアを用いた場合でも、配信されたデータが本システムの系外へ出るこ

はない。

【0044】一方、情報提示手段24は、汎用のビューアソフトウェアを流用して実現することができる。ただし、汎用のビューアソフトウェアをそのまま用いた場合、情報保持手段23内の単位配信情報Dを不正な手段で本システムの系外にある記録媒体などに読み出すことが物理的に可能になる。そこで、汎用のビューアソフトウェアに特別なプラグインソフトウェアを組み込むことにより、情報提示手段24を構成するようにし、情報保持手段23に対するアクセスが、このプラグインソフトウェアを介してのみもしくはその監督下においてのみ行われるように構成しておくことよい。このように、汎用のビューアソフトウェアによるディスプレイ表示、プリントアウト、データ複写などの処理を、このプラグインソフトウェアの管理下もしくは監視下におくようにすれば、予め設定した利用条件を遵守したコンテンツの提示が物理的に確保されることになる。

【0045】結局、情報受信手段21、情報登録手段22、情報保持手段23、情報提示手段24、情報送信手段25からなる本システムの系から、配信された単位配信情報Dが出ないような構成となるように配慮すれば、汎用のパーソナルコンピュータなどを利用して被配信用コンピュータ20を実現することが可能になる。

【0046】以上、本発明を図示する一実施形態に基づいて説明したが、本発明はこの実施形態に限定されるものではなく、この他にも種々の形態で実施可能である。たとえば、図2に示す例では、単位配信情報Dを、単位コンテンツデータ、検索用情報、利用条件の3つの情報によって構成したが、この他にも、たとえばコンテンツの著作権を示す情報や、種々の認証情報を単位配信情報D内に付加してもよい。また、単位コンテンツデータに検索用情報や利用条件を付加する際には、暗号化などの手法を用い、不可視データとしてコンテンツデータ内に埋め込む処理を行うことも可能である。この場合、情報登録手段22によって登録を行う際に、埋め込まれていた検索用情報や利用条件を抽出した上で、データベースの形式への登録を行うことになる。また、利用料金の設定も、たとえば、配信時に1回だけ課金をを行い、配信後の利用形態にかかわらず一律料金となるような設定も可能である。もちろん、本発明で利用できるコンテンツは、図3に示す地図情報に限定されるものではなく、あらゆるジャンルのコンテンツを本発明に係るシステムで配信することができる。

【0047】

【発明の効果】以上のとおり本発明に係るデジタルコンテンツの配信システムによれば、配信されたコンテンツをデータベースの形式で格納し、これを所定の利用条件に基づいて提示できるようにしたため、入手したコンテンツの管理を効率的に行うことができ、しかも任意の利用条件に基づくコンテンツの提供事業が可能になる。

【図面の簡単な説明】

【図1】本発明の一実施形態に係るデジタルコンテンツの配信システムの基本構成を示すブロック図である。

【図2】図1に示すシステムにおける単位配信情報Dの構成例を示す図である。

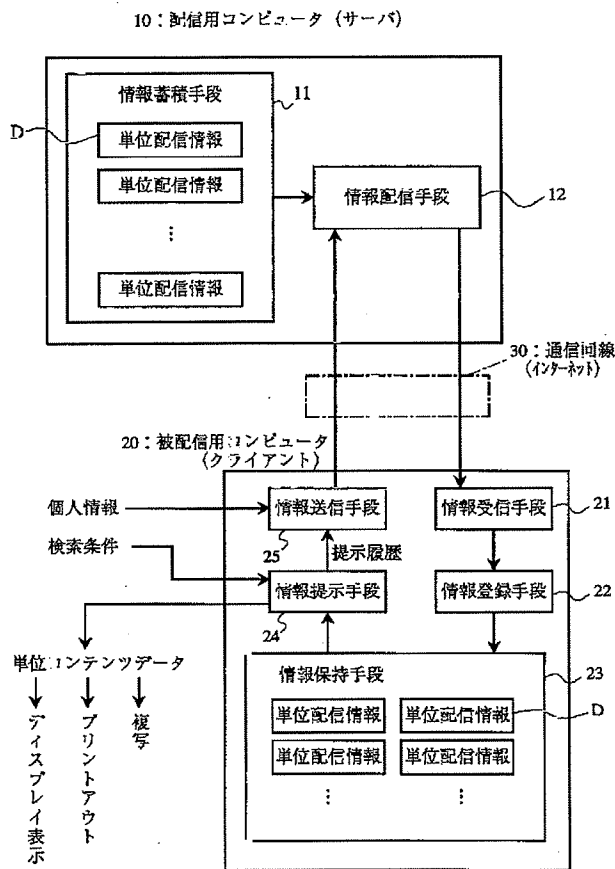
【図3】図1に示すシステムにおける単位配信情報Dのより具体的な構成例を示す図である。

【符号の説明】

- 10…配信用コンピュータ
- 11…情報蓄積手段

- 12…情報配信手段
- 20…被配信用コンピュータ
- 21…情報受信手段
- 22…情報登録手段
- 23…情報保持手段
- 24…情報提示手段
- 25…情報送信手段
- 30…通信回線
- D…単位配信情報

【図1】



【図2】

D: 単位配信情報

| | |
|------------|---------------------------|
| 単位コンテンツデータ | 文字データ、画像データ、音声データ |
| 検索用情報 | 題名、分野、キーワード、発行日 |
| 利用条件 | 利用料金、プリントアウト回数、複写の回数、利用期限 |

【図3】

単位配信情報Dの具体例

◎単位コンテンツデータ (画像データ、文字データ)

◎検索用情報

題名: 青森県北津軽郡マップ
 分野: 社会/地理/日本地図
 キーワード: 青森, 龍飛, 青函トンネル, リンゴ
 発行日: 1998年4月1日

◎利用条件

利用料金: 20円
 プリントアウト回数: 1回
 複写の回数: 0回
 利用期限: 1998年12月31日まで

PATENT ABSTRACTS OF JAPAN

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(22)Date of filing : 29.01.1998

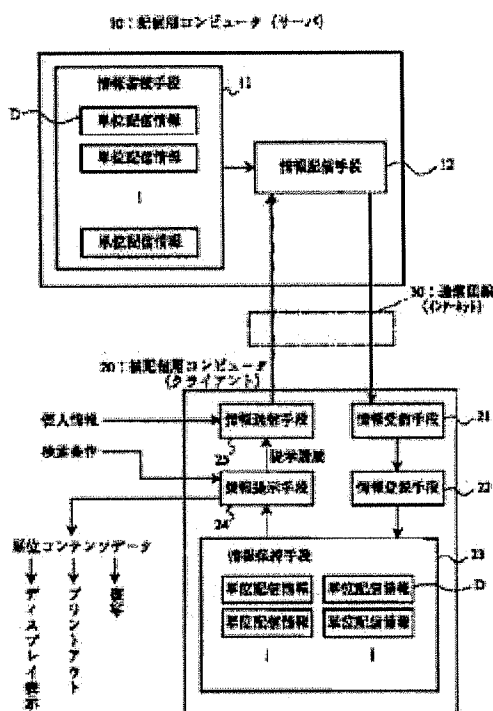
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(54) DISTRIBUTION SYSTEM FOR DIGITAL CONTENTS

(57)Abstract:

PROBLEM TO BE SOLVED: To efficiently manage distributed contents and to utilize the contents based on an optional application condition.

SOLUTION: Many unit distribution information data D are prepared in a distributing computer 10. Each data D are constituted of original contents data to be distributed, retrieving information for the contents data and an application condition for the contents data. The data D distributed through a communication line 30 are received by an information receiving means 21 built in the computer 20 and registered in an information storing means 23 as data base format data by an information registering means 22. When a user provides a prescribed retrieving condition to an information presenting means 24, specific contents data are retrieved based on retrieving information and presented. The presentation of the contents data are restricted by the application condition included in the data D. Conditions such as the payment of a prescribed charge, limitation to printing-out frequency and an application period can be set up as application conditions.



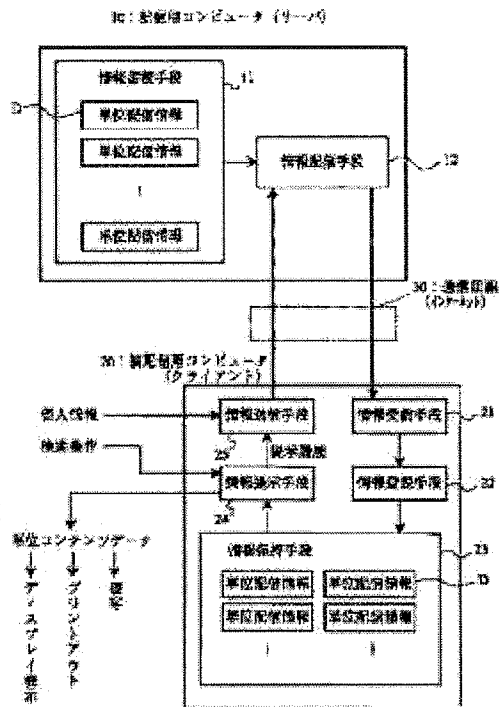
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* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention] Especially this invention relates to the distribution system of the digital contents which can use desired contents with the gestalt of a database

about the distribution system of digital contents.

PRIOR ART

[Description of the Prior Art]By rapid progress of computer technology, all information, including text, picture information, and speech information, is used as digital contents, and is increasingly distributed via various recording media including CD-ROM. By the spread of the Internet, the technique of distributing digital contents with the on-line through a communication line can also be generalized, and the user can obtain various digital contents now on-line using a personal computer.

[0003]Thus, the service which provides various digital contents is also expanded as the environment where digital contents are accepted in the user side spreads. The contents which made the subject characters, such as an operations manual of various news, an interpretive article, stock quotations, and software, in the present, The contents which made the subject the sound of the contents which made the picture of a photograph, pictures, etc. the subject, MIDI data, karaoke data, etc., And contents including programs, such as application software, utility software, plug-in software, and software for update, are provided on-line from various distribution contractors.

[0004]The system which distributes digital contents with on-line is usually constituted by the computer for distribution which functions as a server, and the computer for [distributing] which functions as a client. The computer for distribution is a computer which the distribution contractor side of contents installs.

The server computer generally provided with the mass memory measure is used. On the other hand, the computer for [distributing] is a computer which a general user installs.

It is common to use various personal computers.

Both computers are connected via various communication lines, and transmission and reception of data are performed based on a predetermined communications protocol. In the present, it is common to send and receive data using the protocol of the Internet, a user accesses a distribution contractor's Web page using a WWW browser, and the technique of downloading desired digital contents is used widely.

EFFECT OF THE INVENTION

[Effect of the Invention] Storing the distributed contents in the form of a database, and having enabled it to show this based on a predetermined utilization condition according to the distribution system of the digital contents which start this invention as above. A sake, The contents which came to hand can be managed efficiently and, moreover, the offer enterprise of contents based on arbitrary utilization conditions becomes possible.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] If the distribution system of digital contents is used as mentioned above, each user at desired time at a desired place. Since desired information can be obtained and information can moreover be obtained in the form of digital data, it becomes possible to use with various gestalten by computer. However, the use kitchen of the distribution gestalt by the distribution system of the conventional digital contents is not necessarily good.

[0006] The 1st problem is a point that management of the contents which came to hand becomes complicated. Although distribution of the contents using the Internet was based on what is called pull art of the type with which the user side collects required data positively until now, It is expected that the thing what is called based on a push technology of the type which the distribution contractor side collects the data corresponding to the conditions beforehand shown from the user side, and distributes it positively becomes in use from now on. If distribution based on such a push technology is performed, even if there is no positive collection act of a user, on the other hand, distribution of contents will be performed on a target from the distribution contractor side, and a huge quantity of contents will be gradually accumulated in the computer for [distributing]. The distribution system of the conventional digital contents does not have the function to manage the huge contents accumulated in the computer for [distributing] in this way, but management of contents must be performed in a user's own responsibility.

[0007] The 2nd problem is a point that the offer enterprise of contents based on arbitrary utilization conditions is difficult. The distribution contractor of contents needs to perform processing which charges the fee which balanced the usage pattern whenever the user used contents, since distribution business was performed as business. Although the usage pattern of a display display is permitted freely, It is to provide predetermined use restrictions of imposing number-of-times restrictions about the usage pattern of print-out, and it is to distribute on the conditions of collecting an ancillary charge about the usage pattern of print-out. Of course, although the duplicate acts of the distributed contents can be legally

restricted based on the Copyright Act or a distribution contract, unless the physical limiting function in a distribution system works, effective restriction is not necessarily guaranteed. For this reason, in the conventional distribution gestalt, the actual condition is that the use restrictions based on the Copyright Act or a distribution contract are not functioning effectively.

[0008]Then, this invention can manage the contents which came to hand efficiently, and an object of this invention is to provide the distribution system of the digital contents in which the offer enterprise of contents based on arbitrary utilization conditions is possible moreover.

MEANS

[Means for Solving the Problem](1) The 1st mode of this invention from a computer for distribution which functions as a server. In a distribution system of digital contents which distribute digital contents to a computer for [distributing] which functions as a client via a communication line, Unit contents data which should be distributed as a mass of information, and information for search about this unit contents data, An information accumulation means which prepares two or more unit delivery information which has the information which shows a utilization condition about this unit contents data, and accumulates two or more unit delivery information in a computer for distribution, An information distribution means which reads predetermined unit delivery information according to a demand from a user from an information accumulation means, and transmits this to a computer for [distributing] via a communication line, An information retaining means which can hold two or more unit delivery information to ***** and a computer for [distributing], An information receiving means which receives unit delivery information transmitted via a communication line, Based on a predetermined search condition inputted by an information registering means which registers unit delivery information which received into an information retaining means in a mode which can be searched based on information for search, and user who receives distribution, unit delivery information within an information retaining means is searched, An information presenting means which shows a user unit contents data in unit delivery information which has the information for search corresponding to a search condition based on the utilization condition, It is made to constitute so that use by a user of unit contents data currently held in ***** and an information retaining means may become possible under a supervisor of an information presenting means via an information presenting means.

[0010](2) In a distribution system of digital contents which require the 2nd mode of this invention for the 1st above-mentioned mode, An information transmission means which transmits personal information which a user inputted to a computer for distribution via a communication line is further provided in the computer side for [distributing], and a function to receive information transmitted to an information distribution means in a computer for distribution from this information transmission means is given.

[0011](3) In a distribution system of digital contents which require the 3rd mode of this invention for the 1st above-mentioned mode, An information transmission means which transmits a presentation history of contents data to a user by an information presenting means to a computer for distribution via a communication line, It provides in the computer side for [distributing] further, and a function to receive information transmitted to an information distribution means in a computer for distribution from this information transmission means is given.

[0012](4) In a distribution system of digital contents which require the 4th mode of this invention for the 1st above-mentioned mode, Conditions of digital contents which wish to distribute for each user of every, respectively are defined beforehand, Unit delivery information which contains digital contents corresponding to each user's distribution terms desired in an information distribution means is automatically read from an information accumulation means, and a function which transmits this to each user's computer for [distributing] automatically is given.

[0013](5) In a distribution system of digital contents which require the 5th mode of this invention for the 1-4th above-mentioned modes, Conditions about a utilization charge are set up as a utilization condition about unit contents data, and on condition that a user consents to payment of this utilization charge, presentation of the unit contents data concerned based on an information presenting means is made to be performed.

[0014](6) In a distribution system of digital contents which require the 6th mode of this invention for the 1-5th above-mentioned modes, As a utilization condition about unit contents data, conditions which restrict the number of times of print-out or a copy are set up, and an information presenting means refuses presentation of the unit contents data concerned to a usage pattern exceeding this restricted frequency.

[0015](7) In a distribution system of digital contents which require the 7th mode of this invention for the 1-6th above-mentioned modes, Conditions which restrict a use term are set up as a utilization condition about unit contents data, and an information presenting means refuses presentation of the unit contents data concerned to a usage pattern exceeding this use term.

[0016](8) In a distribution system of digital contents which require the 8th mode of this invention for the 1-7th above-mentioned modes, It has a function which transmits unit delivery information obtained by performing processing which a computer for distribution enciphers information for search, or a utilization condition, and embeds to unit contents data, It is made to have the function to register after a computer for [distributing] extracts information for search or a utilization condition currently embedded at unit delivery information which received.

[0017](9) The 9th mode of this invention records a program for making it function as a computer for [distributing] in a distribution system of digital contents concerning the 1-8th above-mentioned modes on a recording medium in which computer reading is possible, and enables it to distribute it.

[0018]

[Embodiment of the Invention]Hereafter, it explains based on the embodiment illustrating this invention. Drawing 1 is a block diagram showing the basic constitution of the distribution system of the digital contents concerning this embodiment. the big component of this distribution system comes out with the communication line 30 which connects both with the computer 10 for distribution which functions as a server, and the computer 20 for [distributing] which functions as a client.

[0019]According to this embodiment, the computer 10 for distribution is constituted by the computer for servers installed in the place of business of the distribution contractor of contents, and has a comparatively mass external storage. If this computer 10 for distribution is regarded as a functional block, it is constituted by the information accumulation means 11 and the information distribution means 12 as the graphic display. Two or more unit delivery information D is accumulated in the information accumulation means 11. Although the composition of this unit delivery information D is explained in full detail behind, in this distribution system, distribution which uses unit delivery information D as a mass of data will be performed. Specifically, this information accumulation means 11 is realized by external storages, such as a hard disk drive. On the other hand, the information distribution means 12 reads the predetermined unit delivery information D according to the demand from a user from the information accumulation means 11, and achieves the function which transmits this to the computer 20 for [distributing] via the communication line 30.

[0020]On the other hand, the computer 20 for [distributing] is constituted by the computer for clients installed in the basis of the general user who receives distribution of contents, and is actually realized by including software for exclusive use in a general-purpose personal computer. This computer 20 for [distributing] is

also shown as a functional block here, and is constituted by the information receiving means 21, the information registering means 22, the information retaining means 23, the information presenting means 24, and the information transmission means 25 as the graphic display.

[0021] It is received by the information receiving means 21 and the unit delivery information D transmitted via the communication line 30 is registered by the information registering means 22 to the information retaining means 23. In the information retaining means 23, the unit delivery information D of distributed a large number is saved in the form of a database so that it may mention later. Thus, the point that contents distribution is performed so that a database may be built in users' computer 20 for [distributing] is the 1st feature of this invention. In this way, a user is shown by the information presenting means 24 the contents in the unit delivery information D of a large number saved in the form of the database. This presentation history and a user's personal information are transmitted to the computer 10 side for distribution by the information transmission means 25 via the communication line 30 if needed. The information distribution means 12 receives the data transmitted from the information transmission means 25 with the function which transmits the unit delivery information D, and has the function to perform required processing.

[0022] Here, the example which connected the computer 10 for distribution and the computer 20 for [distributing] with the communications protocol of the Internet is shown as a general embodiment of this invention. Therefore, what is necessary is just to use the general dedicated line and telephone line which are used on the Internet as the communication line 30. Of course, the communication line 30 does not need to be a physical signal wire, and may use the wireless circuit using a satellite, etc. if needed. Although the state where the computer 10 for distribution and the computer 20 for [distributing] were connected to 1 to 1 is shown in drawing 1, In a actual system, it will be common to the one computer 10 for distribution that many computers 20 of a stand for [distributing] are connected, and, as for the computer 10 for distribution, contents will be distributed to two or more computers 20 for [distributing]. Of course, the system which installed two or more computers 10 for distribution may be constituted.

[0023] Although the system shown in drawing 1 has a function which transmits a presentation history and personal information to the computer 10 side for distribution by the information transmission means 25, when neither a presentation history nor personal information needs to be transmitted, it may omit the information transmission means 25. The arrow shown in drawing 1 between the arrow, and the information transmission means 25 and the information distribution means 12 which were shown between the information distribution means 12 and

the information receiving means 21, Notional information flows, such as the unit delivery information D, a presentation history, and personal information, are shown, and the flow of concrete data or a signal is not necessarily shown.

Therefore, actually between the information distribution means 12 and the information receiving means 21, Data and a signal will be exchanged bidirectionally and distribution of the unit delivery information D which a user wishes will be performed as the result, Also between the information transmission means 25 and the information distribution means 12, data and a signal will be exchanged bidirectionally and a presentation history and personal information will be transmitted as the result.

[0024]Then, the composition of each unit delivery information D is explained with reference to drawing 2. At this embodiment, each unit delivery information D comprises unit contents data, information for search, and information on three types called a utilization condition. The example of composition of these three types of information is shown in the chart of drawing 2.

[0025]Unit contents data should be called original delivery information which should be distributed as a mass of information, and comprises alphabetic data, image data, voice data, etc. When the contents used as a distribution object are news stories, When the contents which will comprise a mass of alphabetic data and serve as a distribution object are one photograph, unit contents data, Unit contents data will comprise image data of this photograph, and when the contents used as a distribution object are the 1st music of karaoke, unit contents data will comprise voice data of eye this music. Of course, the data about two or more photographs is not cared about as one unit contents data, and voice data of two or more music is not cared about as one unit contents data. Or it is good also considering the mixed data of a character, a picture, and a sound as one unit contents data. In short, the data which the distribution contractor considers to be a mass of distribution object will be dealt with as unit contents data.

[0026]On the other hand, the information for search is information used in order to search this unit contents data, for example, information, including the title of contents, a field, a keyword, the date of issue, etc., can use it as information for search. As mentioned above, the 1st feature of this invention is at the point that contents distribution is performed in the form that a database is built in users' computer 20 for [distributing]. The information for search turns into information used in order to search unit contents data in this database. While a distribution contractor examines the contents of unit contents data, it determines what kind of information is set up as information for search.

[0027]Utilization conditions are conditions which were set up in using this unit contents data, and become a utilization charge which should be paid to the

distribution contractor side when a user uses contents, and the information which restricts that usage pattern when using contents. As concrete restriction of a usage pattern, conditions, such as the number of times of print-out, the number of times of a copy, and a use term, can be set up, for example. About a utilization charge, it is also possible to perform simple setting out which determines only the remuneration which should be paid whenever distribution is performed, and it is also possible to set up a fine remuneration according to each usage pattern. The 2nd feature of this invention is that it could be made to perform offer of contents based on arbitrary utilization conditions by setting up the predetermined utilization condition beforehand for every unit contents data in this way.

[0028]Drawing 3 is a figure showing the example of the unit delivery information D. This example constitutes digital contents based on the information on the map of a specific area, and unit contents data comprises image data of a map like a graphic display, and alphabetic data relevant to this. In the distribution system of digital contents, the data which should be distributed essentially is this unit contents data, and it is also this unit contents data that a user uses directly. However, this invention adds the information for search, and a utilization condition to this unit contents data, forms a mass of unit delivery information D, and is made to perform distribution to a user in the form of this unit delivery information D. If the information for search is added to unit contents data, a database can be built now to users' system and the 1st feature of this invention mentioned above can be realized. If the utilization condition is added to unit contents data, the contents managing based on this utilization condition becomes possible, and the 2nd feature of this invention mentioned above can be realized.

[0029]the example shown in drawing 3 -- as the information for search -- a title, a field, and a keyword -- the date of issue -- four items are set up. That is, the character string which "Kita-Tsugaru-gun, Aomori map" Becomes as a title is set up, and it is shown that this unit contents data is a map of "Kita-Tsugaru-gun, Aomori." performing the classification with a layered structure as a field -- this example -- "society" -- the "geography" within a main class -- the "Japanese map" within an inside classification -- it is shown that it is a field belonging to a minor class. As a keyword, the character string "apple [Aomori, ***, Seikan Tunnel, and]" Becoming is set up, and the search based on these character strings is attained. The date which becomes as the date of issue on "April 1, 1998" is set up, and the search based on the date of issue is also attained.

[0030]on the other hand -- as a utilization condition -- the example of this drawing 3 -- a utilization charge, the number of times of print-out, the number of times of a copy, and use -- a term -- four items are set up. Namely, the rates which become "20 yen" as a utilization charge are made, the number of times of print-out -- the

number of times of "1 time (print-out of the 2nd henceforth is forbidden)", and a copy -- "0 times (a copy is forbidden)" and a use term -- "up to (the use after it is forbidden entirely) December 31, 1998" -- restriction is provided. Of course, as these setups show an example and said "10 yen per one print-out", or "the use on and after January 1, 1999 was half the sum", it is also possible to set up the utilization charge relevant to a usage pattern. Although the one unit delivery information D having contained the unit contents data of the title "Kita-Tsugaru-gun, Aomori map" Becoming was shown in drawing 3, In the information accumulation means 11 by the side of the computer 10 for distribution, many information on various fields including the unit delivery information D about such a map will be prepared.

[0031]Then, order is explained for operation procedures in case a user actually uses the system concerning this invention later on. First, a distribution contractor prepares the unit delivery information D as shown in drawing 3 in the information accumulation means 11 in large quantities. Usually, since a distribution contractor does the work which adds always new contents, the unit delivery information D within the information accumulation means 11 will increase gradually. In the case of contents as shown in a map, it is necessary to revise to a thing new at any time. Thus, although the distribution contractor needs to perform maintenance work to the unit delivery information D within the information accumulation means 11 at any time, the explanation about such maintenance work is omitted here.

[0032]Now, the information distribution means 12 performs processing which distributes suitably the unit delivery information D within the information accumulation means 11 to a predetermined user's computer 20 for [distributing]. If distribution what is called by pull art is performed, the information distribution means 12 should just perform processing which distributes the specific unit delivery information D which a user wishes at the time of the access, when there is access from the computer 20 for [distributing]. If each unit delivery information D is accumulated in the form of the database also into the information accumulation means 11, search based on the search condition presented by the user can be performed, and the hit unit delivery information D can be transmitted to the computer 20 for [distributing].

[0033]On the other hand, if distribution by a push technology is performed, the conditions of the digital contents which wish to distribute for each user of every, respectively will be defined beforehand. For example, if the subscription contract about the contents belonging to a specific genre and the contents containing a specific keyword is concluded with each user and employed, The information distribution means 12 searches the unit delivery information D within the information accumulation means 11 periodically, Processing which takes up the

digital contents included in the subscription range of each user as a distribution object is performed, What is necessary is to read automatically the unit delivery information containing the digital contents used as this distribution object from the information distribution means 12, and just to carry out processing which transmits this to the computer 20 of the user concerned for [distributing] automatically.

[0034]Here, a certain user will consider the case where definition subscription about the contents belonging to the genre a "Japanese map" is being carried out. In this case, the unit delivery information D containing the contents the "Kita-Tsugaru-gun, Aomori map" [which is shown in drawing 3] Becoming will be taken up, and it will be automatically transmitted to the computer 20 of the user concerned for [distributing]. Of course, in addition, much unit delivery information D of the contents belonging to the same genre will be transmitted. When the information distribution means 12 transmits the unit delivery information D, it may be made to add the data of a distribution day etc. to the information for search. For example, in the case of the example shown in drawing 3, the information on a distribution day other than the date of issue will be further added as information for search.

[0035]In this way, it is received by the information receiving means 21 and the unit delivery information D transmitted via the communication line 30 is given to the information registering means 22. The information registering means 22 performs processing which registers this unit delivery information D into the information retaining means 23 in the mode which can be searched based on the information for search. So to speak, this registration processing is processing which builds a database in the information retaining means 23, and the unit delivery information D will be stored in the information retaining means 23 as data which constitutes a database. Since the registration processing by this information registering means 22 continues at the reception by the information receiving means 21 and is performed automatically, the user does not need to do the work for registration in particular. If another word is carried out, before a user will be conscious, the distributed database of contents will be built in the information retaining means 23, and this database will be revised automatically [whenever distribution is performed].

[0036]Thus, the point that a database is automatically built in the information retaining means 23 is the 1st feature of this invention, and the merit that the contents which came to hand are efficiently manageable according to this feature is obtained. Namely, the user should just input a predetermined search condition to the information presenting means 24, when it is thought that the distributed contents will be used. For example, the contents the "Kita-Tsugaru-gun, Aomori map" "Seikan Tunnel" [which is shown in drawing 3 if the becoming keyword is

inputted as a search condition and search is tried] Becoming will hit. In this way, the information presenting means 24 searches the unit delivery information D within the information retaining means 23 based on the predetermined search condition inputted by the user, and performs processing which shows a user the unit contents data in the unit delivery information D which has the information for search corresponding to the inputted search condition.

[0037]However, presentation of unit contents data to a user is performed based on the utilization condition in the unit delivery information D. For example, since the conditioning "utilization-charge:20 yen" Becoming is made in the case of the example shown in drawing 3, on condition that a user consents to the payment of this utilization charge, presentation of unit contents data will be performed. While performing a fee indicator on a display screen, the selection button of "Yes/No" is displayed, and only when the "Yes" button is clicked, specifically, presentation should be made to be performed. As a presenting method (if another word is carried out usage pattern of contents) of unit contents data, 3 and the cage of the method of indicating by a display, the method of printing out, and the method of permitting a copy are set up in this example. If a user specifies a favorite usage pattern to the information presenting means 24, unit contents data will be shown so that use with the specified gestalt may be attained. For example, when a display display is specified, a map as shown in the drawing 3 left will be displayed on a display screen, When print-out is specified, this map will be outputted from a printer, and when a copy is specified, the image data and alphabetic data of this map will be copied to a desired medium.

[0038]Of course, the information presenting means 24 will refuse presentation processing which is contrary to the utilization condition set up about the unit contents data concerned. For example, when the information which restricts the number of times of print-out or a copy is set up as a utilization condition about unit contents data, the information presenting means 24 will refuse presentation of the unit contents data concerned to the usage pattern exceeding this restricted frequency. In the example shown in drawing 3, the number of times of print-out is restricted at once, and the number of times of the copy is restricted to 0 times. Therefore, when a user specifies the usage pattern of print-out, the information presenting means 24 records the number of times, and print-out of the 2nd henceforth will perform processing to refuse. When a user specifies the usage pattern of a copy, the information presenting means 24 will perform processing which refuses presentation by such a usage pattern. When similarly the information which restricts a use term is set up as a utilization condition about unit contents data, the information presenting means 24 will refuse presentation of the unit contents data concerned to the usage pattern exceeding this use term. In the

example shown in drawing 3, when the use term is restricted by December 31, 1998 and a utilization request occurs after this term, the information presenting means 24 will refuse presentation.

[0039]Although it differs from the example shown in drawing 3 a little, when setting out of "collecting the fee of 5 yen whenever it prints out once" is made as a utilization condition, for example, accounting becomes possible by transmitting a presentation history to the computer 10 side for distribution. That is, when the information presenting means 24 has a utilization request by the gestalt of print-out from a user, while showing contents by the usage pattern as a demand, the utilization history which shows "there was one use by the usage pattern of print-out" is transmitted to the information transmission means 25. The information transmission means 25 transmits this utilization history to the information distribution means 12 via the communication line 30. The information distribution means 12 can perform required accounting (for example, automatic draw-down processing from the bank account of the user concerned, etc.) based on this utilization history. Of course, it is equivalent even if it transmits the accounting information (information which should charge five cyclotomies in an above-mentioned example) itself to the information distribution means 12.

[0040]According to the embodiment of a graphic display, the information transmission means 25 also has the function which transmits the personal information which the user inputted to the computer 10 for distribution via the communication line 30. For example, what is necessary is to input personal information, such as a credit card number, to the information transmission means 25, and just to transmit this to the computer 10 side for distribution, when it seems that a user wants to settle the charged fee with a credit card. What is necessary is on the other hand, just to provide the function to receive such personal information and to perform required processings (for example, accounting to a credit account, etc.) in the information distribution means 12.

[0041]In order to restrict physically use by the user of each unit contents data based on the utilization condition in the unit delivery information D, It is necessary to constitute a system so that use by the user of the unit contents data currently held in the information retaining means 23 may become possible under the supervisor of the information presenting means 24 via the information presenting means 24. As already stated, it is practical to use a general-purpose personal computer as it is as the computer 20 for [distributing]. In this case, as the information retaining means 23, the magnetic disk drive for these general-purpose personal computers, etc. will be used as it is. Therefore, when it is in the situation which a user can access freely to the unit contents data stored in this magnetic disk drive, there is a possibility that the usage pattern based on a utilization condition

may not be secured effectually. Concerning [then,] the data stored in the portion which functions as the information retaining means 23 among the magnetic disk drives for these general-purpose personal computers, It is preferred to constitute so that right read-out may be possible, when it accesses via the information presenting means 24, or only when it accesses under the supervisor. Since it is the same, the unit delivery information D which received by the information receiving means 21 is received, It is preferred to consider so that the unit delivery information D which registration to the information retaining means 23 was promptly performed by the information registering means 22, made, and received cannot be stored in another recording medium etc. by an inaccurate means.

[0042]Practically the computer 20 for [distributing] concerning this invention, In the common personal computer incorporating general-purpose web browser software and general-purpose viewer software. If it realizes by adding plug-in software, helper application software, etc. which were created specially because of this invention operation, good cost performance will be obtained.

[0043]Hereafter, the concrete example of composition of the computer 20 for [distributing] is described. First, the information receiving means 21 in the computer 20 for [distributing] shown in drawing 1 can divert general-purpose web browser software, and can be realized. However, when general-purpose web browser software is used as it was, it becomes possible physically to download the unit delivery information D which received to the recording medium etc. which are out of the system of this system by an inaccurate means. Then, the helper application for registering into the information retaining means 23 the data which this general-purpose web browser software received as the information registering means 22 is prepared, What is necessary is just to have composition which this helper application starts automatically, when this general-purpose web browser software receives distribution of data from the computer 10 for distribution. Even when it had such composition and general-purpose web browser software is used as the information receiving means 21, the distributed data does not come out of the system of this system.

[0044]On the other hand, the information presenting means 24 can divert general-purpose viewer software, and can be realized. However, when general-purpose viewer software is used as it was, it becomes possible physically to read the unit delivery information D within the information retaining means 23 to the recording medium etc. which are out of the system of this system by an inaccurate means. Then, by incorporating plug-in software special to general-purpose viewer software, It is good to constitute the information presenting means 24, and to constitute so that access to the information retaining means 23 may be performed under that supervisor via this plug-in software. Thus, presentation of the contents

which observed the utilization condition which set beforehand processing of the display display by general-purpose viewer software, print-out, a data copy, etc. to making it also under management of this plug-in software or surveillance will be secured physically.

[0045]If it considers so that it may become the composition that the distributed unit delivery information D does not come out of the system of this system which consists of the information receiving means 21, the information registering means 22, the information retaining means 23, the information presenting means 24, and the information transmission means 25 after all, It becomes possible to realize the computer 20 for [distributing] using a general-purpose personal computer etc.

[0046]As mentioned above, although it explained based on one embodiment illustrating this invention, this invention is not limited to this embodiment and is feasible with various gestalten. For example, although unit contents data, the information for search, and three information on a utilization condition constituted the unit delivery information D from the example shown in drawing 2, the information and various certification information which show the copyright of contents, for example may be added in the unit delivery information D. When adding the information for search, and a utilization condition to unit contents data, it is also possible to perform processing embedded in contents data as invisible data using techniques, such as encryption. In this case, when registering by the information registering means 22, after extracting the information for search and utilization condition which were embedded, registration to the form of a database will be performed. Setting out of a utilization charge and setting out which charges only once at the time of distribution and serves as a single rate irrespective of the usage pattern after distribution, for example are possible. Of course, the contents which can be used by this invention are not limited to the map information shown in drawing 3, and can distribute the contents of all genres by the system concerning this invention.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a block diagram showing the basic constitution of the distribution system of the digital contents concerning one embodiment of this invention.

[Drawing 2]It is a figure showing the example of composition of the unit delivery information D in the system shown in drawing 1.

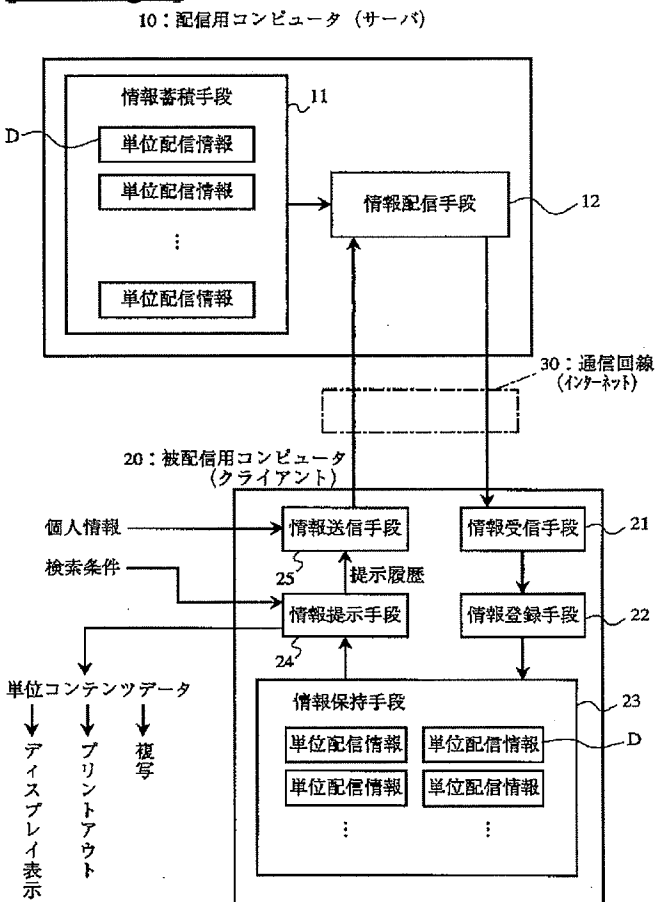
[Drawing 3]It is a figure showing the more concrete example of composition of the unit delivery information D in the system shown in drawing 1.

[Description of Notations]

- 10 -- Computer for distribution
- 11 -- Information accumulation means
- 12 -- Information distribution means
- 20 -- Computer for [distributing]
- 21 -- Information receiving means
- 22 -- Information registering means
- 23 -- Information retaining means
- 24 -- Information presenting means
- 25 -- Information transmission means
- 30 -- Communication line
- D -- Unit delivery information

DRAWINGS

[Drawing 1]



[Drawing 2]

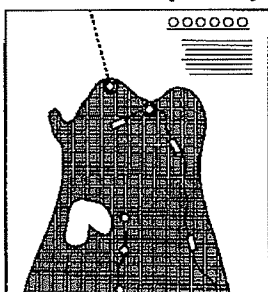
D：単位配信情報

| | |
|------------|-------------------------------|
| 単位コンテンツデータ | 文字データ、画像データ、音声データ |
| 検索用情報 | 題名、分野、キーワード、発行日 |
| 利用条件 | 利用料金、プリントアウト回数、 複写の回数、利用期限 |

[Drawing 3]

単位配信情報Dの具体例

◎単位コンテンツデータ (画像データ
文字データ)



◎検索用情報

題名：青森県北津軽郡マップ
分野：社会／地理／日本地図
キーワード：青森，龍飛，青函トンネル，リンゴ
発行日：1998年4月1日

◎利用条件

利用料金：20円
プリントアウト回数：1回
複写の回数：0回
利用期限：1998年12月31日まで

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] Especially this invention relates to the distribution system of the digital contents which can use desired contents with the gestalt of a database about the distribution system of digital contents.

[0002]

[Description of the Prior Art] By rapid progress of computer technology, all information, including text, picture information, and speech information, is used as digital contents, and is increasingly distributed via various recording media including CD-ROM. By the spread of the Internet, the technique of distributing digital contents with the on-line through a communication line can also be generalized, and the user can obtain various digital contents now on-line using a personal computer.

[0003] Thus, the service which provides various digital contents is also expanded as the environment where digital contents are accepted in the user side spreads. The contents which made the subject characters, such as an operations manual of various news, an interpretive article, stock quotations, and software, in the present,

The contents which made the subject the sound of the contents which made the picture of a photograph, pictures, etc. the subject, MIDI data, karaoke data, etc., And contents including programs, such as application software, utility software, plug-in software, and software for update, are provided on-line from various distribution contractors.

[0004]The system which distributes digital contents with on-line is usually constituted by the computer for distribution which functions as a server, and the computer for [distributing] which functions as a client. The computer for distribution is a computer which the distribution contractor side of contents installs.

The server computer generally provided with the mass memory measure is used. On the other hand, the computer for [distributing] is a computer which a general user installs.

It is common to use various personal computers.

Both computers are connected via various communication lines, and transmission and reception of data are performed based on a predetermined communications protocol. In the present, it is common to send and receive data using the protocol of the Internet, a user accesses a distribution contractor's Web page using a WWW browser, and the technique of downloading desired digital contents is used widely.

[0005]

[Problem(s) to be Solved by the Invention]If the distribution system of digital contents is used as mentioned above, each user at desired time at a desired place. Since desired information can be obtained and information can moreover be obtained in the form of digital data, it becomes possible to use with various gestalten by computer. However, the use kitchen of the distribution gestalt by the distribution system of the conventional digital contents is not necessarily good.

[0006]The 1st problem is a point that management of the contents which came to hand becomes complicated. Although distribution of the contents using the Internet was based on what is called pull art of the type with which the user side collects required data positively until now, It is expected that the thing what is called based on a push technology of the type which the distribution contractor side collects the data corresponding to the conditions beforehand shown from the user side, and distributes it positively becomes in use from now on. If distribution based on such a push technology is performed, even if there is no positive collection act of a user, on the other hand, distribution of contents will be performed on a target from the distribution contractor side, and a huge quantity of contents will be gradually accumulated in the computer for [distributing]. The distribution system of the conventional digital contents does not have the function to manage the huge contents accumulated in the computer for [distributing] in this way, but

management of contents must be performed in a user's own responsibility.

[0007]The 2nd problem is a point that the offer enterprise of contents based on arbitrary utilization conditions is difficult. The distribution contractor of contents needs to perform processing which charges the fee which balanced the usage pattern whenever the user used contents, since distribution business was performed as business. Although the usage pattern of a display display is permitted freely, It is to provide predetermined use restrictions of imposing number-of-times restrictions about the usage pattern of print-out, and it is to distribute on the conditions of collecting an ancillary charge about the usage pattern of print-out. Of course, although the duplicate acts of the distributed contents can be legally restricted based on the Copyright Act or a distribution contract, unless the physical limiting function in a distribution system works, effective restriction is not necessarily guaranteed. For this reason, in the conventional distribution gestalt, the actual condition is that the use restrictions based on the Copyright Act or a distribution contract are not functioning effectively.

[0008]Then, this invention can manage the contents which came to hand efficiently, and an object of this invention is to provide the distribution system of the digital contents in which the offer enterprise of contents based on arbitrary utilization conditions is possible moreover.

[0009]

[Means for Solving the Problem](1) The 1st mode of this invention from a computer for distribution which functions as a server. In a distribution system of digital contents which distribute digital contents to a computer for [distributing] which functions as a client via a communication line, Unit contents data which should be distributed as a mass of information, and information for search about this unit contents data, An information accumulation means which prepares two or more unit delivery information which has the information which shows a utilization condition about this unit contents data, and accumulates two or more unit delivery information in a computer for distribution, An information distribution means which reads predetermined unit delivery information according to a demand from a user from an information accumulation means, and transmits this to a computer for [distributing] via a communication line, An information retaining means which can hold two or more unit delivery information to ***** and a computer for [distributing], An information receiving means which receives unit delivery information transmitted via a communication line, Based on a predetermined search condition inputted by an information registering means which registers unit delivery information which received into an information retaining means in a mode which can be searched based on information for search, and user who receives distribution, unit delivery information within an information

retaining means is searched, An information presenting means which shows a user unit contents data in unit delivery information which has the information for search corresponding to a search condition based on the utilization condition, It is made to constitute so that use by a user of unit contents data currently held in ***** and an information retaining means may become possible under a supervisor of an information presenting means via an information presenting means.

[0010](2) In a distribution system of digital contents which require the 2nd mode of this invention for the 1st above-mentioned mode, An information transmission means which transmits personal information which a user inputted to a computer for distribution via a communication line is further provided in the computer side for [distributing], and a function to receive information transmitted to an information distribution means in a computer for distribution from this information transmission means is given.

[0011](3) In a distribution system of digital contents which require the 3rd mode of this invention for the 1st above-mentioned mode, An information transmission means which transmits a presentation history of contents data to a user by an information presenting means to a computer for distribution via a communication line, It provides in the computer side for [distributing] further, and a function to receive information transmitted to an information distribution means in a computer for distribution from this information transmission means is given.

[0012](4) In a distribution system of digital contents which require the 4th mode of this invention for the 1st above-mentioned mode, Conditions of digital contents which wish to distribute for each user of every, respectively are defined beforehand, Unit delivery information which contains digital contents corresponding to each user's distribution terms desired in an information distribution means is automatically read from an information accumulation means, and a function which transmits this to each user's computer for [distributing] automatically is given.

[0013](5) In a distribution system of digital contents which require the 5th mode of this invention for the 1-4th above-mentioned modes, Conditions about a utilization charge are set up as a utilization condition about unit contents data, and on condition that a user consents to payment of this utilization charge, presentation of the unit contents data concerned based on an information presenting means is made to be performed.

[0014](6) In a distribution system of digital contents which require the 6th mode of this invention for the 1-5th above-mentioned modes, As a utilization condition about unit contents data, conditions which restrict the number of times of print-out or a copy are set up, and an information presenting means refuses presentation of the unit contents data concerned to a usage pattern exceeding this restricted

frequency.

[0015](7) In a distribution system of digital contents which require the 7th mode of this invention for the 1-6th above-mentioned modes, Conditions which restrict a use term are set up as a utilization condition about unit contents data, and an information presenting means refuses presentation of the unit contents data concerned to a usage pattern exceeding this use term.

[0016](8) In a distribution system of digital contents which require the 8th mode of this invention for the 1-7th above-mentioned modes, It has a function which transmits unit delivery information obtained by performing processing which a computer for distribution enciphers information for search, or a utilization condition, and embeds to unit contents data, It is made to have the function to register after a computer for [distributing] extracts information for search or a utilization condition currently embedded at unit delivery information which received.

[0017](9) The 9th mode of this invention records a program for making it function as a computer for [distributing] in a distribution system of digital contents concerning the 1-8th above-mentioned modes on a recording medium in which computer reading is possible, and enables it to distribute it.

[0018]

[Embodiment of the Invention]Hereafter, it explains based on the embodiment illustrating this invention. Drawing 1 is a block diagram showing the basic constitution of the distribution system of the digital contents concerning this embodiment. the big component of this distribution system comes out with the communication line 30 which connects both with the computer 10 for distribution which functions as a server, and the computer 20 for [distributing] which functions as a client.

[0019]According to this embodiment, the computer 10 for distribution is constituted by the computer for servers installed in the place of business of the distribution contractor of contents, and has a comparatively mass external storage. If this computer 10 for distribution is regarded as a functional block, it is constituted by the information accumulation means 11 and the information distribution means 12 as the graphic display. Two or more unit delivery information D is accumulated in the information accumulation means 11. Although the composition of this unit delivery information D is explained in full detail behind, in this distribution system, distribution which uses unit delivery information D as a mass of data will be performed. Specifically, this information accumulation means 11 is realized by external storages, such as a hard disk drive. On the other hand, the information distribution means 12 reads the predetermined unit delivery information D according to the demand from a user from the

information accumulation means 11, and achieves the function which transmits this to the computer 20 for [distributing] via the communication line 30.

[0020]On the other hand, the computer 20 for [distributing] is constituted by the computer for clients installed in the basis of the general user who receives distribution of contents, and is actually realized by including software for exclusive use in a general-purpose personal computer. This computer 20 for [distributing] is also shown as a functional block here, and is constituted by the information receiving means 21, the information registering means 22, the information retaining means 23, the information presenting means 24, and the information transmission means 25 as the graphic display.

[0021]It is received by the information receiving means 21 and the unit delivery information D transmitted via the communication line 30 is registered by the information registering means 22 to the information retaining means 23. In the information retaining means 23, the unit delivery information D of distributed a large number is saved in the form of a database so that it may mention later. Thus, the point that contents distribution is performed so that a database may be built in users' computer 20 for [distributing] is the 1st feature of this invention. In this way, a user is shown by the information presenting means 24 the contents in the unit delivery information D of a large number saved in the form of the database. This presentation history and a user's personal information are transmitted to the computer 10 side for distribution by the information transmission means 25 via the communication line 30 if needed. The information distribution means 12 receives the data transmitted from the information transmission means 25 with the function which transmits the unit delivery information D, and has the function to perform required processing.

[0022]Here, the example which connected the computer 10 for distribution and the computer 20 for [distributing] with the communications protocol of the Internet is shown as a general embodiment of this invention. Therefore, what is necessary is just to use the general dedicated line and telephone line which are used on the Internet as the communication line 30. Of course, the communication line 30 does not need to be a physical signal wire, and may use the wireless circuit using a satellite, etc. if needed. Although the state where the computer 10 for distribution and the computer 20 for [distributing] were connected to 1 to 1 is shown in drawing 1, In a actual system, it will be common to the one computer 10 for distribution that many computers 20 of a stand for [distributing] are connected, and, as for the computer 10 for distribution, contents will be distributed to two or more computers 20 for [distributing]. Of course, the system which installed two or more computers 10 for distribution may be constituted.

[0023]Although the system shown in drawing 1 has a function which transmits a

presentation history and personal information to the computer 10 side for distribution by the information transmission means 25, when neither a presentation history nor personal information needs to be transmitted, it may omit the information transmission means 25. The arrow shown in drawing 1 between the arrow, and the information transmission means 25 and the information distribution means 12 which were shown between the information distribution means 12 and the information receiving means 21, Notional information flows, such as the unit delivery information D, a presentation history, and personal information, are shown, and the flow of concrete data or a signal is not necessarily shown. Therefore, actually between the information distribution means 12 and the information receiving means 21, Data and a signal will be exchanged bidirectionally and distribution of the unit delivery information D which a user wishes will be performed as the result, Also between the information transmission means 25 and the information distribution means 12, data and a signal will be exchanged bidirectionally and a presentation history and personal information will be transmitted as the result.

[0024]Then, the composition of each unit delivery information D is explained with reference to drawing 2. At this embodiment, each unit delivery information D comprises unit contents data, information for search, and information on three types called a utilization condition. The example of composition of these three types of information is shown in the chart of drawing 2.

[0025]Unit contents data should be called original delivery information which should be distributed as a mass of information, and comprises alphabetic data, image data, voice data, etc. When the contents used as a distribution object are news stories, When the contents which will comprise a mass of alphabetic data and serve as a distribution object are one photograph, unit contents data, Unit contents data will comprise image data of this photograph, and when the contents used as a distribution object are the 1st music of karaoke, unit contents data will comprise voice data of eye this music. Of course, the data about two or more photographs is not cared about as one unit contents data, and voice data of two or more music is not cared about as one unit contents data. Or it is good also considering the mixed data of a character, a picture, and a sound as one unit contents data. In short, the data which the distribution contractor considers to be a mass of distribution object will be dealt with as unit contents data.

[0026]On the other hand, the information for search is information used in order to search this unit contents data, for example, information, including the title of contents, a field, a keyword, the date of issue, etc., can use it as information for search. As mentioned above, the 1st feature of this invention is at the point that contents distribution is performed in the form that a database is built in users'

computer 20 for [distributing]. The information for search turns into information used in order to search unit contents data in this database. While a distribution contractor examines the contents of unit contents data, it determines what kind of information is set up as information for search.

[0027]Utilization conditions are conditions which were set up in using this unit contents data, and become a utilization charge which should be paid to the distribution contractor side when a user uses contents, and the information which restricts that usage pattern when using contents. As concrete restriction of a usage pattern, conditions, such as the number of times of print-out, the number of times of a copy, and a use term, can be set up, for example. About a utilization charge, it is also possible to perform simple setting out which determines only the remuneration which should be paid whenever distribution is performed, and it is also possible to set up a fine remuneration according to each usage pattern. The 2nd feature of this invention is that it could be made to perform offer of contents based on arbitrary utilization conditions by setting up the predetermined utilization condition beforehand for every unit contents data in this way.

[0028]Drawing 3 is a figure showing the example of the unit delivery information D. This example constitutes digital contents based on the information on the map of a specific area, and unit contents data comprises image data of a map like a graphic display, and alphabetic data relevant to this. In the distribution system of digital contents, the data which should be distributed essentially is this unit contents data, and it is also this unit contents data that a user uses directly. However, this invention adds the information for search, and a utilization condition to this unit contents data, forms a mass of unit delivery information D, and is made to perform distribution to a user in the form of this unit delivery information D. If the information for search is added to unit contents data, a database can be built now to users' system and the 1st feature of this invention mentioned above can be realized. If the utilization condition is added to unit contents data, the contents managing based on this utilization condition becomes possible, and the 2nd feature of this invention mentioned above can be realized.

[0029]the example shown in drawing 3 -- as the information for search -- a title, a field, and a keyword -- the date of issue -- four items are set up. That is, the character string which "Kita-Tsugaru-gun, Aomori map" Becomes as a title is set up, and it is shown that this unit contents data is a map of "Kita-Tsugaru-gun, Aomori." performing the classification with a layered structure as a field -- this example -- "society" -- the "geography" within a main class -- the "Japanese map" within an inside classification -- it is shown that it is a field belonging to a minor class. As a keyword, the character string "apple [Aomori, ****, Seikan Tunnel, and]" Becoming is set up, and the search based on these character strings is

attained. The date which becomes as the date of issue on "April 1, 1998" is set up, and the search based on the date of issue is also attained.

[0030]on the other hand -- as a utilization condition -- the example of this drawing 3-- a utilization charge, the number of times of print-out, the number of times of a copy, and use -- a term -- four items are set up. Namely, the rates which become "20 yen" as a utilization charge are made, the number of times of print-out -- the number of times of "1 time (print-out of the 2nd henceforth is forbidden)", and a copy -- "0 times (a copy is forbidden)" and a use term -- "up to (the use after it is forbidden entirely) December 31, 1998" -- restriction is provided. Of course, as these setups show an example and said "10 yen per one print-out", or "the use on and after January 1, 1999 was half the sum", it is also possible to set up the utilization charge relevant to a usage pattern. Although the one unit delivery information D having contained the unit contents data of the title "Kita-Tsugaru-gun, Aomori map" Becoming was shown in drawing 3, In the information accumulation means 11 by the side of the computer 10 for distribution, many information on various fields including the unit delivery information D about such a map will be prepared.

[0031]Then, order is explained for operation procedures in case a user actually uses the system concerning this invention later on. First, a distribution contractor prepares the unit delivery information D as shown in drawing 3 in the information accumulation means 11 in large quantities. Usually, since a distribution contractor does the work which adds always new contents, the unit delivery information D within the information accumulation means 11 will increase gradually. In the case of contents as shown in a map, it is necessary to revise to a thing new at any time. Thus, although the distribution contractor needs to perform maintenance work to the unit delivery information D within the information accumulation means 11 at any time, the explanation about such maintenance work is omitted here.

[0032]Now, the information distribution means 12 performs processing which distributes suitably the unit delivery information D within the information accumulation means 11 to a predetermined user's computer 20 for [distributing]. If distribution what is called by pull art is performed, the information distribution means 12 should just perform processing which distributes the specific unit delivery information D which a user wishes at the time of the access, when there is access from the computer 20 for [distributing]. If each unit delivery information D is accumulated in the form of the database also into the information accumulation means 11, search based on the search condition presented by the user can be performed, and the hit unit delivery information D can be transmitted to the computer 20 for [distributing].

[0033]On the other hand, if distribution by a push technology is performed, the

conditions of the digital contents which wish to distribute for each user of every, respectively will be defined beforehand. For example, if the subscription contract about the contents belonging to a specific genre and the contents containing a specific keyword is concluded with each user and employed, The information distribution means 12 searches the unit delivery information D within the information accumulation means 11 periodically, Processing which takes up the digital contents included in the subscription range of each user as a distribution object is performed, What is necessary is to read automatically the unit delivery information containing the digital contents used as this distribution object from the information distribution means 12, and just to carry out processing which transmits this to the computer 20 of the user concerned for [distributing] automatically. [0034]Here, a certain user will consider the case where definition subscription about the contents belonging to the genre a "Japanese map" is being carried out. In this case, the unit delivery information D containing the contents the "Kita-Tsugaru-gun, Aomori map" [which is shown in drawing 3] Becoming will be taken up, and it will be automatically transmitted to the computer 20 of the user concerned for [distributing]. Of course, in addition, much unit delivery information D of the contents belonging to the same genre will be transmitted. When the information distribution means 12 transmits the unit delivery information D, it may be made to add the data of a distribution day etc. to the information for search. For example, in the case of the example shown in drawing 3, the information on a distribution day other than the date of issue will be further added as information for search.

[0035]In this way, it is received by the information receiving means 21 and the unit delivery information D transmitted via the communication line 30 is given to the information registering means 22. The information registering means 22 performs processing which registers this unit delivery information D into the information retaining means 23 in the mode which can be searched based on the information for search. So to speak, this registration processing is processing which builds a database in the information retaining means 23, and the unit delivery information D will be stored in the information retaining means 23 as data which constitutes a database. Since the registration processing by this information registering means 22 continues at the reception by the information receiving means 21 and is performed automatically, the user does not need to do the work for registration in particular. If another word is carried out, before a user will be conscious, the distributed database of contents will be built in the information retaining means 23, and this database will be revised automatically [whenever distribution is performed].

[0036]Thus, the point that a database is automatically built in the information

retaining means 23 is the 1st feature of this invention, and the merit that the contents which came to hand are efficiently manageable according to this feature is obtained. Namely, the user should just input a predetermined search condition to the information presenting means 24, when it is thought that the distributed contents will be used. For example, the contents the "Kita-Tsugaru-gun, Aomori map" "Seikan Tunnel" [which is shown in drawing 3 if the becoming keyword is inputted as a search condition and search is tried] Becoming will hit. In this way, the information presenting means 24 searches the unit delivery information D within the information retaining means 23 based on the predetermined search condition inputted by the user, and performs processing which shows a user the unit contents data in the unit delivery information D which has the information for search corresponding to the inputted search condition.

[0037]However, presentation of unit contents data to a user is performed based on the utilization condition in the unit delivery information D. For example, since the conditioning "utilization-charge:20 yen" Becoming is made in the case of the example shown in drawing 3, on condition that a user consents to the payment of this utilization charge, presentation of unit contents data will be performed. While performing a fee indicator on a display screen, the selection button of "Yes/No" is displayed, and only when the "Yes" button is clicked, specifically, presentation should be made to be performed. As a presenting method (if another word is carried out usage pattern of contents) of unit contents data, 3 and the cage of the method of indicating by a display, the method of printing out, and the method of permitting a copy are set up in this example. If a user specifies a favorite usage pattern to the information presenting means 24, unit contents data will be shown so that use with the specified gestalt may be attained. For example, when a display display is specified, a map as shown in the drawing 3 left will be displayed on a display screen, When print-out is specified, this map will be outputted from a printer, and when a copy is specified, the image data and alphabetic data of this map will be copied to a desired medium.

[0038]Of course, the information presenting means 24 will refuse presentation processing which is contrary to the utilization condition set up about the unit contents data concerned. For example, when the information which restricts the number of times of print-out or a copy is set up as a utilization condition about unit contents data, the information presenting means 24 will refuse presentation of the unit contents data concerned to the usage pattern exceeding this restricted frequency. In the example shown in drawing 3, the number of times of print-out is restricted at once, and the number of times of the copy is restricted to 0 times. Therefore, when a user specifies the usage pattern of print-out, the information presenting means 24 records the number of times, and print-out of the 2nd

henceforth will perform processing to refuse. When a user specifies the usage pattern of a copy, the information presenting means 24 will perform processing which refuses presentation by such a usage pattern. When similarly the information which restricts a use term is set up as a utilization condition about unit contents data, the information presenting means 24 will refuse presentation of the unit contents data concerned to the usage pattern exceeding this use term. In the example shown in drawing 3, when the use term is restricted by December 31, 1998 and a utilization request occurs after this term, the information presenting means 24 will refuse presentation.

[0039]Although it differs from the example shown in drawing 3 a little, when setting out of "collecting the fee of 5 yen whenever it prints out once" is made as a utilization condition, for example, accounting becomes possible by transmitting a presentation history to the computer 10 side for distribution. That is, when the information presenting means 24 has a utilization request by the gestalt of print-out from a user, while showing contents by the usage pattern as a demand, the utilization history which shows "there was one use by the usage pattern of print-out" is transmitted to the information transmission means 25. The information transmission means 25 transmits this utilization history to the information distribution means 12 via the communication line 30. The information distribution means 12 can perform required accounting (for example, automatic draw-down processing from the bank account of the user concerned, etc.) based on this utilization history. Of course, it is equivalent even if it transmits the accounting information (information which should charge five cyclotomies in an above-mentioned example) itself to the information distribution means 12.

[0040]According to the embodiment of a graphic display, the information transmission means 25 also has the function which transmits the personal information which the user inputted to the computer 10 for distribution via the communication line 30. For example, what is necessary is to input personal information, such as a credit card number, to the information transmission means 25, and just to transmit this to the computer 10 side for distribution, when it seems that a user wants to settle the charged fee with a credit card. What is necessary is on the other hand, just to provide the function to receive such personal information and to perform required processings (for example, accounting to a credit account, etc.) in the information distribution means 12.

[0041]In order to restrict physically use by the user of each unit contents data based on the utilization condition in the unit delivery information D, It is necessary to constitute a system so that use by the user of the unit contents data currently held in the information retaining means 23 may become possible under the supervisor of the information presenting means 24 via the information presenting

means 24. As already stated, it is practical to use a general-purpose personal computer as it is as the computer 20 for [distributing]. In this case, as the information retaining means 23, the magnetic disk drive for these general-purpose personal computers, etc. will be used as it is. Therefore, when it is in the situation which a user can access freely to the unit contents data stored in this magnetic disk drive, there is a possibility that the usage pattern based on a utilization condition may not be secured effectually. Concerning [then,] the data stored in the portion which functions as the information retaining means 23 among the magnetic disk drives for these general-purpose personal computers, It is preferred to constitute so that right read-out may be possible, when it accesses via the information presenting means 24, or only when it accesses under the supervisor. Since it is the same, the unit delivery information D which received by the information receiving means 21 is received, It is preferred to consider so that the unit delivery information D which registration to the information retaining means 23 was promptly performed by the information registering means 22, made, and received cannot be stored in another recording medium etc. by an inaccurate means.

[0042]Practically the computer 20 for [distributing] concerning this invention, In the common personal computer incorporating general-purpose web browser software and general-purpose viewer software. If it realizes by adding plug-in software, helper application software, etc. which were created specially because of this invention operation, good cost performance will be obtained.

[0043]Hereafter, the concrete example of composition of the computer 20 for [distributing] is described. First, the information receiving means 21 in the computer 20 for [distributing] shown in drawing 1 can divert general-purpose web browser software, and can be realized. However, when general-purpose web browser software is used as it was, it becomes possible physically to download the unit delivery information D which received to the recording medium etc. which are out of the system of this system by an inaccurate means. Then, the helper application for registering into the information retaining means 23 the data which this general-purpose web browser software received as the information registering means 22 is prepared, What is necessary is just to have composition which this helper application starts automatically, when this general-purpose web browser software receives distribution of data from the computer 10 for distribution. Even when it had such composition and general-purpose web browser software is used as the information receiving means 21, the distributed data does not come out of the system of this system.

[0044]On the other hand, the information presenting means 24 can divert general-purpose viewer software, and can be realized. However, when general-purpose viewer software is used as it was, it becomes possible physically to read the unit

delivery information D within the information retaining means 23 to the recording medium etc. which are out of the system of this system by an inaccurate means. Then, by incorporating plug-in software special to general-purpose viewer software, It is good to constitute the information presenting means 24, and to constitute so that access to the information retaining means 23 may be performed under that supervisor via this plug-in software. Thus, presentation of the contents which observed the utilization condition which set beforehand processing of the display display by general-purpose viewer software, print-out, a data copy, etc. to making it also under management of this plug-in software or surveillance will be secured physically.

[0045]If it considers so that it may become the composition that the distributed unit delivery information D does not come out of the system of this system which consists of the information receiving means 21, the information registering means 22, the information retaining means 23, the information presenting means 24, and the information transmission means 25 after all, It becomes possible to realize the computer 20 for [distributing] using a general-purpose personal computer etc.

[0046]As mentioned above, although it explained based on one embodiment illustrating this invention, this invention is not limited to this embodiment and is feasible with various gestalten. For example, although unit contents data, the information for search, and three information on a utilization condition constituted the unit delivery information D from the example shown in drawing 2, the information and various certification information which show the copyright of contents, for example may be added in the unit delivery information D. When adding the information for search, and a utilization condition to unit contents data, it is also possible to perform processing embedded in contents data as invisible data using techniques, such as encryption. In this case, when registering by the information registering means 22, after extracting the information for search and utilization condition which were embedded, registration to the form of a database will be performed. Setting out of a utilization charge and setting out which charges only once at the time of distribution and serves as a single rate irrespective of the usage pattern after distribution, for example are possible. Of course, the contents which can be used by this invention are not limited to the map information shown in drawing 3, and can distribute the contents of all genres by the system concerning this invention.

[0047]

[Effect of the Invention]Storing the distributed contents in the form of a database, and having enabled it to show this based on a predetermined utilization condition according to the distribution system of the digital contents which start this invention as above A sake, The contents which came to hand can be managed

efficiently and, moreover, the offer enterprise of contents based on arbitrary utilization conditions becomes possible.

CLAIMS

[Claim(s)]

[Claim 1] From a computer for distribution which functions as a server, to a computer for [distributing] which functions as a client. Unit contents data which is a system which distributes digital contents via a communication line, and should be distributed as a mass of information, Information for search about said unit contents data, and information which shows a utilization condition about said unit contents data, An information accumulation means which prepares two or more unit delivery information which ****, and accumulates said two or more unit delivery information in said computer for distribution, An information distribution means which reads predetermined unit delivery information according to a demand from a user from said information accumulation means, and transmits this to said computer for [distributing] via said communication line, An information retaining means which can hold two or more unit delivery information to ***** and said computer for [distributing], An information receiving means which receives unit delivery information transmitted via said communication line, Based on a predetermined search condition inputted by an information registering means which registers unit delivery information which received into said information retaining means in a mode which can be searched based on information for search, and user who receives distribution, unit delivery information within said information retaining means is searched, An information presenting means which shows a user unit contents data in unit delivery information which has the information for search corresponding to said search condition based on the utilization condition, A distribution system of digital contents constituting so that use by a user of unit contents data currently held in ***** and said information retaining means may become possible under a supervisor of said information presenting means via said information presenting means.

[Claim 2] An information transmission means which transmits personal information which a user inputted to a computer for distribution via a communication line in the system according to claim 1, A distribution system of digital contents with which it provides in a computer for [distributing] further, and an information distribution means in a computer for distribution is characterized by making it have the function to receive information transmitted from this information transmission

means.

[Claim 3]In the system according to claim 1, an information transmission means which transmits a presentation history of contents data to a user by an information presenting means to a computer for distribution via a communication line, A distribution system of digital contents with which it provides in a computer for [distributing] further, and an information distribution means in a computer for distribution is characterized by making it have the function to receive information transmitted from this information transmission means.

[Claim 4]In the system according to claim 1, conditions of digital contents which wish to distribute for each user of every, respectively are defined beforehand, A distribution system of digital contents having a function for which an information distribution means reads automatically unit delivery information containing digital contents corresponding to said conditions from an information accumulation means, and transmits this to each user's computer for [distributing] automatically.

[Claim 5]In the system according to any one of claims 1 to 4, as a utilization condition about unit contents data, A distribution system of digital contents on condition that conditions about a utilization charge are set up and a user consents to payment of this utilization charge, wherein presentation of the unit contents data concerned based on an information presenting means is performed.

[Claim 6]In the system according to any one of claims 1 to 5, as a utilization condition about unit contents data, A distribution system of digital contents refusing presentation of the unit contents data concerned to a usage pattern in which conditions which restrict the number of times of print-out or a copy are set, and an information presenting means exceeds said restricted frequency.

[Claim 7]In the system according to any one of claims 1 to 6, as a utilization condition about unit contents data, A distribution system of digital contents refusing presentation of the unit contents data concerned to a usage pattern in which conditions which restrict a use term are set and an information presenting means exceeds said use term.

[Claim 8]In the system according to any one of claims 1 to 7, a computer for distribution, It has a function which transmits unit delivery information obtained by performing processing which enciphers information for search, or a utilization condition, and is embedded to unit contents data, A distribution system of digital contents with which a computer for [distributing] is characterized by having the function to register after extracting information for search or a utilization condition currently embedded at unit delivery information which received.

[Claim 9]A recording medium which recorded a program for making it function on

a computer as a computer for [distributing] in the system according to any one of claims 1 to 8 and in which computer reading is possible.

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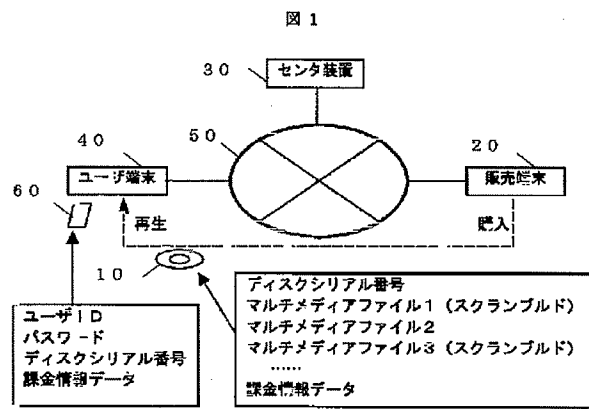
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(54)【発明の名称】 オフラインデータの課金制御方法および装置

(57)【要約】

【課題】データの取得時間とデータの利用時間が異なるオフラインデータ利用システムにおいて、課金や再生の制限方法を、データの販売後に変更する。

【解決手段】販売端末、センタ装置、ユーザ端末からなるオフラインデータ受配信システムにおいて、販売端末で販売時点での課金方法を記録した課金制御データをセンタ装置に記憶するとともに販売するデータに付加し、ユーザ端末でデータの再生に際して、センタ装置から新たな課金制御データをユーザ端末に通知する。また、販売端末またはユーザ端末において、センタ装置内の課金制御データを変更可能とする。



【特許請求の範囲】

【請求項1】 ユーザ端末においてユーザ端末の外部からデータを取得して利用するデータのオフライン配信システムにおいて、

該ユーザ端末が該データを取得する以前に該データに対して設定された該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を、該ユーザ端末が該データを取得した後で変更可能とする利用制限方法変更手段と、

ユーザ端末において該データを利用する際に、該データに対して設定された利用を制限する方法を基に該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項2】 通信回線によって互いに接続可能なセンタ装置とユーザ端末からなるデータのオフライン配信システムにおいて、

前記データと該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データをセンタ装置からユーザ端末に配信する手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項3】 通信回線によって互いに接続可能なユーザ端末と販売端末からなるデータのオフライン配信システムにおいて、

前記販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項4】 通信回線によって互いに接続可能なユーザ端末、センタ装置、および販売端末からなるデータのオフライン配信システムにおいて、

販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

ユーザ端末において、センタ装置に記録されている該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を変更する再生制限方法変更手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項5】 通信回線によって互いに接続可能なユーザ端末、センタ装置、および販売端末からなるデータのオフライン配信システムにおいて、

販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

センタ装置または販売端末において、センタ装置に記録されている該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を変更する再生制限方法変更手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項6】 請求項1、2、3、4、5において、該利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御方法。

【請求項7】 請求項1、2、3、4、5において、該利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）の販売価格あたりの単位をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御方法。

【請求項8】 請求項1、2、3、4、5において、該利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）の回数または時間あたりの販売価格をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御方法。

【請求項9】 請求項1、2、3、4、5において、同一の記憶媒体に複数のデータを格納し、該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）をデータ毎に違うものとす

ることが可能な手段を設けたことを特徴とするオフラインデータの課金制御方法。

【請求項10】請求項1、2、3、4、5において、同一の記憶媒体に複数のデータを格納し、該各データについて、該データ利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）を記述したことを特徴とするオフラインデータの課金制御方法。

【請求項11】請求項1、2、3、4、5において、該データの利用を制限する複数の方法の中から一つを選択可能としたオフラインデータの課金制御方法。

【請求項12】ユーザ端末においてユーザ端末の外部からデータを取得して利用するデータのオフライン配信システムにおいて、

該ユーザ端末が該データを取得する以前に該データに対して設定された該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を、該ユーザ端末が該データを取得した後で変更可能とする利用制限方法変更手段と、

ユーザ端末において該データを利用する際に、該データに対して設定された利用を制限する方法を基に該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御装置。

【請求項13】通信回線によって互いに接続可能なセンタ装置とユーザ端末からなるデータのオフライン配信システムにおいて、

前記データと該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データをセンタ装置からユーザ端末に配信する手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御装置。

【請求項14】通信回線によって互いに接続可能なユーザ端末と販売端末からなるデータのオフライン配信システムにおいて、

前記販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制

御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御装置。

【請求項15】通信回線によって互いに接続可能なユーザ端末、センタ装置、および販売端末からなるデータのオフライン配信システムにおいて、

販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

ユーザ端末において、センタ装置に記録されている該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を変更する再生制限方法変更手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御装置。

【請求項16】通信回線によって互いに接続可能なユーザ端末、センタ装置、および販売端末からなるデータのオフライン配信システムにおいて、

販売端末において、前記データに該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を記述した課金制御データを付加するデータ販売手段と、

センタ装置または販売端末において、センタ装置に記録されている該データの利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する）を変更する再生制限方法変更手段と、

ユーザ端末がセンタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御装置。

【請求項17】請求項12、13、14、15において、

該利用を制限する方法（累積再生回数、累積再生時間、再生期間、または再生可能部分）をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御装置。

【請求項18】請求項12、13、14、15において、

該利用を制限する方法（累積再生回数、累積再生時間、

再生期間、または再生可能部分)の販売価格あたりの単位をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御装置。

【請求項19】請求項12、13、14、15において、

該利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分)の回数または時間あたりの販売価格をユーザ毎に変更する手段を設けたことを特徴とするオフラインデータの課金制御装置。

【請求項20】請求項12、13、14、15において、

同一の記憶媒体に複数のデータを格納し、該データの利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分)をデータ毎に違うものとすることが可能な手段を設けたことを特徴とするオフラインデータの課金制御装置。

【請求項21】請求項12、13、14、15において、

同一の記憶媒体に複数のデータを格納し、該各データについて、該データ利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分)を記述したことを特徴とするオフラインデータの課金制御装置。

【請求項22】請求項12、13、14、15において、

該データの利用を制限する複数の方法の中から一つを選択可能としたオフラインデータの課金制御装置。

【請求項23】通信回線によって互いに接続可能なユーザ端末と販売端末からなるデータのオフライン配信システムにおいて、

前記販売端末において、前記データの利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する)を記述した課金制御データを記憶メディアに記憶するデータ販売手段と、ユーザ端末において該データを利用する際に、記憶メディア内の該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項24】通信回線によって互いに接続可能なユーザ端末と販売端末からなるデータのオフライン配信システムにおいて、

前記販売端末において、前記データに該データの利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する)を付加するデータ販売手段と、

ユーザ端末が該データに付加されている課金制御データの指示によって、センタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【請求項25】通信回線によって互いに接続可能なユーザ端末と販売端末からなるデータのオフライン配信システムにおいて、

前記販売端末において、前記データの利用を制限する方法(累積再生回数、累積再生時間、再生期間、または再生可能部分を規定する)を記述した課金制御データを記憶メディアに記憶するデータ販売手段と、

ユーザ端末が該記憶メディア内の課金制御データの指示によって、センタ装置から該データに関する再生を制限する方法に関する情報を取得し、再生判断手段で用いる新たな課金制御データとする課金制御データ更新手段と、

ユーザ端末において該データを利用する際に、該課金制御データを用いて該データの利用が許される否かを判断する再生判断手段とからなることを特徴とするオフラインデータの課金制御方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、オフラインデータの課金制御方法および装置に関する。

【0002】

【従来の技術】文献調査、会社信用調査等のDB(Data Base)の利用に始まったデータのオンライン利用では、近年、インターネット、通信カラオケ、VOD(Video on Demand)等、多種多様なデータが取り扱われるようになり、また、そのデータは数百バイトのテキストデータから数百メガバイトの映像データへと大容量化が進んでいる。一方、通信回線の伝送速度も数百bpsから数メガbpsへと高速化が進んでいるが、映像データを始めたデータの大容量化には追いついていない。そこで、特願平9-255389号に記載されているように、大容量の映像データはCD、DVDを始めとした光ディスク等の大容量メディアに記録して予めユーザに販売または配布し、その利用の可否、データの購入等の制御のみを利用時に通信を介して行う方法が利用されはじめている。この場合のデータに対する課金は、予め決められた基準、つまり利用時間、利用回数等を基に行われるのが一般的である。しかも、そのようなデータの配信サービスにおいて単一の課金基準が用いられる。

【0003】また、このようなデータのオフライン利用は、光ディスク等のメディアに格納して配信する場合だけでなく、文字放送や衛星を用いて映像をホテルの映像サーバへ配信する等、データを端末装置内に蓄積し、後で利用する形態もある。これは、伝送容量の少ない通信回線を介して更新頻度の少ない大容量データを送ることだけが目的でなく、夜間等の通信回線のトラフィックが

少ない時間帯の利用、料金が低額な時間帯の利用、トラフィックや通信料金を考慮したデータの計画的配信・受信に適したデータのオフライン利用等、様々な目的がある。

【0004】

【発明が解決しようとする課題】本発明の目的は、以下の問題点を解決することにある。

【0005】(1)多様な課金形態の実現が困難

利用するデータ本体を光ディスク等のオフラインメディアに記録して予めユーザに配るサービスの場合、オフラインメディアであるが故に、利用時期やユーザの状況(ユーザの差別化)に応じたデータの利用時点での課金、課金方法の変更が困難であった。

【0006】近年、様々な製品、サービスの販売は、し烈な販売競争を通して、様々な形態で提供されるようになった。特に利用金額や重要度に応じた顧客の差別化は、預金量の多い顧客における銀行手数料の無料化や、利用回数、距離の多い航空顧客における無料航空券の提供などで著しい。映画等の映像データの販売においても同一の傾向が予想される。

【0007】しかし、特にVCRカセットテープ、CD、DVD等のオフラインメディアにおいては、従来、データに対する課金の基準として、CD等のメディア単位または映画、曲等のデータ単位、利用可能なデータの部分単位、そして、その利用時間、利用時期、利用回数が用いられていた。しかし、それらの基準はサービス毎に固定であり、ユーザの累積利用時間、累積利用回数、会員クラスの変更、キャンペーン期間)等によって課金方法(再生時間、再生回数等の基準またはその単価)を変えることが困難であった。

【0008】(2)完全な売切り形態の実現が困難

販売に伴うユーザの個人情報の保護に最も効果的方法は、現金決済による商品の即時渡りであり、販売先となるユーザを特定不可能とすることにある。成人向け商品等、一部のサービスにおいては、ユーザを特定不可能とした場合のほうが、良好な販売実績を得られる場合がある。しかし、メディア内の一部データを販売する上記従来文献に記載されているようなオフラインメディアでは、顧客の管理が必須となるため、ユーザを不特定とした販売が困難であった。

【0009】本発明の目的は、これらの問題を解決することにある。

【0010】

【課題を解決するための手段】メディアまたはデータを販売する販売端末、販売されたメディアまたはデータ、販売先のユーザ、及び課金の形態を記憶するセンタ装置、および販売されたメディアまたはデータの再生(利用)をユーザが行うユーザ端末からなるオフラインデータ受配信システムにおいて、以下の手段を設ける。

【0011】センタ装置に記憶され、販売端末において

販売したデータの販売時点での課金方法を記録した第1の課金制御データ。

【0012】メディアまたはデータに付加され、メディアまたはデータの再生に必要な処理を規定する第2の課金制御データ。

【0013】センタ装置からユーザ端末に通知され、メディアまたはデータの再生に必要な処理を規定する第3の課金制御データ。

【0014】販売したメディアまたはデータを唯一に特定するデータ識別子、販売先のユーザを唯一に特定するユーザID、及び第1の課金制御データをセンタ装置へ登録し、第2の課金制御データをメディアまたはデータに付加する販売端末装置。

【0015】販売したメディアまたはデータを唯一に特定するデータ識別子と、販売先のユーザを唯一に特定するユーザIDと、該メディアまたはデータに付加された第2の課金制御データの対応関係を記憶し、かつ、ユーザ端末からの要求に基づき、第3の課金制御データをユーザ端末に送信するセンタ装置。

【0016】データまたはメディアに付加された第2の課金制御データに基づき、センタ装置からの第3の課金制御データを取得し、第2および第3の課金制御データに基づいたデータまたはメディアの再生(取得)を行うユーザ端末。

【0017】

【発明の実施の形態】本発明のオフラインデータ受配信システムにおける一実施例であるマルチメディアデータ販売システムに関して説明する。

【0018】(システム構成)マルチメディアデータ販売システムのシステム構成に関して図1を用いて説明する。10は販売する一つ以上のマルチメディアデータを格納したDVDである。20はDVD10を販売する際に販売したDVD10の情報やそのDVDを購入したユーザの情報を入力する販売端末である。30は販売されたDVD10やそのユーザの情報を記憶し、販売端末20、ユーザ端末40を管理するセンタ装置である。40はDVD10を購入したユーザがDVD10内に格納されたマルチメディアデータを再生(DVDから読み出し、利用)する端末である。DVD10には、マルチメディアデータを格納したファイルや、スクランブル化されたそれらマルチメディアデータの再生を制御する課金制御データ等が格納される。また、DVD10はディスクシリアル番号によって唯一に特定できる。10は、本実施例ではDVDであるが、記憶メディアであれば、半導体メモリ、磁気ディスク、光磁気ディスク、有機体メモリ等何であってもよい。販売端末20、センタ装置30、ユーザ端末40は互いに通信回線50で接続されている。60はユーザカードであり、ユーザの認証に必要なユーザIDとパスワード、DVD10内のデータの再生に必要な課金制御データが記録される。なお、図1で

はセンタ装置30を設けたが、DVD10の販売を販売側のみで管理する場合は、センタ装置30と販売端末20が一体となった構成も可能である。

【0019】(販売端末)販売端末の概要について図2を用いて説明する。

【0020】販売端末20には、バーコードリーダ201、タッチパネル式顧客側ディスプレイ202、販売員側ディスプレイ203、販売員キーボード204、ICカードリーダライタ205、プリンタ206、DVDドライブ207が備えられている。また、販売端末20本体は、これらの周辺機器201~206を制御する入出力制御部208、販売端末20内の様々な処理を行う処理部209、処理に際して様々なデータを記憶する記憶装置211、センタ装置30との通信を行う通信制御部210がある。

【0021】販売端末20では、DVDを唯一に特定するDVDのシリアル番号、購入者を唯一に特定するユーザID、該DVD内に格納されているデータの内その時点で販売されたデータを特定するデータIDを入力してセンタ装置30へ送信し、センタ装置30から各データの販売価格を受信してディスプレイ202に表示する。そして、顧客に購入するデータを選択させ、その販売結果をセンタ装置30に送信し、登録する。DVDのシリアル番号の入力はDVD本体または該DVDのパッケージに記録されたバーコード印刷をバーコードリーダ201により読み取ることにより行う。また、DVDドライブ207を販売端末に設け、DVDの再生によりDVD上に光学または磁気記録された該DVDのシリアル番号を読み取ることも可能である。

【0022】ユーザは、ICカードリーダライタ205にユーザカード60をセットすることで、該ユーザカード内に記録されているユーザIDを販売端末20へ入力する。また、ユーザは、顧客側ディスプレイ202において、購入するデータを選択する。販売端末20は、DVD内の販売されたデータをユーザ端末40で再生するための後に説明する課金制御データ500をセンタ装置30から取得し、ICカードリーダライタ205にセットされているユーザカード60に記録する。なお、ユーザがデータの購入に際してユーザカード60を携帯していない場合は、キーボード204によるユーザIDの入力、プリンタ206による課金制御データ500の印刷が可能である。なお、データの購入に際して、ユーザIDの入力は必須では無く、その場合、不特定ユーザとして取り扱われる。

【0023】また、DVD-RAMディスクが用いられる場合は、販売端末20のDVDドライブ207にDVD-RAMディスクを接続し、課金制御コード500をDVDに直接記録することが可能である。購入に際して、ユーザから販売側への料金を支払う場合は、即時現金決済、または、ユーザIDに基づいた当該ユーザ

へのクレジットカード決済等が利用される。

【0024】(ユーザ端末)ユーザ端末の概要について図3を用いて説明する。

【0025】ユーザ端末40は、DVDドライブ407、ICカードリーダライタ402、ディスプレイ403、キーボード404が備えられている。また、ユーザ端末40本体は、これらの周辺機器401~407を制御する入出力制御部408、ユーザ端末40内の様々な処理を行う処理部409、様々な処理に関わるデータを記憶する記憶装置411、センタ装置との通信を行う通信制御部410がある。

【0026】ユーザ端末40では、ユーザがユーザカード60をICカードリーダライタ402にセットすることにより、ユーザカード60内のユーザID、パスワード、課金制御データがユーザ端末40に入力される。そして、ユーザがキーボード404からユーザパスワードを入力し、該パスワードがユーザカード60内のパスワードと一致したならば、同じくユーザカード60内の課金制御データに従ってDVD10内のユーザが購入したデータの再生が可能となる。なお、ユーザがデータの再生に際してユーザカード60を携帯していない場合は、キーボード404によるユーザID、パスワード、課金制御データの入力が可能である。

【0027】また、ユーザが既に所持しているDVD10内の未購入のデータを新たに購入する場合、センタ装置30へ新たな課金制御データ500を要求することにより、ユーザ端末40で該課金制御データ500に従って、新たなデータの再生が可能となる。

【0028】なお、購入に際して、ユーザから販売側への料金を支払いする場合は、ユーザIDに基づいた当該ユーザから販売端末IDを用いた販売側へのクレジットカード決済等が利用される。

【0029】(センタ装置)センタ装置の概要について図4を用いて説明するセンタ装置30は、ディスプレイ303、管理者キーボード304が備えられている。また、センタ装置30本体は、これらの周辺機器303、304を制御する入出力制御部308、センタ装置30内の様々な処理を行う処理部309、販売端末20、ユーザ端末40との通信を行う通信制御部310、様々な処理や各ユーザ端末40、販売端末20、DVD10に関わるデータ、購入者、販売者の情報を記憶するDB311がある。

【0030】センタ装置30は、DVDを唯一に特定するDVDのシリアル番号、購入者を唯一に特定するユーザID、該DVD内に格納されているデータの内その時点で販売されたデータを特定するデータ番号、及び該データが販売された販売端末20を特定する販売端末ID等を販売端末20から通信制御部308を介して受信し、DB部311に記憶する。また、ユーザの購入実績やキャンペーン期間等の条件に従ってデータの販売価格

を計算し、販売端末20またはユーザ端末40へ提供する。

【0031】また、センタ装置30は、ユーザ端末40からの要求により、新たな課金制御データを生成し、該ユーザ端末40へ送信することにより、ユーザ端末40で該新たな課金制御データに対応する新たなデータの再生が可能となる。

【0032】(課金制御データ) 課金制御データについて図5を用いて説明する。

【0033】課金制御データは、ユーザの購入形態(購入したデータの特典、再生回数等の制限)に従ってDVDの再生を制限する。

【0034】課金制御データ500には、DVDを唯一に特定するディスクシリアル番号510、該DVDを購入したユーザを唯一に特定するユーザID520、該DVDを販売した販売端末を唯一に特定する販売端末ID530、ユーザ端末を唯一に特定するユーザ端末ID521、及びユーザが購入したデータのデータ番号541やそのファイル名、データの内容を説明するコメント543、該各データに対応する再生制限方法(累積再生回数 累積再生時間、再生可能時間、再生可能期間)544~547が記述されている。再生の制限を累積再生回数で行う場合は累積再生回数制限値544が、累積再生時間で行う場合は累積再生時間制限値545が、再生可能時間で行う場合は再生可能時間制限値546が、再生可能期間で行う場合は再生可能開始年月日時547aと再生可能終了年月日時が547bが記述される。なお、541~548のデータはDVD10内に格納されている各データ毎に記述されている。また、課金制御データ500は各DVD10毎に記憶されている。

【0035】課金制御データ500で、当該DVDまたはデータにセンタ制御548が指定されている場合は、ユーザ端末40でのデータの再生に際してセンタ装置30への接続が必須となる。

【0036】なお、この課金制御データ500は特定のキーコードで解除可能な形で暗号化され、DVD10またはユーザカード60に記録される。また、この課金制御データ500は図5に示したようにレコード形式で記述する場合以外に、プログラミング言語のようなスクリプト形式で記述することも考えられる。

【0037】なお、本実施例ではDVD内のデータの識別にデータ番号を用いているが、ファイル名を用いても良い。

【0038】(ユーザカード) ユーザカード60について図6を用いて説明する。

【0039】ユーザカード60には、ICカード、磁気カード等の記録再生メディアが用いられる。ユーザカード60には、ユーザを唯一に特定するユーザID611、該ユーザの認証を行うためのパスワード612、該ユーザカードの有効期限613、ディスクシリアル番号

620、課金制御データ640を記憶する。ディスクシリアル番号620は、ユーザカード60にどのDVD10の課金制御データ640が記録されているかを識別するためのものであり、一枚のユーザカード60の一つ以上のDVDに関する情報620、640を記憶可能である。課金制御データ640の内容に関しては、図5で説明した課金制御データ500と同等である。

【0040】(ユーザ管理ファイル) ユーザ管理ファイル700について図7を用いて説明する。

【0041】ユーザ管理ファイル700は、センタ装置30のDB311に格納され、ユーザIDとパスワードの対応関係や、各DVD毎の購入形態を各ユーザ別に記録するものである。ユーザ管理ファイル700の内容および構造711~747は図6に示したユーザカード600内のデータ構造が、複数、つまりユーザ毎710に格納された形となっている。但し、データの販売価格をユーザ別に変えるなどユーザを差別化したクラスを示すユーザクラス714が格納されている。

【0042】(データ販売ファイル) データ販売ファイル750について図8を用いて説明する。

【0043】データ販売ファイル750は、センタ装置30のDB311に格納され、DVD10内に記録されている各データの価格を記憶する。データ販売ファイル750は、ディスクシリアル番号760、データ番号771、ファイル名782、および各再生制限方法(累積再生回数 累積再生時間、再生可能時間、再生可能期間)の単価784~787がユーザクラス(A、B、C、D)別に記録される。

【0044】なお、データ販売ファイルは、販売端末20がセンタ装置30とオフラインでデータの販売を行えるように、販売端末20の記憶装置211内にも格納される場合がある。

【0045】(購入データ選択画面) 購入データ選択画面について図9を用いて説明する。

【0046】購入データ選択画面800は、販売端末20において、ユーザがDVD内の購入するデータを選択するための画面である。購入選択画面800には、ユーザが購入しようとするDVD10内の各データについて、データ番号810、データ名820、各データの購入形態830、購入予定金額の合計840が表示される。各データの購入形態830は、購入可能な各再生制限方法(累積再生回数 累積再生時間、再生可能時間、再生可能期間)について、その単価831と、ユーザが入力する購入単位832と、そのデータの購入金額833が表示される。なお、データ名には該データのファイル名が用いられる。

【0047】(契約変更画面) 契約変更画面900について図10を用いて説明する。

【0048】契約変更画面900は、ユーザ端末40において、ユーザが所有しているDVD10内の未購入デ

ータを新規に購入したり、購入済のデータの購入形態を変更する時、つまりそのDVDに関する契約形態を変更する場合に用いる。契約変更画面900には、ユーザが購入しようとするDVD10内の各データについて、データ番号910、データ名920、各データの購入形態930、購入予定金額の合計940が表示される。各データの購入形態930は、購入可能な各再生制限方法（累積再生回数 累積再生時間、再生可能時間、再生可能期間）について、その単価931と、購入済の単位932と、そのデータの購入金額933が表示される。なお、購入済の単位932に新たな購入単位を入力すること、または、別の再生制限方法の購入単位932に入力することにより契約の変更を行う。そして、購入予定金額の合計940に、変更前の購入金額と変更後の購入金額の差額が表示される。購入単位を減らしたりした場合には、合計金額がマイナスとなり、ユーザが払い戻しを受けることも可能である。

【0049】なお、この契約変更画面900は、販売端末20における課金情報データ変更画面としても用いられる。

【0050】（販売価格変更画面）販売価格変更画面4001、4002について図11、図12を用いて説明する。

【0051】販売価格変更画面4001、4002は、販売端末20において、特定のDVD10内のデータの販売価格を変更するために用いる。まず、販売員は、販売価格変更画面1（4001）を用いて自分の販売員としてのユーザID4011とパスワード4012、および販売価格を変更するDVD10のディスクシリアル番号4013を入力する。次に販売価格変更画面2（4002）を用いて、各データの販売価格の変更を行う。販売価格変更画面2（4002）には、販売価格を変更しようとするDVD10内の各データについて、データ番号4010、データ名4020、各データの購入形態4030、ディスクシリアル番号4050が表示される。各データの購入形態4030は、そのディスクに関して販売可能な各再生制限方法（累積再生回数 累積再生時間、再生可能時間、再生可能期間）について、その変更前の単価4031を表示し、変更後の単価4032を入力する。各データの販売可能な再生制限方法は、特定の操作により、追加、削除が可能である。

【0052】（ユーザクラス変更画面）ユーザクラス変更画面4101、4102について図13、図14を用いて説明する。

【0053】ユーザクラス変更画面4101、4102は、販売端末20において、特定のユーザのユーザクラスを変更するために用いる。まず、販売員は、ユーザクラス変更画面1（4101）を用いて自分の販売員としてのユーザID4111とパスワード4112、およびユーザクラスを変更するユーザのユーザIDを入力す

る。次にユーザクラス変更画面2（4102）を用いて、当該ユーザのユーザクラスの変更を行う。ユーザクラス変更画面2（4102）には、ユーザクラスを変更しようとするユーザのユーザID4114と当該ユーザの現在のユーザクラス4115が表示され、変更後のユーザクラス4116を入力する。

【0054】（再生データ選択画面）再生データ選択画面5000について図15を用いて説明する。

【0055】再生データ選択画面5000は、ユーザがユーザ端末40において再生しようとするデータを選択するために用いる。データ番号5010、データ名5020、各データの購入形態5030が表示される。各データの購入形態5030には、購入した再生制限方法（累積再生回数 累積再生時間、再生可能時間、再生可能期間）5031と、その購入済の単位の内、その時点で利用可能な残っている単位5032が表示される。なお、データ名には該データのファイル名が用いられ、データの選択はデータ番号の入力5033により行う。

【0056】次に、以上で述べたシステム構成、データ構造、画面仕様を用いた本実施例における各処理について説明する。

【0057】（販売端末の処理）

（1）販売処理

販売端末の販売処理について図16を用いて説明する。

【0058】販売端末20におけるDVD10の販売に伴う処理は以下の手順で行う。

【0059】販売処理1000は、販売処理開始キーが入力されると、顧客側ディスプレイ装置202に購入者へユーザカード60をカードリーダ205へセットする要求メッセージを表示し（1002）、ユーザカード60に格納されているユーザID611、パスワード612、有効期限613を読み出す（1003）。次に、顧客側ディスプレイ装置202に購入者へパスワードの入力を要求するメッセージを表示し（1004）、パスワードの入力を受け付ける（1005）。そして、ユーザカード60から読み出したパスワード612との一致を検査する（1006）。

【0060】顧客からユーザカード60が提示されない場合は、顧客側ディスプレイ装置202に購入者へユーザIDの入力を要求するメッセージを表示し（1030）、ユーザIDの入力を受け付ける（1031）。次に、顧客側ディスプレイ装置202に購入者へパスワードの入力を要求するメッセージを表示し（1041）、パスワードの入力を受け付ける（1042）。そして、センタ装置30に入力された該ユーザIDとパスワードを送信し（1032）、センタ装置30において、センタ装置30のユーザ管理ファイル700に登録されているユーザID711とパスワード712の対応関係の一致を検査し、その結果をセンタ装置30から販売端末20へ送信する（1033）。

【0061】そして、ユーザIDとパスワードの対応が不一致ならば、顧客側ディスプレイ装置202にパスワードが不一致であるメッセージを表示する(1007)。なお、ユーザIDを持たない場合は、ユーザIDとして“9999”を入力することにより、不特定ユーザとして取り扱われる。不特定ユーザとしての扱いは、該データを購入了た該ユーザの事実を追跡不可能にし、該ユーザの個人情報を保護することができる。

【0062】パスワードが一致したならば、販売処理1000は、販売員側ディスプレイ装置203にDVD10のDVDドライブ207へのセットを要求するメッセージを表示し(1020a)、DVDのディスクシリアル番号を読み取る(1021a)。販売端末20にDVDドライブ207が無い場合は(1034)、バーコードリーダ201やキーボード204を用いた入力により、DVD10のシリアル番号を入力する(1021b)。

【0063】そして、センタ装置30へ販売端末を特定する販売端末ID、購入者が入力したユーザID、DVDドライブ207にセットされているDVDのシリアル番号を送信し(1008)、センタ装置30から各データの購入形態別の販売金額を受信する(1009)。そして、顧客側ディスプレイ装置202に、図9に示した購入するデータの番号と各データの購入形態の入力を要求する購入データ選択画面800を、DVD10に格納されている各データの名称820、各購入形態の販売金額831の販売金額の一覧表として表示し(1010)、データ番号810及び購入形態830の入力を受け付ける(1011)。データ番号と購入形態の入力は、終了が指示されるまで行われ、入力が行われるとともに購入予定金額が選択したデータの販売価格の合計840として表示される。センタ装置30に販売金額を問い合わせるのは、ユーザの購入実績、販売者の販売実績、販売地域、販売促進期間等によって販売金額が異なる場合があるからである。

【0064】なお、販売金額をセンタ装置30へ問い合わせない場合(オフライン処理)は(1035)、販売端末40内の記憶装置211に記憶されているデータ販売ファイル750から各データの販売金額を検索し(1013)、各データの名称、各購入形態の販売金額の一覧表として表示する(1010)。

【0065】次に、顧客が購入したデータのデータ番号、購入形態をセンタ装置30へ送信する(1015)。そして、センタ装置30から販売した各データの購入形態に従って生成され、暗号化された課金制御データ500を受信し(1016)、DVD10に記録する(1018)。DVD10に記録できない場合は、暗号化され課金制御データ500をユーザカードに記録する(1020)。さらに、ユーザカードに記録できない場合またはユーザがユーザカードを持っていない場合は、

販売端末のプリンタ装置206を用いて暗号化された課金制御データ500の印刷を行う(1022)。

【0066】(2)販売価格変更処理

販売端末20における販売価格変更処理について図17を用いて説明する。

【0067】販売価格変更処理1100は、販売価格変更処理開始キーが入力されると、販売員側ディスプレイ装置203に販売者のユーザID、パスワード、及びDVDのディスクシリアル番号の入力を要求する図11に示した販売価格変更画面1(4001)を表示し(1101)、バーコードリーダ201やキーボード204を用いた入力により、DVD10のディスクシリアル番号を入力する(1102)。

【0068】そして、センタ装置30へ販売端末ID、ユーザID、パスワード、及びDVDのシリアル番号を送信する(1103)。センタ装置30では、センタ装置30のユーザ管理ファイル700に登録されている販売員のユーザID711とパスワード712の対応関係の一致を検査し、その結果をセンタ装置30から販売端末20へ送信する。販売価格変更処理1100は、そのパスワードの一致検査結果を受信し(1104)、ユーザIDとパスワードの対応関係が不一致ならば、販売員側ディスプレイ装置202にパスワードが不一致であるメッセージを表示する(1105)。パスワードが一致したならば、センタ装置30から変更前における各データの購入形態別の販売金額を受信する(1106)。そして、販売員側ディスプレイ装置203に販売価格変更の入力を要求する図12に示した販売価格変更画面2(4002)を、DVD10に格納されている各データの名称4020、各購入形態4030別の変更前の販売金額4031の一覧表として表示し(1107)、変更後の販売金額4032の入力を受け付ける(1108)。入力は終了が指示されるまで行われる。次に、センタ装置30へ変更後における各データの購入形態別の販売金額を送信する(1109)。センタ装置30では、受信した各データの購入形態別の販売金額へデータ販売ファイル750の内容を更新する(3406)。

【0069】(3)ユーザクラス変更処理

販売端末20におけるユーザクラス変更処理について図18を用いて説明する。

【0070】ユーザクラス変更処理1200は、ユーザクラス変更処理開始キーが入力されると、販売員側ディスプレイ装置203に販売者のユーザID、パスワード、及びユーザクラスを変更するユーザのユーザIDの入力を要求する図13に示すユーザクラス変更画面1(4101)を表示し(1201)、それら4111~4113の入力を行う(1202)。そして、センタ装置30へ販売端末ID、ユーザID、パスワード、変更対象のユーザIDを送信する(1203)。センタ装置30では、センタ装置30のユーザ管理ファイル700

に登録されている販売員のユーザID711とパスワード712の対応関係の一致を検査し、その結果をセンタ装置30から販売端末20へ送信する。ユーザクラス変更処理1200は、そのユーザIDとパスワードの一致検査結果を受信し(1204)、ユーザIDとパスワードの対応関係が不一致ならば、販売員側ディスプレイ203にパスワードが不一致であるメッセージを表示する(1205)。パスワードが一致したならば、センタ装置30から変更前における当該ユーザのユーザクラスを受信し(1206)、販売員側ディスプレイ装置203にユーザクラスの変更の入力を要求する図14に示すユーザクラス変更画面2(4102)を表示し(1207)、新しいユーザクラス4116の入力を受け付ける(1208)。次に、センタ装置30へ変更後における各ユーザのユーザIDと新しいユーザクラスを送信する(1209)。センタ装置30では、ユーザ管理ファイル700において、受信したユーザID711のユーザクラス714を更新する。

【0071】(4) 課金情報データ変更処理

販売端末20における課金情報データ変更について図19を用いて説明する。

【0072】課金制御データ500において、センタ制御548が指定されている場合は、ユーザ端末40におけるデータの再生に際して、センタ装置30への接続が必須となる。販売者、データの提供者が、そのデータの再生に必要な条件、つまり課金制御データ500を必要に応じて変更したい場合に指定される。センタ装置30のDB311に登録されている課金制御データ500を変更する指示は、販売端末20において行われる。

【0073】課金情報データ変更処理1300は、課金情報データ変更処理開始キーが入力されると、販売員側ディスプレイ装置203に販売員のユーザID、パスワードの入力を要求するメッセージを表示し(1301)、それらの入力を行う(1302)。そして、センタ装置30へ販売端末ID、ユーザID、パスワードを送信する(1303)。センタ装置30では、センタ装置30のDB311のユーザ管理ファイル700に登録されている販売員のユーザID711とパスワード712の対応関係の一致を検査し、その結果をセンタ装置30から販売端末20へ送信する。課金制御データ変更処理1300は、ユーザIDとパスワードの一致検査結果を受信し(1304)、ユーザIDとパスワードの対応関係が不一致ならば、販売員側ディスプレイ203にパスワードが不一致であるメッセージを表示する(1305)。パスワードが一致したならば、センタ装置30から変更前における当該ユーザの課金制御データを受信し(1306)、販売員側ディスプレイ装置203に再生制限方法(累積再生回数 累積再生時間、再生可能時間、再生可能期間、販売後経過時間)の変更の入力を要求する図10に示した契約変更画面900を表示し(1

307)、新しい再生制限方法の入力を受け付ける(1308)。入力は終了が指示されるまで行われる。次に、センタ装置30へ変更後における再生制限方法を送信する(1309)。センタ装置30では、受信したユーザIDに関して新しい再生制限方法に基づいた課金制御データ500を生成し、当該ユーザのユーザ管理ファイル700の課金制御データデータ740を更新する。

【0074】(ユーザ端末の処理)

(1) 再生処理

ユーザ端末における再生処理について図20を用いて説明する。

【0075】ユーザ端末処理1500は、DVDドライブ407にDVD10がセットされると、DVD10に記憶されている課金制御データ500を読み出し(1501)、ユーザ端末40の記憶装置411内の課金制御データ500として記憶する(1502)。そして、DVD10に格納されている各データのデータ番号、データ名称、再生制限方法(残りの再生可能回数、再生可能時間等、無制限等)の一覧表と、再生するデータの番号の入力を要求する再生データ選択画面5000をディスプレイ403に表示する(1503)。再生するデータの番号5033がユーザにより入力されると(1504)、該番号で指定されたデータが再生可能か否かを記憶装置411に記憶された課金制御データ(累積再生回数制限値、累積再生時間制限値、再生可能時間制限値、再生可能開始年月日時と再生可能終了年月日時、再生可能終了日時)500に基づいて検査する(1505)。再生可能である場合には、該データをスクランブル解除キーを用いてデコードし、再生を行う(1507)。また、同時に記憶装置411内の課金制御データ500の書き換えを行う(1508)。そして、DVD10のDVDドライブ407からの取り出しが指示されたならば、記憶装置411内の課金制御データ500をDVD10内の課金制御データ500に書き込み(1512)、DVD10の課金制御データの更新を行う。

【0076】なお、DVD10が書き換え可能のDVD-RAMでなく、書き換えが行えないDVD-ROMの場合、課金制御データ500はユーザカード60に記憶されている。よって、上述の処理1501~1512のDVD10からの課金制御データ500の読み出し、書き込みはユーザカード60に対するものに置き換えられる。

【0077】課金制御データ500において、データにセンタ制御548が指定されている場合は、ユーザ端末40におけるデータの再生に際して、センタ装置30への接続が必須となる。販売者、データの提供者が、データの購入形態、販売価格を必要に応じて変更したい場合に指定される。つまり、ユーザ端末処理1500はセンタ装置にユーザIDと端末IDを送信し(1509)、それらのユーザIDと端末IDに対応するその時点での

課金制御データ500をセンタ装置30内のユーザ管理ファイル700に格納されている課金制御データ740から取得し、記憶装置411に記憶する(1510)。そして、その課金制御データ500に基づき、再生の判断を行う(1505)。

【0078】データの再生制限を累積再生回数で行う場合は累積再生回数制限値を検査し、0でない場合に再生可能となり、再生開始によって、デクリメントする。

【0079】データの再生制限を累積再生時間で行う場合は累積再生時間制限値を検査し、0分でない場合に再生可能となり、再生開始後、毎分毎にデクリメントする。

【0080】データの再生制限を再生可能時間で行う場合は、データの先頭からの再生ポイントが再生可能時間制限値に至るまで再生可能となる。この場合、再生可能時間制限値の書き換えは行わない。

【0081】データの再生制限を再生可能期間で行う場合は再生可能開始年月日時と再生可能終了年月日時を検査し、再生時が再生可能開始年月日時と再生可能終了年月日時の間に含まれる場合は再生可能となる。

【0082】データの再生制限を販売後経過時間で行う場合は再生時が再生可能終了日時以前の場合は再生可能となる。

【0083】(2) 契約変更処理
ユーザ端末における契約変更処理について図21を用いて説明する。

【0084】ユーザ端末40において、DVD10内のデータの内、未購入のデータの追加購入、購入形態の変更(再生制限方法の変更)がユーザにより指示されたならば、ユーザ端末40は契約変更処理1600を行う。契約変更処理1600は、販売端末20における販売処理と類似の処理を行う。

【0085】契約変更処理1600は、契約変更キーが入力されると、ディスプレイ403にユーザカードのカードリーダーへのセットを要求するメッセージを表示し(1602)、ユーザカードに格納されているユーザID、パスワード、有効期限を読み出す(1603)。

【0086】次に、顧客側ディスプレイ装置202に購入者へパスワードの入力を要求するメッセージを表示し(1604)、パスワードの入力を受け付ける(1605)。そして、ユーザカード60から読み出したパスワード612との一致を検査する(1006)。

【0087】顧客からユーザカード60が提示されない場合は、顧客側ディスプレイ装置202に購入者へユーザIDの入力を要求するメッセージを表示し(1630)、ユーザIDの入力を受け付ける(1631)。次に、顧客側ディスプレイ装置202に購入者へパスワードの入力を要求するメッセージを表示し(1641)、パスワードの入力を受け付ける(1642)。そして、センタ装置30に入力された該ユーザIDとパスワード

を送信し(1032)、センタ装置30において、センタ装置30のユーザ管理ファイル700に登録されているユーザID711とパスワード712の対応関係の一致を検査し、その結果をセンタ装置30から販売端末20へ送信する(1633)。

【0088】そして、ユーザIDとパスワードの対応関係が一致したならば、ディスプレイ403にDVD10のDVDドライブ407へのセットを要求するメッセージを表示し(1620)、DVD10のディスクシリアル番号を読み取る(1621)。そして、センタ装置30へユーザ端末ID、入力されたユーザID、DVDドライブ407にセットされているDVD10のディスクシリアル番号または該DVD10に格納されているデータのデータ番号、課金制御データ500に記憶されている購入者のユーザID520、販売端末ID530を送信し(1608)、センタ装置30のDB311に格納されているデータ販売ファイル750から各データの購入形態別の販売金額を受信する(1609)。そして、ディスプレイ403に購入するデータの番号と各データの購入形態の入力を要求する図10に示す契約変更画面900を、DVD10に格納されている各データの名称920、各購入形態の販売金額(購入済の購入形態との差額)の一覧表930として表示し(1610)、データ番号910と購入形態932の入力を受け付ける(1611)。データ番号と購入形態の入力は、終了が指示されるまで行われ、入力が行われるとともに予定金額940が表示される(2510)。次に、購入したデータのデータ番号、購入形態をセンタ装置30へ送信する(1615)。そして、センタ装置30では、販売した各データとその購入形態に従って課金制御データ500を生成し(1616)、暗号化し(1617)、ユーザ端末40のDVDドライブ407にセットされているDVD10に記録する(1618)。DVD10に記録できない場合は、暗号化された課金制御データ500をユーザカード60に記録する(1620)。さらに、ユーザカード60に記録できない場合またはユーザがユーザカードを所持していない場合は、プリンタ406を用いて暗号化された課金情報データの印刷を行う(1622)。

【0089】(センタ装置の処理) 上述した販売端末20、ユーザ端末40の各処理1000~1600に関わるセンタ装置30の各処理について説明する。

【0090】(1) パスワード検査
センタ装置30のパスワード検査処理について図22を用いて説明する。

【0091】パスワード検査処理3100は、ユーザ端末20または販売端末40からパスワード検査のためのユーザIDとパスワードを受信すると(3101)、ユーザ管理ファイル700に格納されているユーザID711とパスワード712の対応関係の一致を検査し(3

102)、一致または不一致の結果を示すメッセージをユーザ端末20または販売端末40へ返信する(3103)。

【0092】(2) 販売処理

センタ装置30の販売処理について図23を用いて説明する。

【0093】販売処理3200は、販売端末ID、購入者が販売端末で入力したユーザID、販売端末40のDVDドライブ407にセットされているDVD10のディスクシリアル番号または該DVD10に格納されているデータのデータ番号を販売端末40から受信すると(3201)、まずユーザ管理ファイル700を読み出し、受信したユーザIDを持つユーザのユーザクラス(A、B、C、D)714を取得する(3202)。次に、データ販売テーブル750を検査し、受信したDVD10のディスクシリアル番号または各データデータ番号に対応する販売価格を取得する(3203)。販売価格は、ユーザクラスに該当する購入形態別に取得し、販売端末40に送信する(3204)。そして、販売端末40から、購入されたデータ番号とその購入形態を受信したならば(3205)、販売した各データの購入形態に従って課金制御データ500を生成し(3206)、暗号化して(3207)、販売端末40へ返信する(3208)。また、該生成した課金制御データをユーザ管理ファイル700の課金制御データ740として登録する(3209)。

(3) 契約変更処理

センタ装置30の契約変更処理について図24を用いて説明する。

【0094】販売処理3300は、ユーザ端末ID、ユーザがユーザ端末40で入力したユーザID、ユーザ端末40のDVDドライブ407にセットされているDVD10のディスクシリアル番号または該DVD10に格納されているデータのデータ番号、変更前の各データの購入形態、課金制御データ500に記憶されている購入者のユーザID520、販売端末ID530をユーザ端末40から受信すると(3301)、まずユーザ管理ファイル700を読み出し、受信したユーザIDを持つユーザのユーザクラス(A、B、C、D)714を取得する(3302)。次に、データ販売テーブル750を検査し、受信したDVD10のディスクシリアル番号のDVDに含まれるデータの一つ以上のデータ番号、または、受信したデータ番号の各データの販売価格を取得する(3303)。販売価格は、ユーザクラスに該当する購入形態別に取得し、変更前の購入形態との販売価格の差額を計算して(3304)、ユーザ端末へ送信する(3305)。

【0095】(4) 販売価格変更処理

センタ装置30の販売価格変更処理について図25を用いて説明する。

【0096】販売価格変更処理3400は、販売端末40から、販売端末ID、ユーザID、パスワード、及びDVD10のディスクシリアル番号を受信すると(3401)、DB311に格納されているユーザ管理ファイル700を用いて販売員のユーザID711とパスワード712の対応関係の一致を検査し(3402)、その結果を販売端末20へ送信する(3403)。パスワードが一致したならば、データ販売ファイル750を読み出し、販売端末40へ変更前における各データの購入形態別の販売金額を送信する(3404)。次に、販売端末40から変更後における各データの購入形態別の販売金額を受信する(3405)。そして、受信した各データの購入形態別の販売金額へデータ販売ファイル750を更新する(3406)。

【0097】(5) ユーザクラス変更処理

センタ装置30のユーザクラス変更処理について図26を用いて説明する。

【0098】ユーザクラス変更処理3500は、販売端末40から、販売端末ID、ユーザID、パスワード、及び変更するユーザのユーザクラスを受信すると(3501)、DB311に格納されているユーザ管理ファイル700を用いて販売員のユーザIDとパスワードの対応関係の一致を検査し(3502)、その結果を販売端末40へ送信する(3503)。パスワードが一致したならば、販売端末40へ変更前におけるユーザのユーザクラス714を送信する(3504)。次に、販売端末40から変更後における各ユーザのユーザIDとユーザクラスを受信し(3505)、ユーザ管理ファイル700のユーザクラス714を更新する(3406)。

【0099】(6) 課金制御データ変更

センタ装置30の課金制御データ変更処理について図27を用いて説明する。

【0100】課金制御データ500において、センタ制御748が指定されている場合は、ユーザ端末20におけるデータの再生に際して、センタ装置30への接続が必須となる。販売者、データの提供者が、そのデータの再生に必要な条件、つまり課金制御データを必要に応じて変更したい場合に指定される。

【0101】課金制御データ変更処理3600は、販売端末40から課金制御データ500の更新要求として、ユーザID、ディスクシリアル番号、新たな再生制限方法(累積再生回数 累積再生時間、再生可能時間、再生可能期間)を受信すると(3601)、DB311に格納されているユーザ管理ファイル700を用いて販売員のユーザIDとパスワードの対応関係の一致を検査し(3602)、その結果を販売端末40へ送信する(3603)。パスワードが一致したならば、当該再生制限方法に基づいて新たな課金制御データ500を生々し、DB311に登録されているユーザ管理ファイル700を読み出し、受信したユーザID711とディスクシリ

アル720番号に対応する課金制御データ740を書き換える。

【0102】(ユーザクラスにより再生制限方法を変更する実施例) 上述の実施例では、ユーザクラスによりユーザに対するデータの販売価格を変更したが、ユーザクラスにより、販売単価に対する再生制限方法の単位(再生回数、再生時間、再生可能期間)を変える実施例も考えられる。この場合、ユーザクラスの変更を行うと、購入した再生制限方法の単位を後で変更することができる。

【0103】(データ放送での実施例) 上述の実施例では物理的な記憶メディアであるDVDを購入者が運び、自分のユーザ端末にセットして再生するオフラインデータ配信の一形態について示した。しかし、データ放送、衛星を用いた映像データのホテル映像サーバへ配信等、オンラインでセンタ装置からユーザ端末にデータを配信してユーザ端末内に一端蓄積し、後で再生、利用するシステムについても同等に適用できる。

【0104】

【発明の効果】本発明では、データの取得時間とデータの利用時間が異なるオフラインデータ利用システムにおいて、データに対する課金の基準として、様々な再生制限方法(再生可能回数、再生可能時間、再生可能期間、無制限等)を設定することが可能である。また、データの販売後に、データの追加購入や再生制限方法の変更をユーザまたは販売者が行うことができる。このように、本発明ではデータの種別や顧客の種別を考慮したきめこまかなデータの購入形態を実現できる。

【図面の簡単な説明】

【図1】システム構成

【図2】販売端末の概要

【図3】ユーザ端末の概要

【図4】センタ装置の概要

【図5】課金情報データの構造

【図6】ユーザカードのデータ構造

【図7】ユーザ管理ファイルの構造

【図8】データ販売ファイルの構造

【図9】購入データ選択画面の一例

【図10】契約変更画面の一例

【図11】販売価格変更画面1の一例

【図12】販売価格変更画面2の一例

【図13】ユーザクラス変更画面1の一例

【図14】ユーザクラス変更画面2の一例

【図15】再生データ選択画面の一例

【図16】販売端末における販売処理の説明

【図17】販売端末における販売価格変更処理の説明

【図18】販売端末におけるユーザクラス変更処理の説明

【図19】販売端末における課金情報データ変更処理の説明

【図20】ユーザ端末における再生処理の説明

【図21】ユーザ端末における契約変更処理の説明

【図22】センタ装置におけるパスワード検査処理の説明

【図23】センタ装置における販売処理の説明

【図24】センタ装置における契約変更処理の説明

【図25】センタ装置における販売価格変更処理の説明

【図26】センタ装置におけるユーザクラス変更処理の説明

【図27】センタ装置における課金情報データ変更処理の説明

【符号の説明】

10……DVD、

20……販売端末、

30……センタ装置、

40……ユーザ端末、

50……通信回線、

60……ユーザカード、

500……課金制御データ、

700……ユーザ管理ファイル、

800……購入データ選択画面、

900……契約変更画面、

4001……販売価格変更画面1、

4002……販売価格変更画面2、

4101……ユーザクラス変更画面1、

4102……ユーザクラス変更画面2、

5000……再生データ選択画面、

1000……販売端末における販売処理、

1100……販売端末における販売価格変更処理、

1200……販売端末におけるユーザクラス変更処理、

1300……販売端末における課金情報データ変更処理、

1500……ユーザ端末における再生処理、

1600……ユーザ端末における契約変更処理、

3100……センタ装置におけるパスワード検査処理、

3200……センタ装置における販売処理、

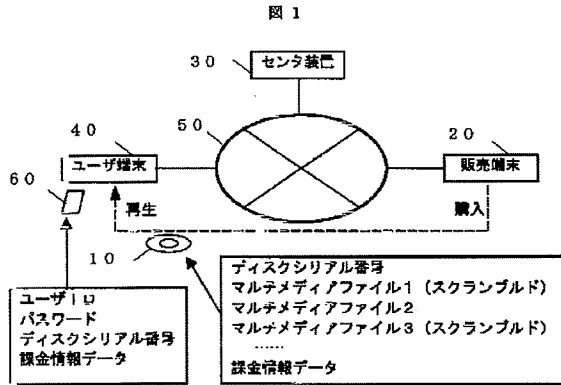
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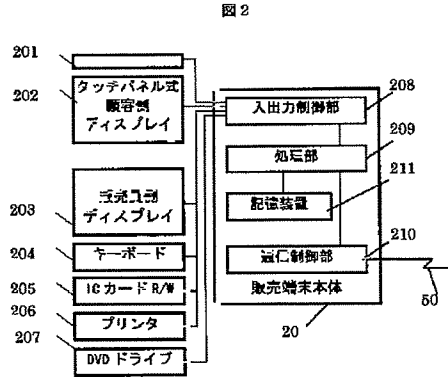
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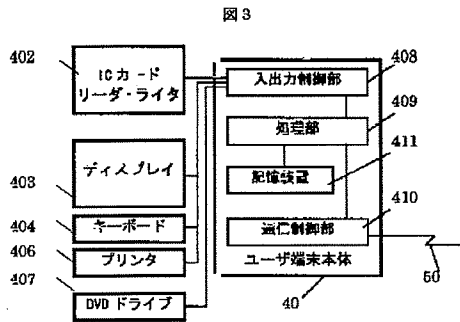
【図1】



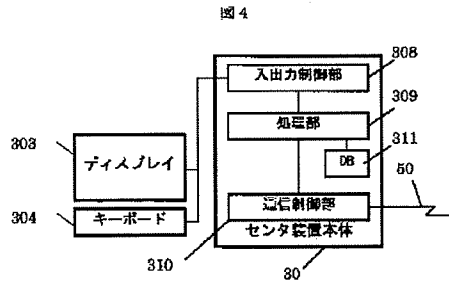
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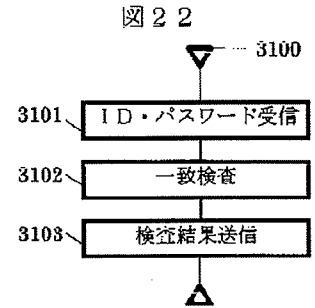
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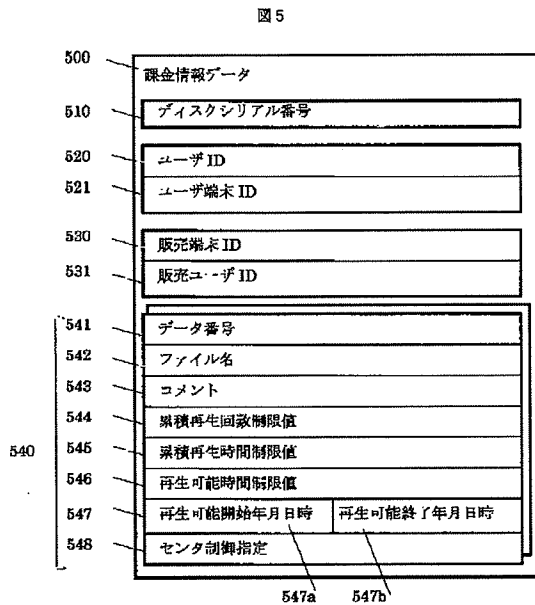
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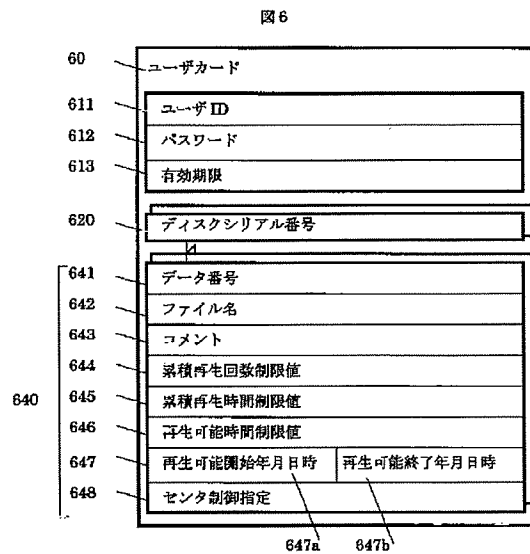
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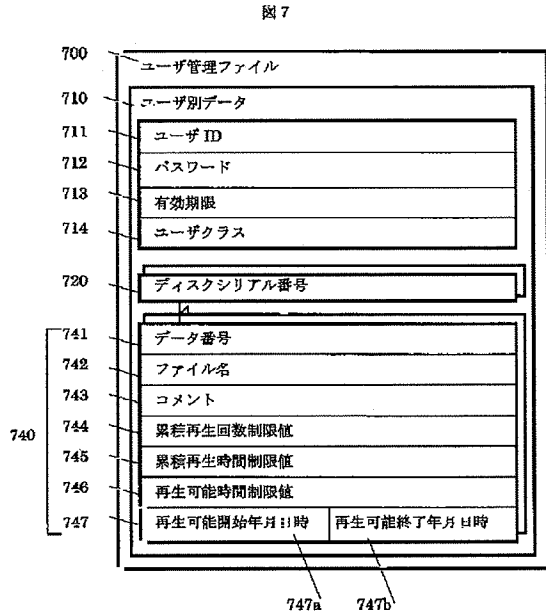
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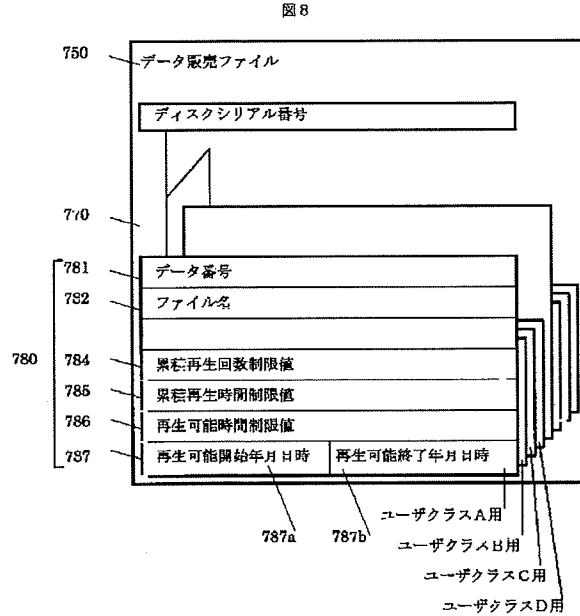
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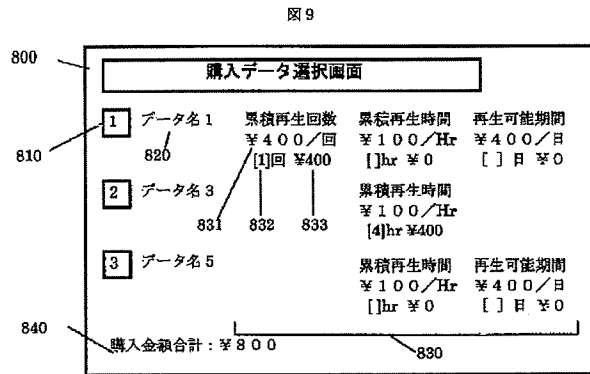
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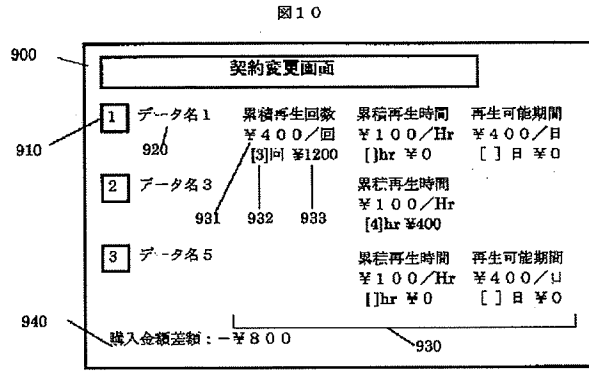
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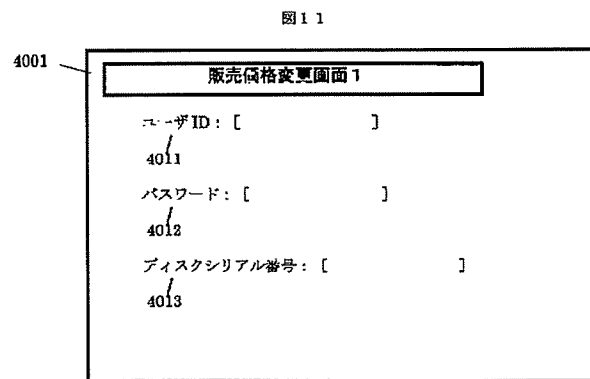
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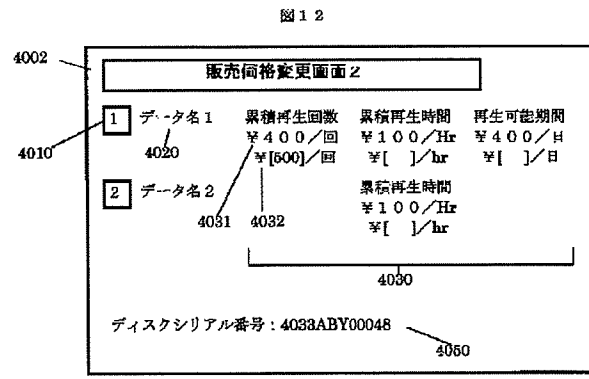
【図10】



【図11】

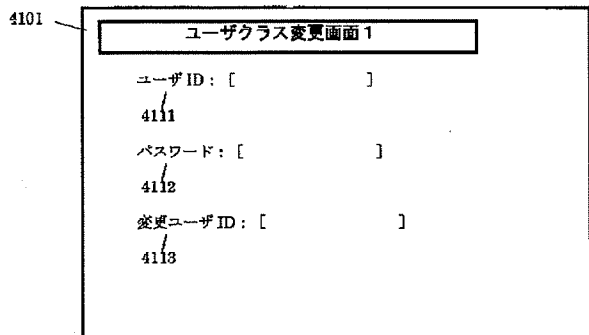


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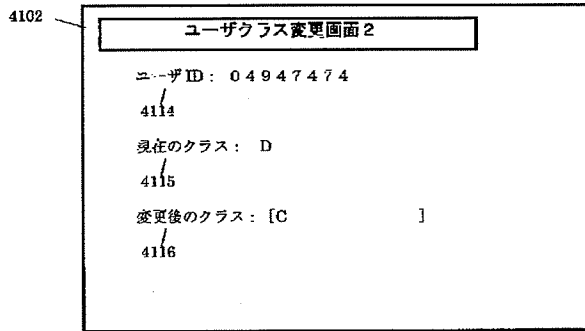
【図13】

図13



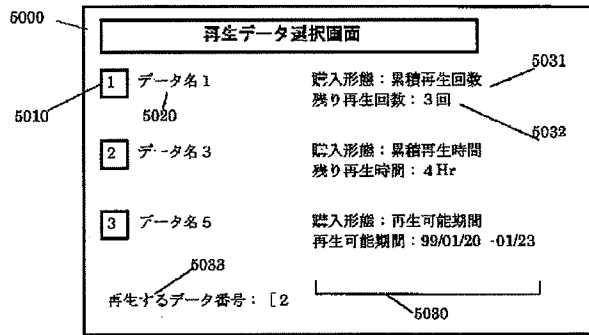
【図14】

図14



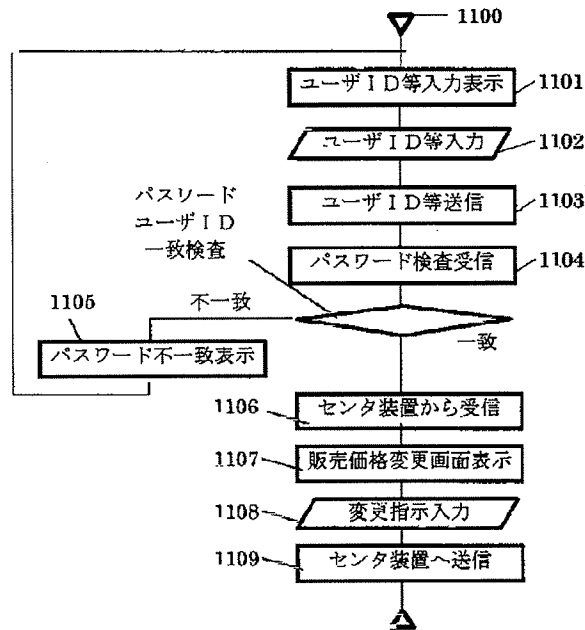
【図15】

図15



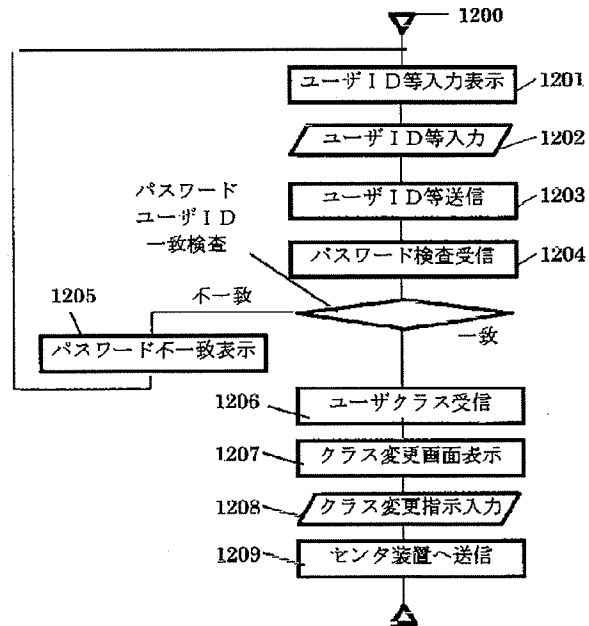
【図17】

図17



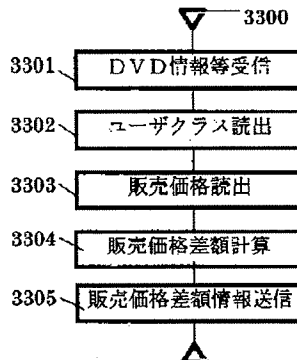
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図18



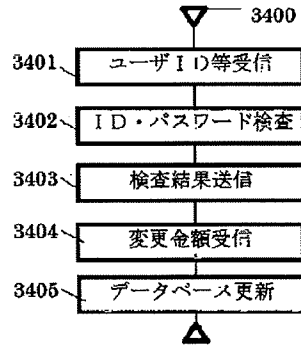
【図24】

図24



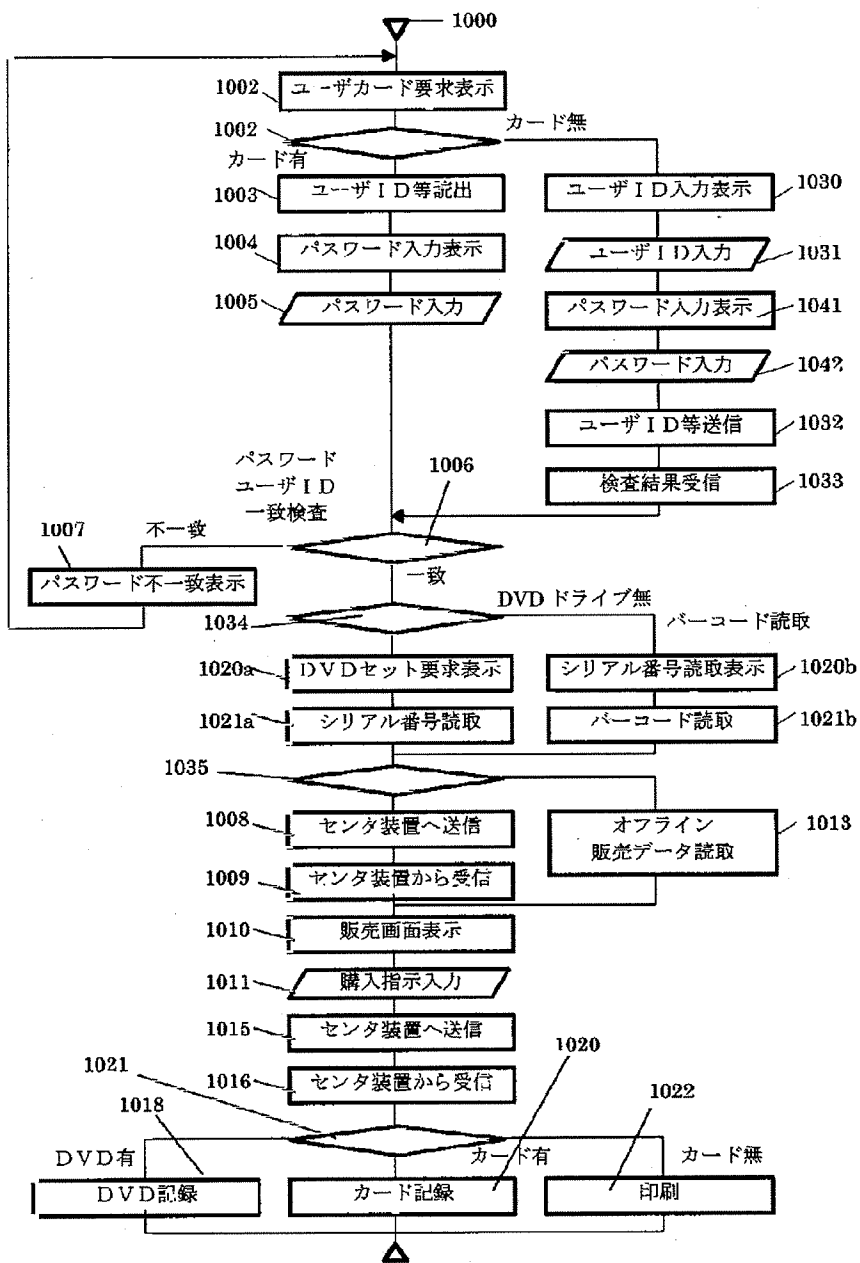
【図25】

図25



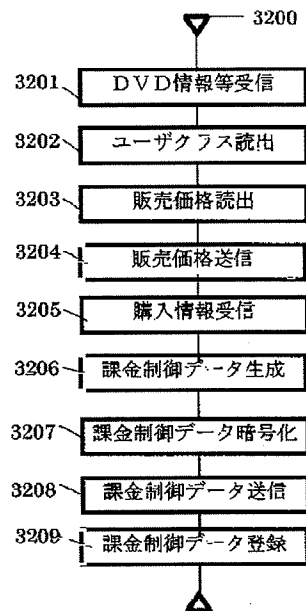
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図16



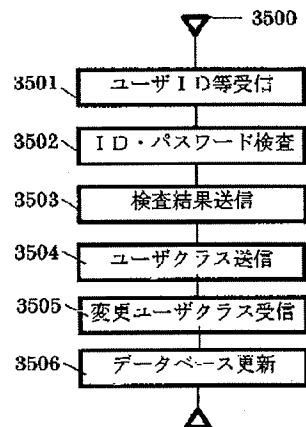
【図23】

図23



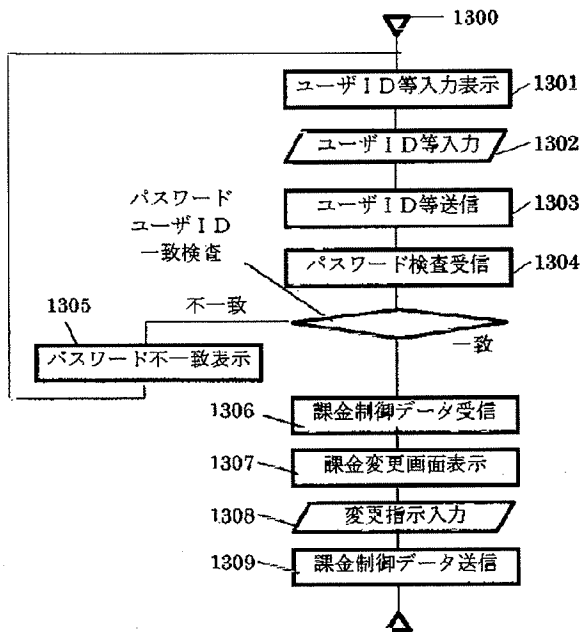
【図26】

図26



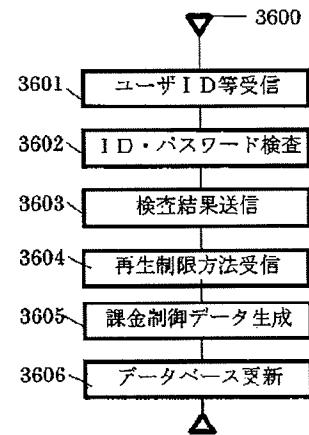
【図19】

図19



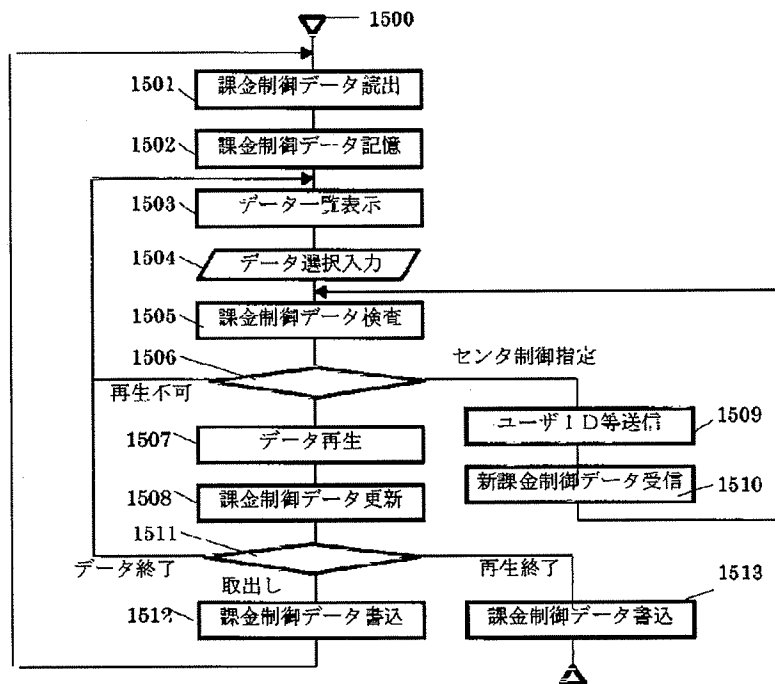
【図27】

図27

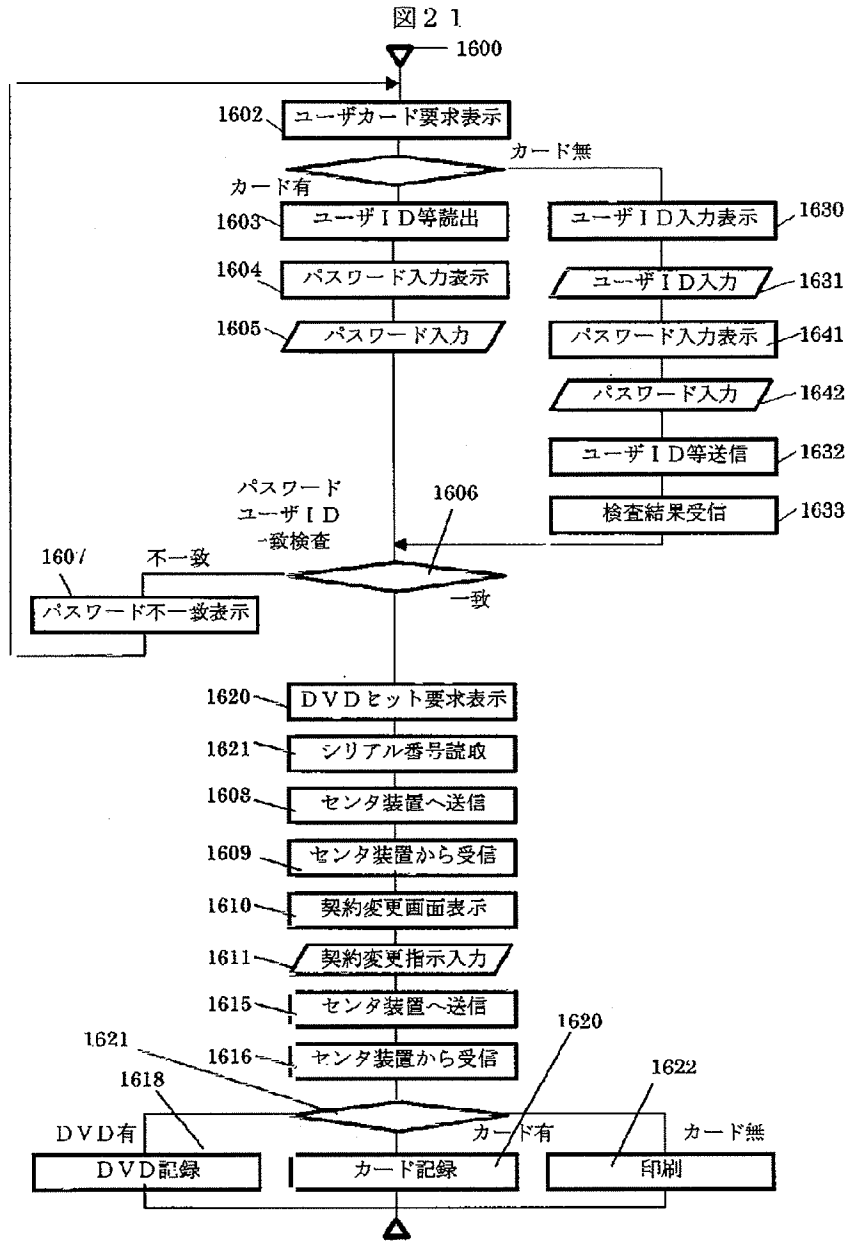


【図20】

図20



【図21】



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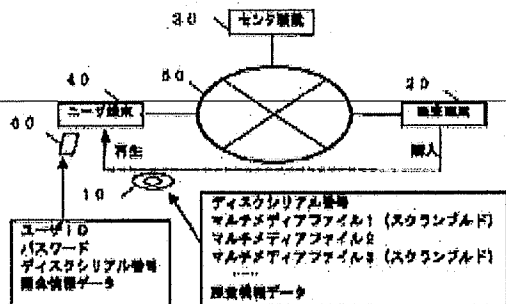
(72)Inventor : KUWAMOTO HIDEKI
AMANO YOSHIKAZU

(54) METHOD AND DEVICE FOR ACCOUNTING CONTROL OF OFF-LINE DATA

(57)Abstract:

PROBLEM TO BE SOLVED: To change an accounting or reproducing control method after selling data in an off-line data use system where the time of data acquisition and that of data use are different.

SOLUTION: In an off-line data reception and delivery system consisting of a selling terminal 20, a center device 30, and a user terminal 40; accounting control data where an accounting method at the time of setting is recorded in the selling terminal 20 is stored in the center device 30 and is added to sold data, and another accounting control data is reported to the user terminal 40 from the center device 30 at the time of reproducing data in the user terminal 40. Accounting control data in the center device can be changed by the selling terminal 20 or the user terminal 40.

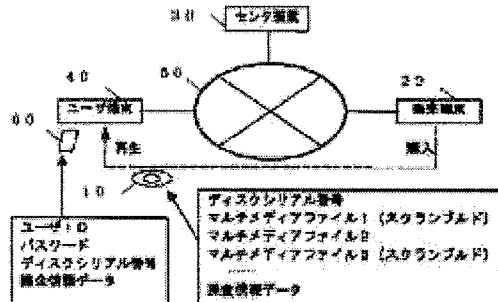


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TECHNICAL FIELD

[Field of the Invention] This invention relates to the fee collection control method and device of off-line data.

PRIOR ART

[Description of the Prior Art] In on-line use of the data which started in use of DB(s) (DataBase), such as literature documentation and corporate credit investigation. In recent years, a variety of data of the Internet, online karaoke, VOD (Video on Demand), etc. comes to be dealt with, and large scale-ization is following the data to hundreds of megabytes of picture image data from hundreds of bytes of text data. On the other hand, although improvement in the speed is also following the access speed of the communication line to several mega bps from hundreds of bps, it has not caught up with large scale-ization of data including picture image data. Mass picture image data as indicated to Tokuganhei9-255389 Then, CD, It records on mass media, such as optical discs including DVD, a user is beforehand sold or supplied widely, and the method of carrying out only control of the propriety of the use, the purchase of data, etc. to utilization time via communication is beginning to be used. As for the fee collection to the data in this case, it is common to be carried out based on the standard decided beforehand, i.e., the utilization time, using frequency, etc. And a single fee collection standard is used in the distribution service of such data.

[0003]Such off-line use of data has not only when storing and distributing to media, such as an optical disc, but a gestalt which stores data into a terminal unit, such as distributing an image to the image server of a hotel using a teletext or a satellite, and is used later. It is not only the purpose that this sends large capacity data with little update frequency via a communication line with little transmission capacity, There are various purposes, such as use of a time zone with little traffic of communication lines, such as night, use of a small amount fee time zone, and off-line use of data suitable for the planned distribution and reception in consideration of traffic or telex rate gold of data.

EFFECT OF THE INVENTION

[Effect of the Invention]In the off-line data utilization system with which the acquisition time of data differs from the utilization time of data in this invention, it is possible to set up various reproduction limiting methods (the number of times of refreshable, refreshable time, a refreshable period, unrestricted **) as a standard of the fee collection to data. After sale of data, the additional purchase of data is performed and a user or a vender can make a change of a reproduction limiting method. Thus, in this invention, the purchase style of the fine data in consideration of the classification of data or the customer's classification is realizable.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]The purpose of this invention is to solve the following problems.

[0005](1) In the service which records the data body in which realization of various fee collection gestalten carries out difficult use on off-line media, such as an optical disc, and distributes it to a user beforehand, although it is off-line media, therefore, The fee collection in the utilization time point of the data according to the situation (a user's differentiation) of a utilization time term or a user and change of a charging method were difficult.

[0006]In recent years, sale of various products and service lets a violent marketing battle pass, and came to be provided with various gestalten. Differentiation of the customer especially according to rental spending and importance is remarkable at non-charge of the bank charge in a customer with much savings volume, offer of the free airline ticket in using frequency and an aeronautical-navigation customer with much distance, etc. The same tendency is expected also in sale of picture image data, such as a movie.

[0007]However, especially in off-line media, such as a VCR cassette tape, CD, and DVD, Conventionally, using frequency was used as a standard of the fee collection to data the data unit [, such as media units, such as CD, or a movie, and music,], available partial unit [of data] and its utilization-time, and utilization time term. However, those standards were difficult to be immobilization and to change a charging method (a standard or its unit prices, such as regeneration time and reproduction frequency) for every service, by change of a user's accumulation utilization time, accumulation using frequency, and a member class, a campaign period, etc.

[0008](2) Most, realization of a perfect outright-sales gestalt is instant delivery of the goods by cash settlement, and the effective method has it in making impossible specific the user who becomes a sale place at protection of a user's personal information accompanying difficult sale. In service of the parts of the goods for adults, etc., the way at the time of making a user impossible specific can obtain good sales performance. However, in off-line media which are indicated in document conventionally [above-mentioned] which sells the partial data in media, since a customer's management became indispensable, sale which made the user unspecified was difficult.

[0009]The purpose of this invention is to solve these problems.

MEANS

[Means for Solving the Problem]A sales terminal which sells media or data, sold media, or data, The following means are formed in an off-line data carrier distribution system which consists of a user terminal in which a user performs reproduction (use) of a center apparatus which memorizes a user of a sale place, and a gestalt of fee collection and sold media, or data.

[0011]The 1st fee collection control data that recorded a charging method in a point-of-sale of data which a center apparatus memorized and was sold in a sales terminal.

[0012]The 2nd fee collection control data that is added to media or data and specifies processing required for reproduction of media or data.

[0013]The 3rd fee collection control data that is notified to a user terminal from a center apparatus, and specifies processing required for reproduction of media or data.

[0014]A selling terminal which registers a data identifier which specifies sold media or data as only, user ID which specifies a user of a sale place as only, and the 1st fee collection control data to a center apparatus, and adds the 2nd fee collection control data to media or data.

[0015]A data identifier which specifies sold media or data as only, and user ID which specifies a user of a sale place as only, A center apparatus which memorizes a correspondence relation of the 2nd fee collection control data added to these media or data, and transmits the 3rd fee collection control data to a user terminal based on a demand from a user terminal.

[0016]A user terminal which acquires the 3rd fee collection control data from a center apparatus, and performs reproduction (acquisition) of data or media based on the 2nd and 3rd fee collection control data based on the 2nd fee collection control data added to data or media.

[0017]

[Embodiment of the Invention]The multimedia data sales system which is one working example in the off-line data carrier distribution system of this invention is explained.

[0018](System configuration) The system configuration of a multimedia data sales system is explained using drawing 1. 10 is DVD which stored one or more multimedia data to sell. 20 is a sales terminal which inputs the information of the user who purchased the information on DVD10 sold when selling DVD10, and its DVD. 30 is a center apparatus which memorizes the information of DVD10 sold or its user and manages the sales terminal 20 and the user terminal 40. 40 is a terminal in which the user who purchased DVD10 reproduces the multimedia data stored in DVD10 (it reads from DVD and uses). The file which stored multimedia data, the fee collection control data which controls the scramble-ized reproduction of these multimedia data, etc. are stored in DVD10. DVD10 can be specified as only by a disk serial number. Although 10 is DVD in this example, as long as it is a memory medium, it may be whatever, such as semiconductor memory, a magnetic disk, a magneto-optical disc, and an organism memory. The sales terminal 20, the center apparatus 30, and the user terminal 40 of each other are connected by the communication line 50. 60 is a user card and user ID and a password required for a user's attestation, and fee collection control data required for reproduction of the data in DVD10 are recorded. Although the center apparatus 30 was formed in drawing 1, when managing sale of DVD10 only by the sale side, the composition with which the center apparatus 30 and the sales terminal 20 were united is also possible.

[0019](Sales terminal) The outline of a sales terminal is explained using drawing 2.

[0020]The sales terminal 20 is equipped with the bar code reader 201, the touch-sensitive customer side display 202, the salesperson side display 203, the salesperson keyboard 204, IC card reader writers 205, the printer 206, and the DVD drive 207. Sales terminal 20 main part has the communication control part

210 which performs communication with I/O control unit 208 which controls these peripheral equipment 201-206, the treating part 209 which performs various processings in the sales terminal 20, the memory storage 211 which memorizes various data when processing, and the center apparatus 30.

[0021]The serial number of DVD which specifies DVD as only in the sales terminal 20, The user ID which specifies a buyer as only, and data ID which specifies the data sold among the data stored in this DVD at the time are inputted, it transmits to the center apparatus 30, the selling price of each data is received from the center apparatus 30, and it displays on the display 202. And the data purchased to a customer is made to choose, it transmits to the center apparatus 30 and the sales result is registered. The input of the serial number of DVD is performed by reading bar code printing recorded on the package of the main part of DVD, or this DVD by the bar code reader 201. It is also possible to form the DVD drive 207 in a sales terminal, and to read on DVD the serial number of optics or this DVD by which magnetic recording was carried out by reproduction of DVD.

[0022]A user is setting the user card 60 to IC card reader writers 205, and inputs into the sales terminal 20 the user ID currently recorded in this user card. A user chooses the data to purchase in the customer side display 202. The sales terminal 20 acquires the fee collection control data 500 explained at the back for reproducing the sold data in DVD with the user terminal 40 from the center apparatus 30, and records it on the user card 60 set to IC card reader writers 205. When the user is not carrying the user card 60 when purchasing data, the input of the user ID by the keyboard 204 and printing of the fee collection control data 500 based on the printer 206 are possible. When purchasing data, the input of user ID is not indispensable and is dealt with as an unspecified user in that case.

[0023]When a DVD-RAM disk is used, it is possible to connect a DVD-RAM disk to the DVD drive 207 of the sales terminal 20, and to record the fee collection control code 500 on DVD directly. When making payment of the fee from the user to the sale side when purchasing, quick cash settlement of accounts or the credit card transaction to the user concerned based on user ID is used.

[0024](User terminal) The outline of a user terminal is explained using drawing 3.

[0025]The user terminal 40 has the DVD drive 407, IC card reader writers 402, the display 403, and the keyboard 404. User terminal 40 main part has the communication control part 410 which performs communication with I/O control unit 408 which controls these peripheral equipment 401-407, the treating part 409 which performs various processings in the user terminal 40, the memory storage 411 which memorizes the data in connection with various processings, and a center apparatus.

[0026]In the user terminal 40, when a user sets the user card 60 to IC card reader writers 402, the user ID in the user card 60, a password, and fee collection control data are inputted into the user terminal 40. And if a user enters a user password from the keyboard 404 and this password is in agreement with the password in the user card 60, it will become renewable [the data which the user in DVD10 similarly purchased according to the fee collection control data in the user card 60]. When the user is not carrying the user card 60 when reproducing data, the input of the user ID by the keyboard 404, a password, and fee collection control data is possible.

[0027]When a user newly purchases the data which is not purchased in DVD10 already possessed, according to this fee collection control data 500, reproduction of new data is attained with the user terminal 40 by requiring the new fee collection control data 500 of the center apparatus 30.

[0028]When making payment of the fee from the user to the sale side when purchasing, the credit card transaction from the user concerned based on user ID to the vender side using sales terminal ID, etc. are used.

[0029](Center apparatus) As for the center apparatus 30 explained using drawing 4 about the outline of a center apparatus, it has the display 303 and the administrator keyboard 304. Center apparatus 30 main part, The communication control part 310 which performs communication with I/O control unit 308 which controls these peripheral equipment 303 and 304, the treating part 309 which performs various processings in the center apparatus 30, the sales terminal 20, and the user terminal 40, various processings, each user terminal 40, the sales terminal 20, the data in connection with DVD10, There is DB311 which memorizes the information of a buyer and a vender.

[0030]The serial number of DVD in which the center apparatus 30 specifies DVD as only, The user ID which specifies a buyer as only, the data number which specifies the data sold among the data stored in this DVD at the time, And it receives via the communication control part 308 from the sales terminal 20, and sales terminal ID etc. which specify the sales terminal 20 in which this data was sold are memorized to DB part 311. The selling price of data is calculated according to conditions, such as a user's purchase performance and a campaign period, and it provides to the sales terminal 20 or the user terminal 40.

[0031]what the center apparatus 30 generates new fee collection control data, and transmits to this user terminal 40 by the demand from the user terminal 40 -- the user terminal 40 -- this -- it becomes renewable [the new data corresponding to new fee collection control data].

[0032](Fee collection control data) Fee collection control data is explained using drawing 5.

[0033]Fee collection control data restricts reproduction of DVD according to a user's purchase style (restriction of specification of the purchased data, reproduction frequency, etc.).

[0034]In the fee collection control data 500. DVD. The disk serial number 510 and this DVD which are specified as only. Sales terminal ID530 which specifies the user ID 520 which specifies the user who purchased as only, and the sales terminal which sold this DVD as only, user terminal ID521 which specify a user terminal as only, and the data number 541 and its file name of the data which the user purchased, The comment 543 explaining the contents of data and the reproduction limiting methods (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) 544-547 corresponding to this each data are described. When restricting reproduction by accumulation reproduction frequency, the accumulation reproduction frequency limit value 544, When carrying out by accumulation reproduction time, the accumulation-reproduction-time limit value 545 carries out in refreshable time and the refreshable time limit value 546 carries out in a refreshable period, 547b is described for 547a and the end date time of refreshable at the time of refreshable inaugural year days and months. The data of 541-548 is described for each [which is stored in DVD10] data of every. The fee collection control data 500 is memorized for every DVD10.

[0035]With the fee collection control data 500, when the center control 548 is specified as DVD concerned or data, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 40.

[0036]It is enciphered in the form which can be canceled by a specific key code, and this fee collection control data 500 is recorded on DVD10 or the user card 60. As this fee collection control data 500 was shown in drawing 5, except when a record format describes, describing in script form like a programming language is also considered.

[0037]A file name may be used although the data number is used for discernment of the data in DVD in this example.

[0038](User card) The user card 60 is explained using drawing 6.

[0039]Record reproduction media, such as an IC card and a magnetic card, are used for the user card 60. On the user card 60, the password 612 for performing attestation of the user ID 611 and this user who specify a user as only, the term of validity 613 of this user card, the disk serial number620, and the fee collection control data 640 are memorized. The disk serial number 620 is for identifying of which DVD10 the fee collection control data 640 is recorded on the user card 60, and can memorize the information 620 and 640 about one or more DVDs on the one user card 60. It is equivalent to the fee collection control data 500 explained by drawing 5 about the contents of the fee collection control data 640.

[0040](User management file) The user management file 700 is explained using drawing 7.

[0041]The user management file 700 is stored in DB311 of the center apparatus 30, and records the correspondence relation between user ID and a password, and the purchase style for every DVD according to each user. The contents and the structures 711-747 of the user management file 700 serve as the form where the data structure in the user card 600 shown in drawing 6 was stored in every two or more, i.e., user, 710. However, the user class 714 which shows the class which differentiated a user, such as changing the selling price of data according to a user, is stored.

[0042](Data sales file) The data sales file 750 is explained using drawing 8.

[0043]The data sales file 750 is stored in DB311 of the center apparatus 30, and memorizes the price of each data currently recorded in DVD10. the data sales file 750 -- the unit prices 784-787 of the disk serial number 760, the data number 771, the file name 782, and each playback limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) -- an user class (A, B, C, D) -- it is recorded independently.

[0044]A data sales file may be stored also in the memory storage 211 of the sales terminal 20 so that the sales terminal 20 can sell data the center apparatus 30 and off-line.

[0045](Purchase data selection picture) A purchase data selection picture is explained using drawing 9.

[0046]The purchase data selection picture 800 is a screen for a user to choose the data in DVD to purchase in the sales terminal 20. A total of 840 of the data number 810, the data name 820, the purchase style 830 of each data, and the amount of money for a purchase schedule is displayed on the purchase selection picture 800 about each data in DVD10 which a user is going to purchase. The unit price 831, the purchase unit 832 which a user inputs, and the purchased amount 833 of the data are displayed about each reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can purchase the purchase style 830 of each data. The file name of this data is used for a data name.

[0047](Contract modification screen) The contract modification screen 900 is explained using drawing 10.

[0048]In the user terminal 40, when purchasing newly the non-purchase data in DVD10 which the user owns or changing the purchase style of purchased data that is, the contract modification screen 900 is used, when changing the contract form about the DVD. A total of 940 of the data number 910, the data name 920, the purchase style 930 of each data, and the amount of money for a purchase schedule

is displayed on the contract modification screen 900 about each data in DVD10 which a user is going to purchase. The unit price 931, the purchased unit 932, and the purchased amount 933 of the data are displayed about each reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can purchase the purchase style 930 of each data. A contract is changed inputting a new purchase unit into the purchased unit 932, or by inputting into the purchase unit 932 of another reproduction limiting method. And the difference of the purchased amount before change and the purchased amount after change is displayed on a total of 940 of the amount of money for a purchase schedule. When a purchase unit is reduced, a user is able for the total amount to be subtracted and to receive refundment.

[0049]This contract modification screen 900 is used also as an accounting information data changing screen in the sales terminal 20.

[0050](Selling price change screen) The selling price change screens 4001 and 4002 are explained using drawing 11 and drawing 12.

[0051]In the sales terminal 20, the selling price change screens 4001 and 4002 are used in order to change the selling price of the data in specific DVD10. First, a salesperson inputs the user ID 4011 as his salesperson, the password 4012, and the disk serial number 4013 of DVD10 which changes the selling price using the selling price change screen 1 (4001). Next, the selling price of each data is changed using the selling price change screen 2 (4002). The data number 4010, the data name 4020, the purchase style 4030 of each data, and the disk serial number 4050 are displayed on the selling price change screen 2 (4002) about each data in DVD10 which is going to change the selling price. About the disk, about each playback limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can be sold, the purchase style 4030 of each data displays the unit price 4031 before the change, and inputs the unit price 4032 after change. By specific operation, it can add and the reproduction limiting method which can sell each data can be deleted.

[0052](User-class change screen) The user-class change screens 4101 and 4102 are explained using drawing 13 and drawing 14.

[0053]In the sales terminal 20, the user-class change screens 4101 and 4102 are used in order to change a specific user's user class. First, a salesperson inputs the user ID of the user who changes the user ID 4111 as his salesperson, the password 4112, and an user class using the user-class change screen 1 (4101). Next, the user class of the user concerned is changed using the user-class change screen 2 (4102). The user ID 4114 of the user who is going to change an user class, and the present user class 4115 of the user concerned are displayed on the user-class change screen 2 (4102), and the user class 4116 after change is inputted into it.

[0054](Regenerative data selection picture) The regenerative data selection picture 5000 is explained using drawing 15.

[0055]The regenerative data selection picture 5000 is used in order to choose the data which a user is going to reproduce in the user terminal 40. The data number 5010, the data name 5020, and the purchase style 5030 of each data are displayed. The available unit 5032 which remains is displayed on the purchase style 5030 of each data at the time among the purchased reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) 5031 and the unit purchased [the]. The file name of this data is used for a data name, and the input 5033 of a data number performs selection of data.

[0056]Next, each processing in this example using the system configuration, the data structure, and screen specifications which were expressed above is explained.

[0057](Processing of a sales terminal)

(1) Explain the sales processing of a sales processing sales terminal using drawing 16.

[0058]Processing accompanying sale of DVD10 in the sales terminal 20 is performed in the following procedures.

[0059]The sales processing 1000 will display the request message which sets the user card 60 to a buyer to the card reader 205 on the customer side display device 202, if a sales processing start key is inputted (1002), The user ID 611, the password 612, and the term of validity 613 which are stored in the user card 60 are read (1003). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1004), and the input of a password is received (1005). And coincidence with the password 612 read from the user card 60 is inspected (1006).

[0060]When the user card 60 is not shown from a customer, the message which requires the input of user ID of a buyer is displayed on the customer side display device 202 (1030), and the input of user ID is received (1031). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1041), and the input of a password is received (1042). And in [transmit this user ID and the password which were entered into the center apparatus 30 (1032), and] the center apparatus 30, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are registered into the user management file 700 of the center apparatus 30] is inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30 (1033).

[0061]And if correspondence of user ID and a password is inharmonious, a password will display an inharmonious message on the customer side display

device 202 (1007). When it does not have user ID, it is dealt with as an unspecified user by inputting "9999" as user ID. The handling as an unspecified user can make impossible pursuit of the fact of this user that purchased this data, and can protect this user's personal information.

[0062]If a password is in agreement, the sales processing 1000 will display the message which requires the set to the DVD drive 207 of DVD10 on the salesperson side display device 203 (1020a), and will read the disk serial number of DVD (1021a). The serial number of DVD10 is inputted by the input which used (1034), the bar code reader 201, and the keyboard 204 when there was no DVD drive 207 in the sales terminal 20 (1021b).

[0063]And the serial number of sales terminal ID which specifies a sales terminal as the center apparatus 30, the user ID which the buyer inputted, and DVD set to the DVD drive 207 is transmitted (1008), and the sales amount according to purchase style of each data is received from the center apparatus 30 (1009). And the purchase data selection picture 800 which requires the input of the number of data, and the purchase style of each data which was shown in the customer side display device 202 at drawing 9, and to purchase, It displays as a table of the sales amount of the name 820 of each data stored in DVD10, and the sales amount 831 of each purchase style (1010), and the input of the data number 810 and the purchase style 830 is received (1011). The input of a data number and a purchase style is displayed as a total of 840 of the selling price of the data which the amount of money for a purchase schedule chose while it is carried out until an end is directed, and an input is performed. The sales amount is asked to the center apparatus 30 because the sales amount may change with a user's purchase performance, a vender's sales performance, a selling area, sales promotion periods, etc.

[0064]When not asking the center apparatus 30 the sales amount (off-line processing), (1035), The sales amount of each data is searched from the data sales file 750 memorized by the memory storage 211 in the sales terminal 40 (1013), and it displays as a table of the name of each data, and the sales amount of each purchase style (1010).

[0065]Next, the data number of the data which the customer purchased, and a purchase style are transmitted to the center apparatus 30 (1015). And it is generated according to the purchase style of each data sold from the center apparatus 30, the enciphered fee collection control data 500 is received (1016), and it records on DVD10 (1018). When unrecordable on DVD10, it is enciphered and the fee collection control data 500 is recorded on a user card (1020). When unrecordable on a user card, or when the user does not have a user card, the fee collection control data 500 enciphered using the printer 206 of a sales terminal is

printed (1022).

[0066](2) Explain the selling price change processing in the selling price change processing sales terminal 20 using drawing 17.

[0067]If a selling price change processing start key is inputted, the selling price change processing 1100, To the salesperson side display device 203, a vender's user ID, a password, And the selling price change screen 1 (4001) shown in drawing 11 which requires the input of the disk serial number of DVD is displayed (1101), and the disk serial number of DVD10 is inputted by the input using the bar code reader 201 or the keyboard 204 (1102).

[0068]And the serial number of sales terminal ID, user ID, a password, and DVD is transmitted to the center apparatus 30 (1103). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the password 712] which are registered into the user management file 700 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The selling price change processing 1100 receives the coincidence inspection result of the password (1104), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display device 202 (1105). If a password is in agreement, the sales amount according to purchase style of each data before change will be received from the center apparatus 30 (1106). And the selling price change screen 2 (4002) shown in drawing 12 which requires the input of selling price ***** of the salesperson side display device 203, the name 4020 of each data stored in DVD10, and each purchase style 4030 -- it displays as a table of the sales amount 4031 before another change (1107), and the input of the sales amount 4032 after change is received (1108). An input is performed until an end is directed. Next, the sales amount according to purchase style of each data after change is transmitted to the center apparatus 30 (1109). In the center apparatus 30, the contents of the data sales file 750 are updated to the sales amount according to purchase style of each received data (3406).

[0069](3) Explain the user-class change processing in the user-class change processing sales terminal 20 using drawing 18.

[0070]If an user-class change processing start key is inputted, the user-class change processing 1200, The user-class change screen 1 (4101) shown in drawing 13 which requires the input of the user ID of the user who changes a vender's user ID, a password, and an user class into the salesperson side display device 203 is displayed (1201), and the input of them 4111-4113 is performed (1202). And the user ID of sales terminal ID, user ID, a password, and a change target is transmitted to the center apparatus 30 (1203). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the

password 712] which are registered into the user management file 700 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The user-class change processing 1200 receives the coincidence inspection result of the user ID and password (1204), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display 203 (1205). If a password is in agreement, the user class of the user concerned before change will be received from the center apparatus 30 (1206), The user-class change screen 2 (4102) shown in drawing 14 which requires the input of the change of an user class to the salesperson side display device 203 is displayed (1207), and the input of the new user class 4116 is received (1208). Next, the user ID of each user after change and a new user class are transmitted to the center apparatus 30 (1209). In the center apparatus 30, the user class 714 of the user ID 711 which received is updated in the user management file 700.

[0071](4) Explain the accounting information data changing in the accounting information data changing processing sales terminal 20 using drawing 19.

[0072]In the fee collection control data 500, when the center control 548 is specified, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 40. It is specified when a vender and the donor of data want to change if needed, the conditions 500 required for reproduction, i.e., the fee collection control data, of the data. The directions which change the fee collection control data 500 registered into DB311 of the center apparatus 30 are performed in the sales terminal 20.

[0073]If an accounting information data changing processing start key is inputted, the accounting information data changing processing 1300 will display the message which requires a vender's user ID and the input of a password on the salesperson side display device 203 (1301), and will perform those inputs (1302). And sales terminal ID, user ID, and a password are transmitted to the center apparatus 30 (1303). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the password 712] which are registered into the user management file 700 of DB311 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The fee collection control data change processing 1300 receives the coincidence inspection result of user ID and a password (1304), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display 203 (1305). If a password is in agreement, the fee collection control data of the user concerned before change will be received from the center apparatus 30 (1306), The contract modification screen 900 shown in drawing 10 which requires the

input of change of a reproduction limiting method (lapsed time after accumulation reproduction frequency accumulation reproduction time, refreshable time, a refreshable period, and sale) to the salesperson side display device 203 is displayed (1307), and the input of a new reproduction limiting method is received (1308). An input is performed until an end is directed. Next, the reproduction limiting method after change is transmitted to the center apparatus 30 (1309). In the center apparatus 30, the fee collection control data 500 based on a new reproduction limiting method is generated about the user ID which received, and the fee collection control data data 740 of the user management file 700 of the user concerned is updated.

[0074](Processing of a user terminal)

(1) Explain the regeneration in a regeneration user terminal using drawing 20.

[0075]If DVD10 is set to the DVD drive 407, the user terminal processing 1500 will read the fee collection control data 500 memorized by DVD10 (1501), and will memorize it as the fee collection control data 500 in the memory storage 411 of the user terminal 40 (1502). And the regenerative data selection picture 5000 which requires the input of the table of the data number of each data stored in DVD10, a data name, and a reproduction limiting method (unrestricted **, such as the remaining number of times of refreshable and refreshable time) and the number of the data to reproduce is displayed on the display 403 (1503). If the number 5033 of the data to reproduce is inputted by the user (1504), Based on the fee collection control data (at the at an accumulation reproduction frequency limit value, an accumulation-reproduction-time limit value, a refreshable time limit value, refreshable inaugural year days and months, the end date time of refreshable, the time of a refreshable end date) 500 memorized by the memory storage 411, it is inspected whether the data specified by this number is refreshable (1505). In being refreshable, it reproduces by decoding this data using a releasing scramble key (1507). The fee collection control data 500 in the memory storage 411 is rewritten simultaneously (1508). And if extraction from the DVD drive 407 of DVD10 is directed, the fee collection control data 500 in the memory storage 411 will be written in the fee collection control data 500 in DVD10 (1512), and the fee collection control data of DVD10 will be updated.

[0076]When it is not DVD-RAM that DVD10 can rewrite but DVD-ROM which cannot perform rewriting, the fee collection control data 500 is memorized by the user card 60. Therefore, read-out of the fee collection control data 500 from DVD10 of the above-mentioned processings 1501-1512 and writing are transposed to the thing to the user card 60.

[0077]In the fee collection control data 500, when the center control 548 is specified as data, connection with the center apparatus 30 becomes indispensable

when reproducing the data in the user terminal 40. It is specified when a vender and the donor of data want to change the purchase style of data, and the selling price if needed. That is, the user terminal processing 1500 transmits user ID and terminal ID to a center apparatus (1509), The fee collection control data 500 in the time of corresponding to those user ID and terminal ID is acquired from the fee collection control data 740 stored in the user management file 700 in the center apparatus 30, and it memorizes to the memory storage 411 (1510). And reproduction is judged based on the fee collection control data 500 (1505).

[0078]When performing reproduction restrictions of data by accumulation reproduction frequency, an accumulation reproduction frequency limit value is inspected, when it is not 0, it becomes refreshable, and a decrement is carried out by reproduction start.

[0079]When performing reproduction restrictions of data by accumulation reproduction time, an accumulation-reproduction-time limit value is inspected, when it is not 0 minute, it becomes refreshable, and a decrement is carried out for every per minute after a reproduction start.

[0080]When performing reproduction restrictions of data in refreshable time, the reproduction point from the head of data becomes refreshable until it results in a refreshable time limit value. In this case, rewriting of a refreshable time limit value is not performed.

[0081]When performing reproduction restrictions of data in a refreshable period, the time of refreshable inaugural year days and months and the end date time of refreshable are inspected, and it becomes refreshable when the time of reproduction is included between the time of refreshable inaugural year days and months, and the end date time of refreshable.

[0082]It becomes refreshable, when performing reproduction restrictions of data by after-sale lapsed time and the time of reproduction is before the time of a refreshable end date.

[0083](2) Explain the contract modification processing in a contract modification processing user terminal using drawing 21.

[0084]In the user terminal 40, if the additional purchase of unpurchased data and change (change of a reproduction limiting method) of a purchase style are directed by the user among the data in DVD10, the user terminal 40 will perform contract modification processing 1600. The contract modification processing 1600 performs processing similar to the sales processing in the sales terminal 20.

[0085]If a contract modification key is inputted, the contract modification processing 1600 will display the message which requires the set to the card reader of a user card on the display 403 (1602), and will read the user ID, the password, and the term of validity which are stored in the user card (1603).

[0086]Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1604), and the input of a password is received (1605). And coincidence with the password 612 read from the user card 60 is inspected (1006).

[0087]When the user card 60 is not shown from a customer, the message which requires the input of user ID of a buyer is displayed on the customer side display device 202 (1630), and the input of user ID is received (1631). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1641), and the input of a password is received (1642). And in [transmit this user ID and the password which were entered into the center apparatus 30 (1032), and] the center apparatus 30, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are registered into the user management file 700 of the center apparatus 30] is inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30 (1633).

[0088]And if the correspondence relation between user ID and a password is in agreement, the message which requires the set to the DVD drive 407 of DVD10 will be displayed on the display 403 (1620), and the disk serial number of DVD10 will be read (1621). To the center apparatus 30, and user terminal ID, inputted user ID, The data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407, User ID [which is memorized by the fee collection control data 500 / of a buyer] 520 and sales terminal ID530 is transmitted (1608), and the sales amount according to purchase style of each data is received from the data sales file 750 stored in DB311 of the center apparatus 30 (1609). And the contract modification screen 900 shown indrawing 10 which requires the input of the number of data, and the purchase style of each data purchased on the display 403, It displays as the name 920 of each data stored in DVD10, and the table 930 of the sales amount (difference with a purchased purchase style) of each purchase style (1610), and the input of the data number 910 and the purchase style 932 is received (1611). While the input of a data number and a purchase style is performed until an end is directed, and an input is performed, the amount of money 940 for a schedule is displayed (2510). Next, the data number of the purchased data and a purchase style are transmitted to the center apparatus 30 (1615). And in the center apparatus 30, according to each sold data and its purchase style, the fee collection control data 500 is generated (1616), and it enciphers (1617), and records on DVD10 set to the DVD drive 407 of the user terminal 40 (1618). When it cannot record on DVD10, the enciphered fee collection control data 500 is recorded on the user card 60 (1620). When unrecordable on the user card 60, or when the user does not possess the user card,

the ***** data enciphered using the printer 406 is printed (1622).

[0089](Processing of a center apparatus) Each processing of the center apparatus 30 in connection with each processings 1000-1600 of the sales terminal 20 and the user terminal 40 mentioned above is explained.

[0090](1) Explain password verification processing of the password verification center apparatus 30 using drawing 22.

[0091]If the user ID and the password for password verification are received from the user terminal 20 or the sales terminal 40 (3101), the password verification processing 3100, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are stored in the user management file 700] is inspected (3102), and the message which shows coincidence or an inharmonious result is replied to the user terminal 20 or the sales terminal 40 (3103).

[0092](2) Explain the sales processing of the sales processing center apparatus 30 using drawing 23.

[0093]The user ID into which sales terminal ID and a buyer inputted the sales processing 3200 with the sales terminal, If the data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407 of the sales terminal 40 is received from the sales terminal 40 (3201), The user class (A, B, C, D) 714 of the user who reads the user management file 700 first and has the user ID which received is acquired (3202). Next, the data sales table 750 is inspected and the selling price corresponding to the received disk serial number or each data data number of DVD10 is acquired (3203). The selling price is acquired according to the purchase style applicable to an user class, and transmits to the sales terminal 40 (3204). And if the purchased data number and its purchase style are received from the sales terminal 40 (3205), according to the purchase style of each sold data, the fee collection control data 500 will be generated (3206), and it will encipher (3207), and will reply to the sales terminal 40 (3208). The generated this fee collection control data is registered as the fee collection control data 740 of the user management file 700 (3209).

(3) Explain contract modification processing of the contract modification processing center device 30 using drawing 24.

[0094]The user ID into which user terminal ID and a user inputted the sales processing 3300 with the user terminal 40, The data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407 of the user terminal 40, If purchase style [of each data before change], user ID [which is memorized by the fee collection control data 500 / of a buyer] 520, and sales terminal ID530 is received from the user terminal 40 (3301), The user class (A, B, C, D) 714 of the user who reads the user management file 700 first and has the user ID which received is acquired (3302). Next, the selling price of each data of one or

more data numbers of the data which inspects the data sales table 750 and is contained in DVD of the disk serial number of DVD10 which received, or the received data number is acquired (3303). The selling price is acquired according to the purchase style applicable to an user class, calculates the difference of the selling price with the purchase style before change (3304), and transmits to a user terminal (3305).

[0095](4) Explain the selling price change processing of the selling price change processing center apparatus 30 using drawing 25.

[0096]The selling price change processing 3400 Sales terminal ID from the sales terminal 40, user ID, If the disk serial number of password and DVD10 is received (3401), A salesperson's user ID 711 and coincidence of correspondence-related [of the password 712] are inspected using the user management file 700 stored in DB311 (3402), and the result is transmitted to the sales terminal 20 (3403). If a password is in agreement, the data sales file 750 will be read and the sales amount according to purchase style of each data before change will be transmitted to the sales terminal 40 (3404). Next, the sales amount according to purchase style of each data after change is received from the sales terminal 40 (3405). And the data sales file 750 is updated to the sales amount according to purchase style of each received data (3406).

[0097](5) Explain the user-class change processing of the user-class change processing center apparatus 30 using drawing 26.

[0098]The user-class change processing 3500 From the sales terminal 40 to sales terminal ID. If user ID, a password, and the user class of the user who changes are received (3501), A salesperson's user ID and coincidence of correspondence-related [of a password] are inspected using the user management file 700 stored in DB311 (3502), and the result is transmitted to the sales terminal 40 (3503). If a password is in agreement, the user class 714 of the user before change will be transmitted to the sales terminal 40 (3504). Next, each user's user ID and user class after change are received from the sales terminal 40 (3505), and the user class 714 of the user management file 700 is updated (3406).

[0099](6) Explain the fee collection control data change processing of the fee collection control data change center apparatus 30 using drawing 27.

[0100]In the fee collection control data 500, when the center control 748 is specified, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 20. It is specified when a vender and the donor of data want to change if needed, the conditions required for reproduction, i.e., the fee collection control data, of the data.

[0101]The fee collection control data change processing 3600 as an update request of the fee collection control data 500 from the sales terminal 40, user ID, a disk

serial number, and a new playback limiting method (accumulation reproduction frequency accumulation reproduction time.) If refreshable time and a refreshable period are received (3601), a salesperson's user ID and coincidence of correspondence-related [of a password] will be inspected using the user management file 700 stored in DB311 (3602), and the result will be transmitted to the sales terminal 40 (3603). If a password is in agreement, based on the playback limiting method concerned, the new fee collection control data 500 is raw-**(ed), the user management file 700 registered into DB311 will be read, and the fee collection control data 740 corresponding to user ID 711 and disk serial 720 received number will be rewritten.

EXAMPLE

(Working example which changes a reproduction limiting method by an user class)
In above-mentioned working example, although the selling price of the data to a user was changed by the user class, working example which changes the unit (reproduction frequency, regeneration time, refreshable period) of the reproduction limiting method for a sales unit price by an user class is also considered. In this case, if an user class is changed, the unit of the purchased reproduction limiting method can be changed later.

DESCRIPTION OF DRAWINGS

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- [Brief Description of the Drawings]
 - [Drawing 1]System configuration
 - [Drawing 2]The outline of a sales terminal
 - [Drawing 3]The outline of a user terminal
 - [Drawing 4]The outline of a center apparatus
 - [Drawing 5]Structure of accounting information data
 - [Drawing 6]The data structure of a user card
 - [Drawing 7]Structure of a user management file
 - [Drawing 8]Structure of a data sales file
 - [Drawing 9]An example of a purchase data selection picture
 - [Drawing 10]An example of a contract modification screen
 - [Drawing 11]An example of the selling price change screen 1
 - [Drawing 12]An example of the selling price change screen 2
 - [Drawing 13]An example of the user-class change screen 1

[Drawing 14]An example of the user-class change screen 2
[Drawing 15]An example of a regenerative data selection picture
[Drawing 16]Explanation of the sales processing in a sales terminal
[Drawing 17]Explanation of the selling price change processing in a sales terminal
[Drawing 18]Explanation of the user-class change processing in a sales terminal
[Drawing 19]Explanation of the accounting information data changing processing in a sales terminal
[Drawing 20]Explanation of the regeneration in a user terminal
[Drawing 21]Explanation of the contract modification processing in a user terminal
[Drawing 22]Explanation of the password verification processing in a center apparatus
[Drawing 23]Explanation of the sales processing in a center apparatus
[Drawing 24]Explanation of the contract modification processing in a center apparatus
[Drawing 25]Explanation of the selling price change processing in a center apparatus
[Drawing 26]Explanation of the user-class change processing in a center apparatus
[Drawing 27]Explanation of the accounting information data changing processing in a center apparatus

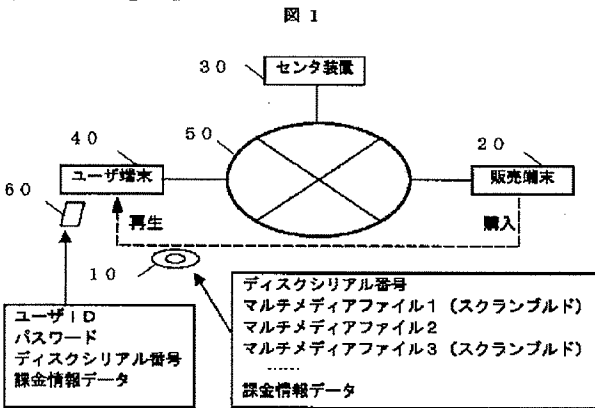
[Description of Notations]

10 DVD,
20 Sales terminal,
30 Center apparatus
40 User terminal
50 Communication line,
60 User card,
500 Fee collection control data,
700 User management file,
800 Purchase data selection picture,
900 Contract modification screen,
4001 Selling price change screen 1,
4002 Selling price change screen 2,
4101 User-class change screen 1,
4102 User-class change screen 2,
5000 Regenerative data selection picture,
1000 Sales processing in a sales terminal,
1100 Selling price change processing in a sales terminal,
1200 User-class change processing in a sales terminal,

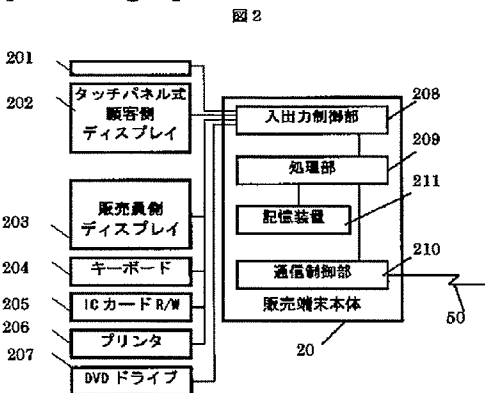
- 1300 Accounting information data changing processing in a sales terminal,
- 1500 Regeneration in a user terminal,
- 1600 Contract modification processing in a user terminal,
- 3100 Password verification processing in a center apparatus,
- 3200 Sales processing in a center apparatus,
- 3300 Contract modification processing in a center apparatus,
- 3400 Selling price change processing in a center apparatus,
- 3500 User-class change processing in a center apparatus,
- 3600 Accounting information data changing processing in a center apparatus

DRAWINGS

[Drawing 1]

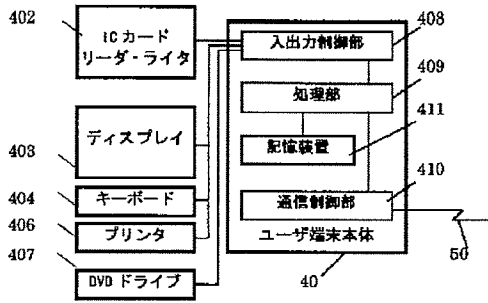


[Drawing 2]



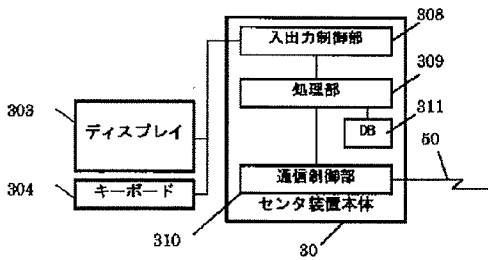
[Drawing 3]

図 3



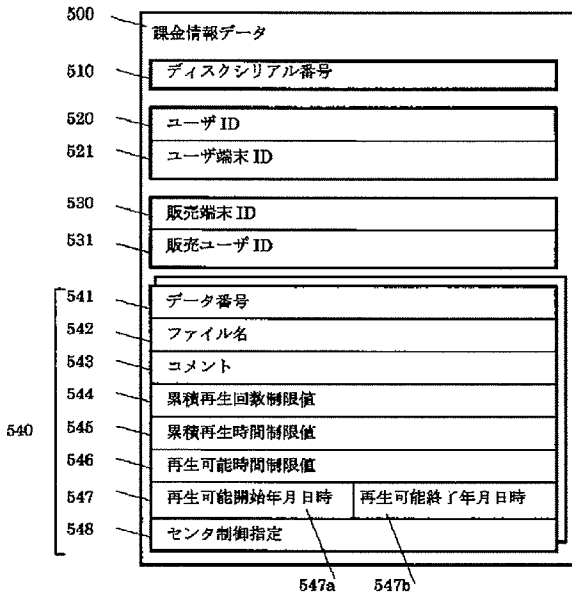
[Drawing 4]

図 4



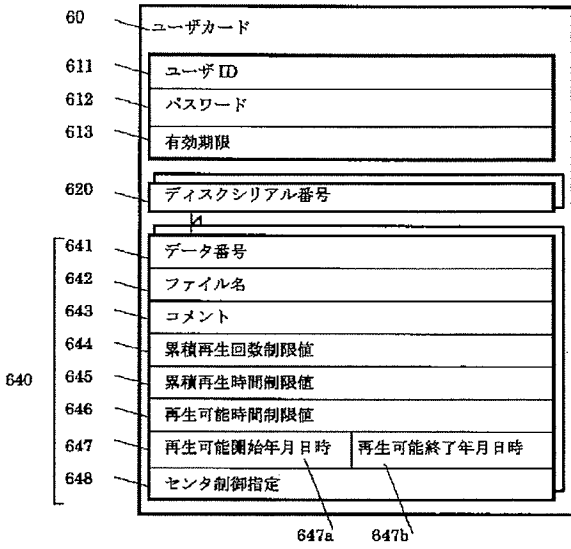
[Drawing 5]

図 5



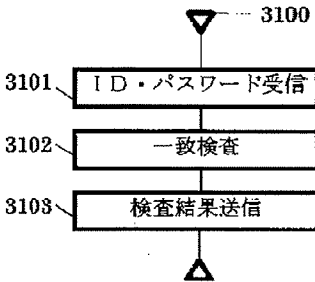
[Drawing 6]

図6



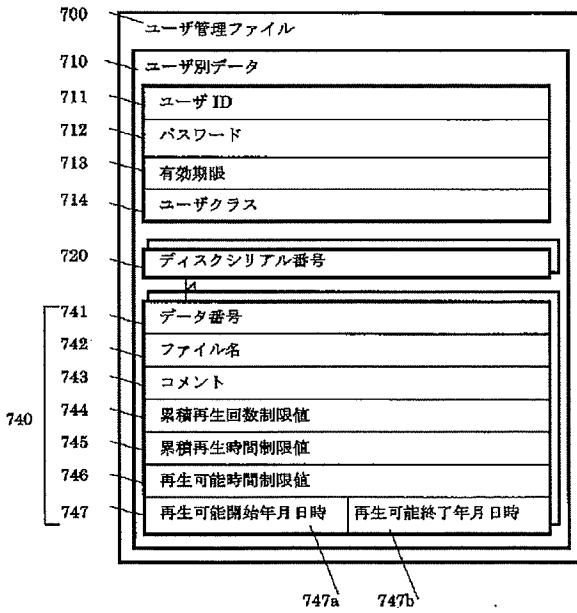
[Drawing 22]

図 2 2



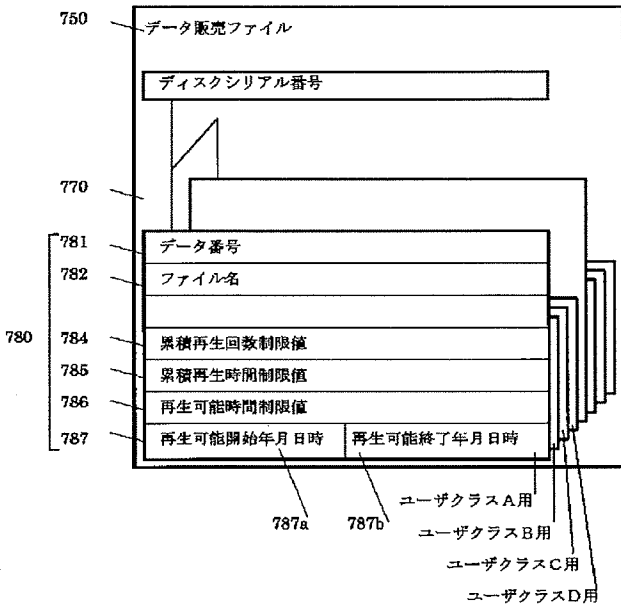
[Drawing 7]

図 7



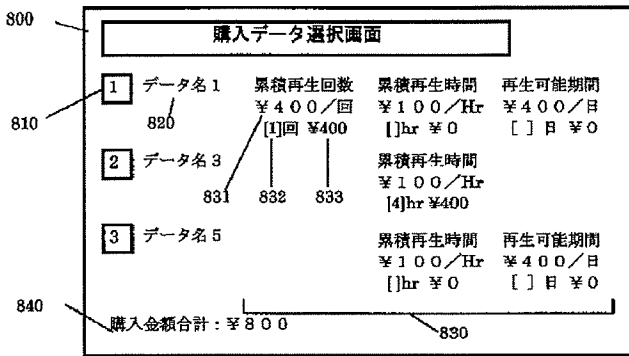
[Drawing 8]

図 8



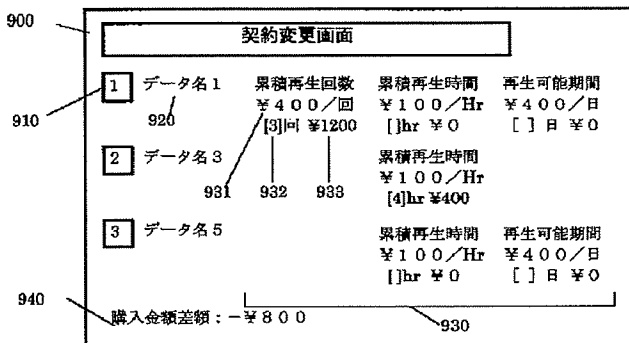
[Drawing 9]

図 9



[Drawing 10]

図 10



[Drawing 11]

図 1 1

4001

販売価格変更画面 1

ユーザID: []
4011

パスワード: []
4012

ディスクシリアル番号: []
4013

[Drawing 12]

図 1 2

4002

販売価格変更画面 2

4010

| | | | | |
|---|--------|------------------------------|------------------------------|----------------------------|
| 1 | データ名 1 | 累積再生回数 ¥400/回 ¥[500]/回 | 累積再生時間 ¥100/Hr ¥[]/hr | 再生可能期間 ¥400/日 ¥[]/日 |
| 2 | データ名 2 | | 累積再生時間 ¥100/Hr ¥[]/hr | |

4031 4032

4030

ディスクシリアル番号: 4033ABY00048 4050

[Drawing 13]

図 1 3

4101

ユーザクラス変更画面 1

ユーザID: []
4111

パスワード: []
4112

変更ユーザID: []
4113

[Drawing 14]

図 1 4

4102

ユーザクラス変更画面 2

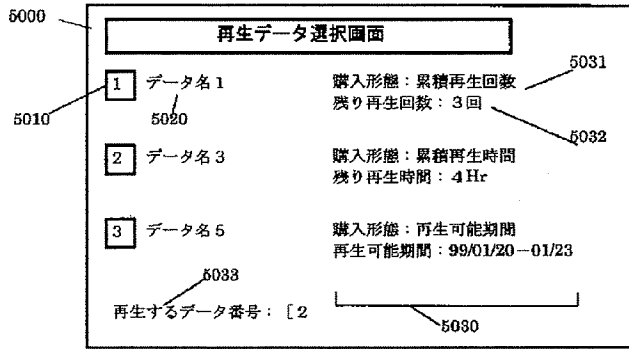
ユーザID: 04947474
4114

現在のクラス: D
4115

変更後のクラス: [C]
4116

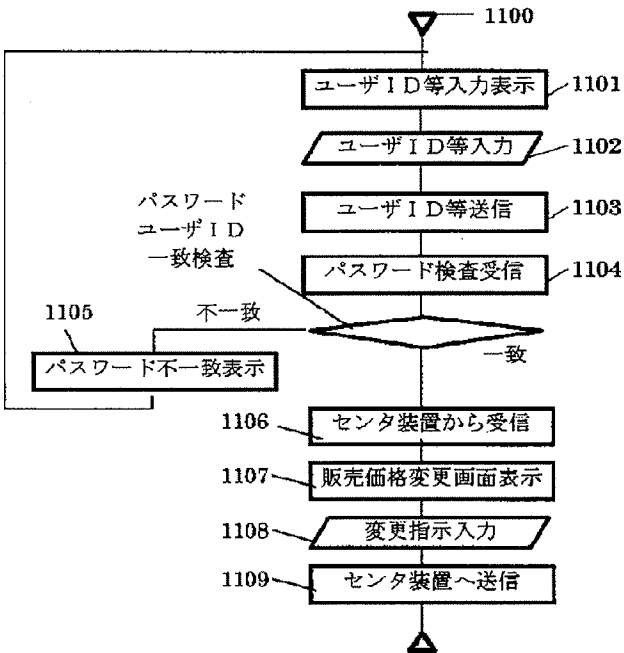
[Drawing 15]

図15



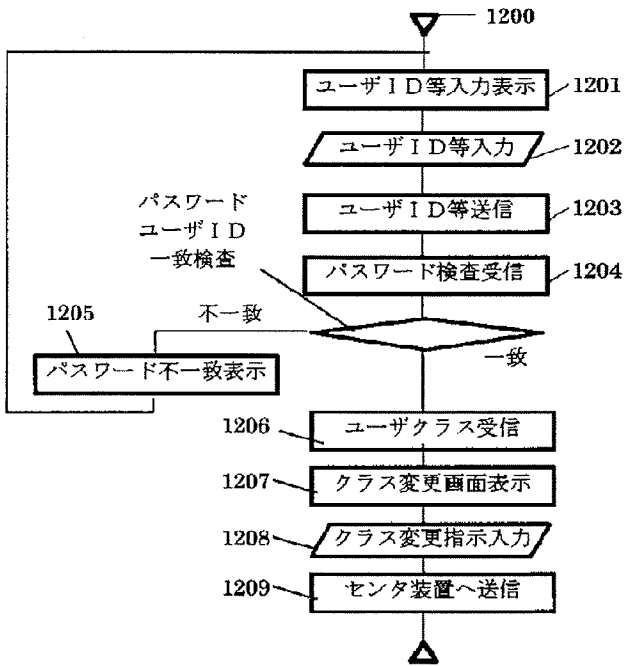
[Drawing 17]

図17



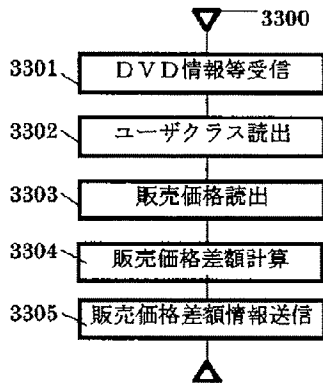
[Drawing 18]

図 1 8



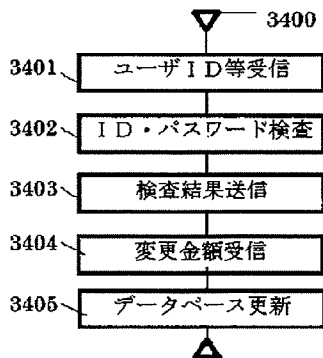
[Drawing 24]

図 2 4



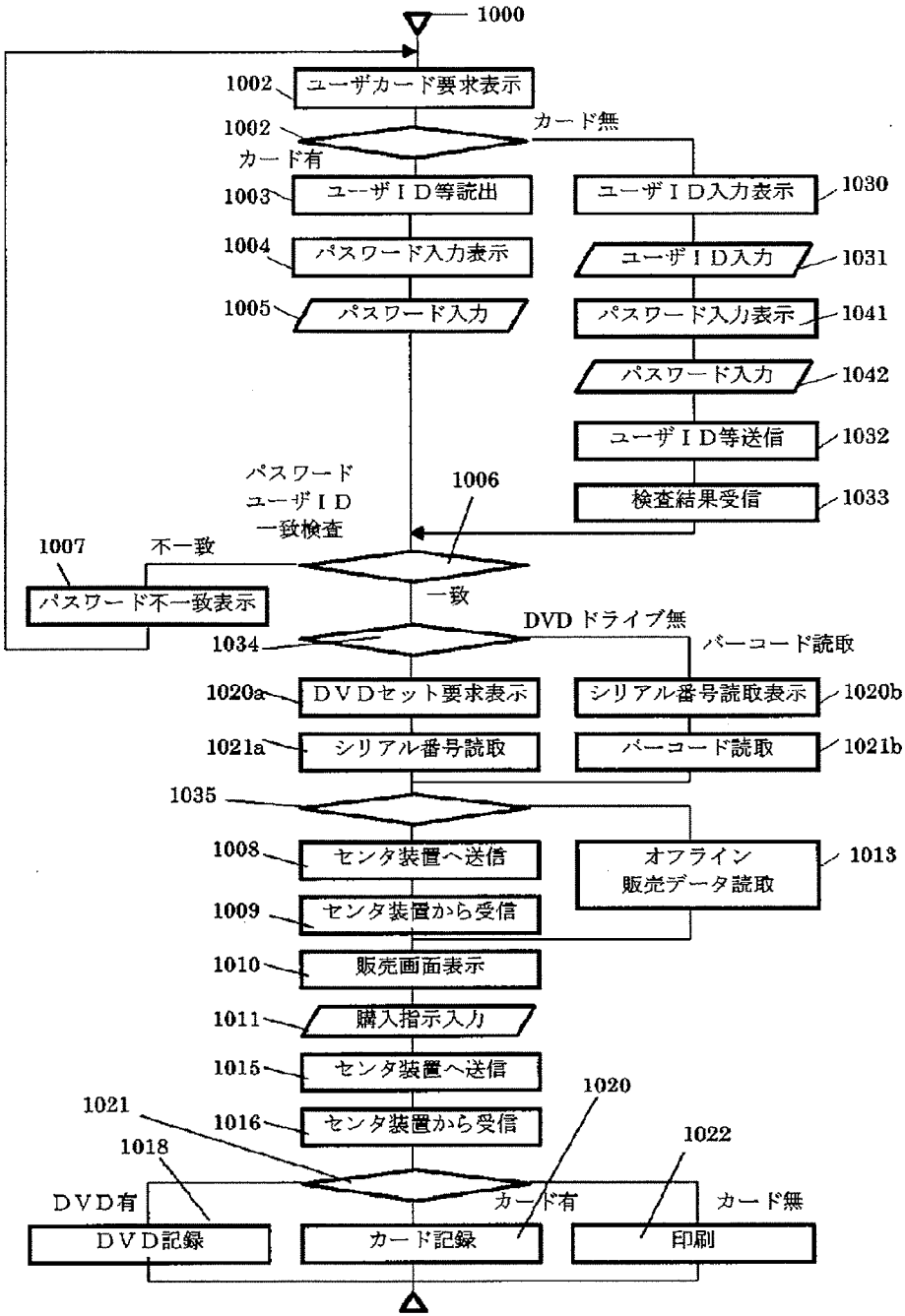
[Drawing 25]

図 2 5



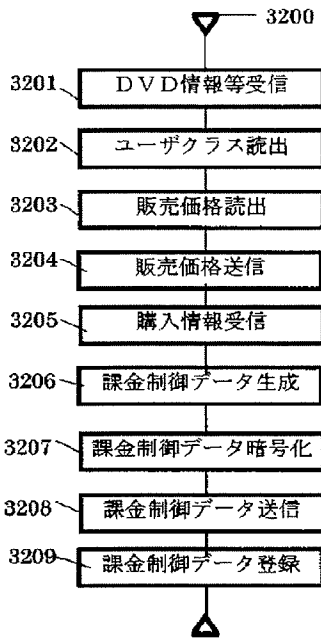
[Drawing 16]

図 16



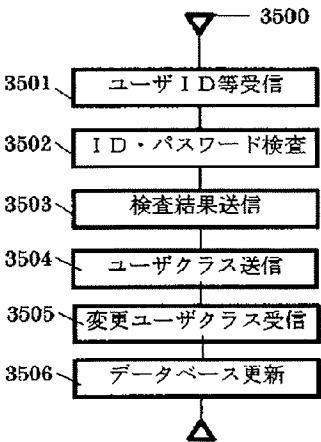
[Drawing 23]

図 2 3



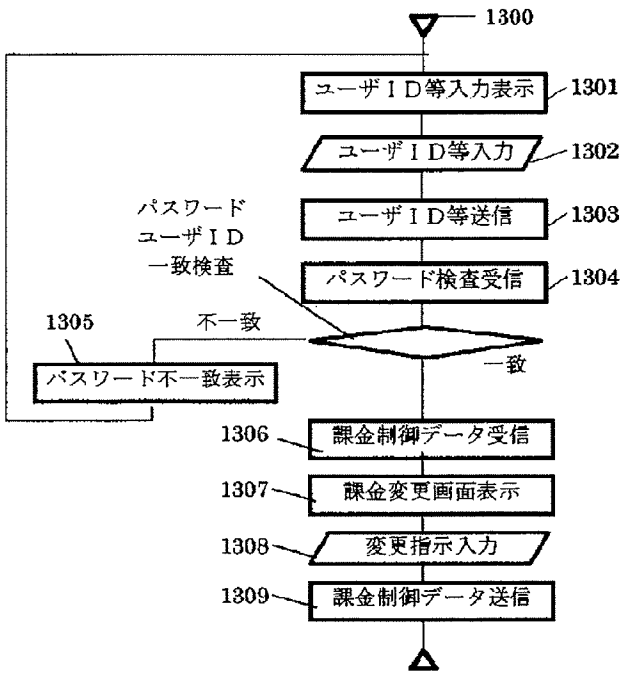
[Drawing 26]

図 2 6



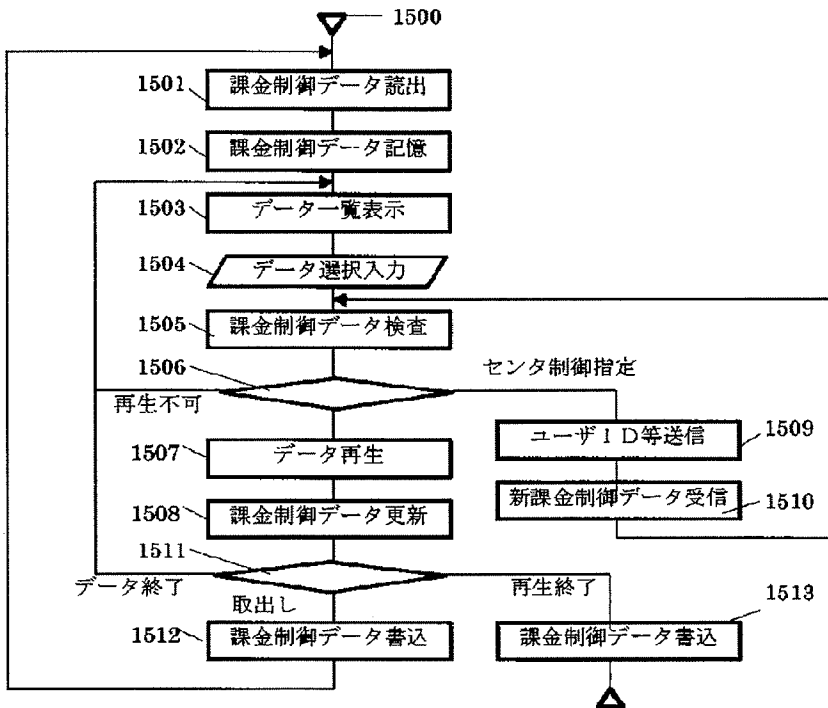
[Drawing 19]

図 1 9

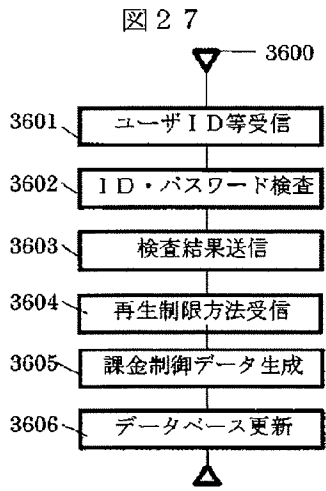


[Drawing 20]

図 2 0

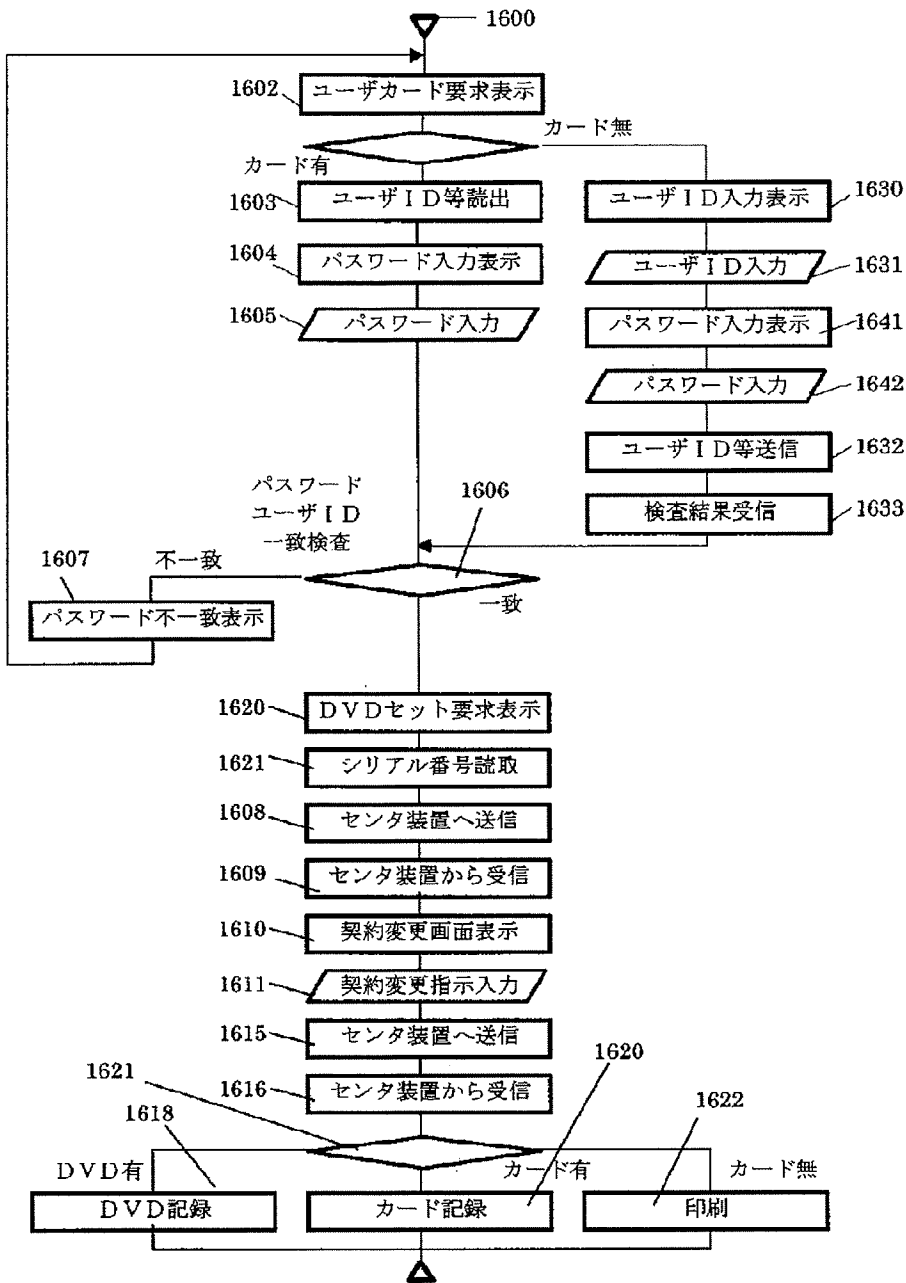


[Drawing 27]



[Drawing 21]

図 2 1



DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the fee collection control method and device of off-line data.

[0002]

[Description of the Prior Art]In on-line use of the data which started in use of DB(s) (DataBase), such as literature documentation and corporate credit investigation. In recent years, a variety of data of the Internet, online karaoke, VOD (Video on Demand), etc. comes to be dealt with, and large scale-ization is following the data to hundreds of megabytes of picture image data from hundreds of bytes of text data. On the other hand, although improvement in the speed is also following the access speed of the communication line to several mega bps from hundreds of bps, it has not caught up with large scale-ization of data including picture image data. Mass picture image data as indicated to Tokuganhei9-255389 Then, CD, It records on mass media, such as optical discs including DVD, a user is beforehand sold or supplied widely, and the method of carrying out only control of the propriety of the use, the purchase of data, etc. to utilization time via communication is beginning to be used. As for the fee collection to the data in this case, it is common to be carried out based on the standard decided beforehand, i.e., the utilization time, using frequency, etc. And a single fee collection standard is used in the distribution service of such data.

[0003]Such off-line use of data has not only when storing and distributing to media, such as an optical disc, but a gestalt which stores data into a terminal unit, such as distributing an image to the image server of a hotel using a teletext or a satellite, and is used later. It is not only the purpose that this sends large capacity data with little update frequency via a communication line with little transmission capacity, There are various purposes, such as use of a time zone with little traffic of communication lines, such as night, use of a small amount fee time zone, and off-line use of data suitable for the planned distribution and reception in consideration of traffic or telex rate gold of data.

[0004]

[Problem(s) to be Solved by the Invention]The purpose of this invention is to solve the following problems.

[0005](1) In the service which records the data body in which realization of various fee collection gestalten carries out difficult use on off-line media, such as an optical disc, and distributes it to a user beforehand, although it is off-line media, therefore, The fee collection in the utilization time point of the data according to the situation (a user's differentiation) of a utilization time term or a user and change of a charging method were difficult.

[0006]In recent years, sale of various products and service lets a violent marketing battle pass, and came to be provided with various gestalten. Differentiation of the customer especially according to rental spending and importance is remarkable at non-charge of the bank charge in a customer with much savings volume, offer of the free airline ticket in using frequency and an aeronautical-navigation customer

with much distance, etc. The same tendency is expected also in sale of picture image data, such as a movie.

[0007]However, especially in off-line media, such as a VCR cassette tape, CD, and DVD, Conventionally, using frequency was used as a standard of the fee collection to data the data unit [, such as media units, such as CD, or a movie, and music,], available partial unit [of data] and its utilization-time, and utilization time term. However, those standards were difficult to be immobilization and to change a charging method (a standard or its unit prices, such as regeneration time and reproduction frequency) for every service, by change of a user's accumulation utilization time, accumulation using frequency, and a member class, a campaign period, etc.

[0008](2) Most, realization of a perfect outright-sales gestalt is instant delivery of the goods by cash settlement, and the effective method has it in making impossible specific the user who becomes a sale place at protection of a user's personal information accompanying difficult sale. In service of the parts of the goods for adults, etc., the way at the time of making a user impossible specific can obtain good sales performance. However, in off-line media which are indicated in document conventionally [above-mentioned] which sells the partial data in media, since a customer's management became indispensable, sale which made the user unspecified was difficult.

[0009]The purpose of this invention is to solve these problems.

[0010]

[Means for Solving the Problem]A sales terminal which sells media or data, sold media, or data, The following means are formed in an off-line data carrier distribution system which consists of a user terminal in which a user performs reproduction (use) of a center apparatus which memorizes a user of a sale place, and a gestalt of fee collection and sold media, or data.

[0011]The 1st fee collection control data that recorded a charging method in a point-of-sale of data which a center apparatus memorized and was sold in a sales terminal.

[0012]The 2nd fee collection control data that is added to media or data and specifies processing required for reproduction of media or data.

[0013]The 3rd fee collection control data that is notified to a user terminal from a center apparatus, and specifies processing required for reproduction of media or data.

[0014]A selling terminal which registers a data identifier which specifies sold media or data as only, user ID which specifies a user of a sale place as only, and the 1st fee collection control data to a center apparatus, and adds the 2nd fee collection control data to media or data.

[0015]A data identifier which specifies sold media or data as only, and user ID which specifies a user of a sale place as only, A center apparatus which memorizes a correspondence relation of the 2nd fee collection control data added to these media or data, and transmits the 3rd fee collection control data to a user terminal based on a demand from a user terminal.

[0016]A user terminal which acquires the 3rd fee collection control data from a center apparatus, and performs reproduction (acquisition) of data or media based on the 2nd and 3rd fee collection control data based on the 2nd fee collection control data added to data or media.

[0017]

[Embodiment of the Invention]The multimedia data sales system which is one working example in the off-line data carrier distribution system of this invention is explained.

[0018](System configuration) The system configuration of a multimedia data sales system is explained using drawing 1. 10 is DVD which stored one or more multimedia data to sell. 20 is a sales terminal which inputs the information of the user who purchased the information on DVD10 sold when selling DVD10, and its DVD. 30 is a center apparatus which memorizes the information of DVD10 sold or its user and manages the sales terminal 20 and the user terminal 40. 40 is a terminal in which the user who purchased DVD10 reproduces the multimedia data stored in DVD10 (it reads from DVD and uses). The file which stored multimedia data, the fee collection control data which controls the scramble-ized reproduction of these multimedia data, etc. are stored in DVD10. DVD10 can be specified as only by a disk serial number. Although 10 is DVD in this example, as long as it is a memory medium, it may be whatever, such as semiconductor memory, a magnetic disk, a magneto-optical disc, and an organism memory. The sales terminal 20, the center apparatus 30, and the user terminal 40 of each other are connected by the communication line 50. 60 is a user card and user ID and a password required for a user's attestation, and fee collection control data required for reproduction of the data in DVD10 are recorded. Although the center apparatus 30 was formed in drawing 1, when managing sale of DVD10 only by the sale side, the composition with which the center apparatus 30 and the sales terminal 20 were united is also possible.

[0019](Sales terminal) The outline of a sales terminal is explained using drawing 2.

[0020]The sales terminal 20 is equipped with the bar code reader 201, the touch-sensitive customer side display 202, the salesperson side display 203, the salesperson keyboard 204, IC card reader writers 205, the printer 206, and the DVD drive 207. Sales terminal 20 main part has the communication control part

210 which performs communication with I/O control unit 208 which controls these peripheral equipment 201-206, the treating part 209 which performs various processings in the sales terminal 20, the memory storage 211 which memorizes various data when processing, and the center apparatus 30.

[0021]The serial number of DVD which specifies DVD as only in the sales terminal 20, The user ID which specifies a buyer as only, and data ID which specifies the data sold among the data stored in this DVD at the time are inputted, it transmits to the center apparatus 30, the selling price of each data is received from the center apparatus 30, and it displays on the display 202. And the data purchased to a customer is made to choose, it transmits to the center apparatus 30 and the sales result is registered. The input of the serial number of DVD is performed by reading bar code printing recorded on the package of the main part of DVD, or this DVD by the bar code reader 201. It is also possible to form the DVD drive 207 in a sales terminal, and to read on DVD the serial number of optics or this DVD by which magnetic recording was carried out by reproduction of DVD.

[0022]A user is setting the user card 60 to IC card reader writers 205, and inputs into the sales terminal 20 the user ID currently recorded in this user card. A user chooses the data to purchase in the customer side display 202. The sales terminal 20 acquires the fee collection control data 500 explained at the back for reproducing the sold data in DVD with the user terminal 40 from the center apparatus 30, and records it on the user card 60 set to IC card reader writers 205. When the user is not carrying the user card 60 when purchasing data, the input of the user ID by the keyboard 204 and printing of the fee collection control data 500 based on the printer 206 are possible. When purchasing data, the input of user ID is not indispensable and is dealt with as an unspecified user in that case.

[0023]When a DVD-RAM disk is used, it is possible to connect a DVD-RAM disk to the DVD drive 207 of the sales terminal 20, and to record the fee collection control code 500 on DVD directly. When making payment of the fee from the user to the sale side when purchasing, quick cash settlement of accounts or the credit card transaction to the user concerned based on user ID is used.

[0024](User terminal) The outline of a user terminal is explained using drawing 3.

[0025]The user terminal 40 has the DVD drive 407, IC card reader writers 402, the display 403, and the keyboard 404. User terminal 40 main part has the communication control part 410 which performs communication with I/O control unit 408 which controls these peripheral equipment 401-407, the treating part 409 which performs various processings in the user terminal 40, the memory storage 411 which memorizes the data in connection with various processings, and a center apparatus.

[0026]In the user terminal 40, when a user sets the user card 60 to IC card reader writers 402, the user ID in the user card 60, a password, and fee collection control data are inputted into the user terminal 40. And if a user enters a user password from the keyboard 404 and this password is in agreement with the password in the user card 60, it will become renewable [the data which the user in DVD10 similarly purchased according to the fee collection control data in the user card 60]. When the user is not carrying the user card 60 when reproducing data, the input of the user ID by the keyboard 404, a password, and fee collection control data is possible.

[0027]When a user newly purchases the data which is not purchased in DVD10 already possessed, according to this fee collection control data 500, reproduction of new data is attained with the user terminal 40 by requiring the new fee collection control data 500 of the center apparatus 30.

[0028]When making payment of the fee from the user to the sale side when purchasing, the credit card transaction from the user concerned based on user ID to the vender side using sales terminal ID, etc. are used.

[0029](Center apparatus) As for the center apparatus 30 explained using drawing 4 about the outline of a center apparatus, it has the display 303 and the administrator keyboard 304. Center apparatus 30 main part, The communication control part 310 which performs communication with I/O control unit 308 which controls these peripheral equipment 303 and 304, the treating part 309 which performs various processings in the center apparatus 30, the sales terminal 20, and the user terminal 40, various processings, each user terminal 40, the sales terminal 20, the data in connection with DVD10, There is DB311 which memorizes the information of a buyer and a vender.

[0030]The serial number of DVD in which the center apparatus 30 specifies DVD as only, The user ID which specifies a buyer as only, the data number which specifies the data sold among the data stored in this DVD at the time, And it receives via the communication control part 308 from the sales terminal 20, and sales terminal ID etc. which specify the sales terminal 20 in which this data was sold are memorized to DB part 311. The selling price of data is calculated according to conditions, such as a user's purchase performance and a campaign period, and it provides to the sales terminal 20 or the user terminal 40.

[0031]what the center apparatus 30 generates new fee collection control data, and transmits to this user terminal 40 by the demand from the user terminal 40 -- the user terminal 40 -- this -- it becomes renewable [the new data corresponding to new fee collection control data].

[0032](Fee collection control data) Fee collection control data is explained using drawing 5.

[0033]Fee collection control data restricts reproduction of DVD according to a user's purchase style (restriction of specification of the purchased data, reproduction frequency, etc.).

[0034]In the fee collection control data 500. DVD. The disk serial number 510 and this DVD which are specified as only. Sales terminal ID530 which specifies the user ID 520 which specifies the user who purchased as only, and the sales terminal which sold this DVD as only, user terminal ID521 which specify a user terminal as only, and the data number 541 and its file name of the data which the user purchased, The comment 543 explaining the contents of data and the reproduction limiting methods (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) 544-547 corresponding to this each data are described. When restricting reproduction by accumulation reproduction frequency, the accumulation reproduction frequency limit value 544, When carrying out by accumulation reproduction time, the accumulation-reproduction-time limit value 545 carries out in refreshable time and the refreshable time limit value 546 carries out in a refreshable period, 547b is described for 547a and the end date time of refreshable at the time of refreshable inaugural year days and months. The data of 541-548 is described for each [which is stored in DVD10] data of every. The fee collection control data 500 is memorized for every DVD10.

[0035]With the fee collection control data 500, when the center control 548 is specified as DVD concerned or data, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 40.

[0036]It is enciphered in the form which can be canceled by a specific key code, and this fee collection control data 500 is recorded on DVD10 or the user card 60. As this fee collection control data 500 was shown in drawing 5, except when a record format describes, describing in script form like a programming language is also considered.

[0037]A file name may be used although the data number is used for discernment of the data in DVD in this example.

[0038](User card) The user card 60 is explained using drawing 6.

[0039]Record reproduction media, such as an IC card and a magnetic card, are used for the user card 60. On the user card 60, the password 612 for performing attestation of the user ID 611 and this user who specify a user as only, the term of validity 613 of this user card, the disk serial number620, and the fee collection control data 640 are memorized. The disk serial number 620 is for identifying of which DVD10 the fee collection control data 640 is recorded on the user card 60, and can memorize the information 620 and 640 about one or more DVDs on the one user card 60. It is equivalent to the fee collection control data 500 explained by drawing 5 about the contents of the fee collection control data 640.

[0040](User management file) The user management file 700 is explained using drawing 7.

[0041]The user management file 700 is stored in DB311 of the center apparatus 30, and records the correspondence relation between user ID and a password, and the purchase style for every DVD according to each user. The contents and the structures 711-747 of the user management file 700 serve as the form where the data structure in the user card 600 shown in drawing 6 was stored in every two or more, i.e., user, 710. However, the user class 714 which shows the class which differentiated a user, such as changing the selling price of data according to a user, is stored.

[0042](Data sales file) The data sales file 750 is explained using drawing 8.

[0043]The data sales file 750 is stored in DB311 of the center apparatus 30, and memorizes the price of each data currently recorded in DVD10. the data sales file 750 -- the unit prices 784-787 of the disk serial number 760, the data number 771, the file name 782, and each playback limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) -- an user class (A, B, C, D) -- it is recorded independently.

[0044]A data sales file may be stored also in the memory storage 211 of the sales terminal 20 so that the sales terminal 20 can sell data the center apparatus 30 and off-line.

[0045](Purchase data selection picture) A purchase data selection picture is explained using drawing 9.

[0046]The purchase data selection picture 800 is a screen for a user to choose the data in DVD to purchase in the sales terminal 20. A total of 840 of the data number 810, the data name 820, the purchase style 830 of each data, and the amount of money for a purchase schedule is displayed on the purchase selection picture 800 about each data in DVD10 which a user is going to purchase. The unit price 831, the purchase unit 832 which a user inputs, and the purchased amount 833 of the data are displayed about each reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can purchase the purchase style 830 of each data. The file name of this data is used for a data name.

[0047](Contract modification screen) The contract modification screen 900 is explained using drawing 10.

[0048]In the user terminal 40, when purchasing newly the non-purchase data in DVD10 which the user owns or changing the purchase style of purchased data that is, the contract modification screen 900 is used, when changing the contract form about the DVD. A total of 940 of the data number 910, the data name 920, the purchase style 930 of each data, and the amount of money for a purchase schedule

is displayed on the contract modification screen 900 about each data in DVD10 which a user is going to purchase. The unit price 931, the purchased unit 932, and the purchased amount 933 of the data are displayed about each reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can purchase the purchase style 930 of each data. A contract is changed inputting a new purchase unit into the purchased unit 932, or by inputting into the purchase unit 932 of another reproduction limiting method. And the difference of the purchased amount before change and the purchased amount after change is displayed on a total of 940 of the amount of money for a purchase schedule. When a purchase unit is reduced, a user is able for the total amount to be subtracted and to receive refundment.

[0049]This contract modification screen 900 is used also as an accounting information data changing screen in the sales terminal 20.

[0050](Selling price change screen) The selling price change screens 4001 and 4002 are explained using drawing 11 and drawing 12.

[0051]In the sales terminal 20, the selling price change screens 4001 and 4002 are used in order to change the selling price of the data in specific DVD10. First, a salesperson inputs the user ID 4011 as his salesperson, the password 4012, and the disk serial number 4013 of DVD10 which changes the selling price using the selling price change screen 1 (4001). Next, the selling price of each data is changed using the selling price change screen 2 (4002). The data number 4010, the data name 4020, the purchase style 4030 of each data, and the disk serial number 4050 are displayed on the selling price change screen 2 (4002) about each data in DVD10 which is going to change the selling price. About the disk, about each playback limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) which can be sold, the purchase style 4030 of each data displays the unit price 4031 before the change, and inputs the unit price 4032 after change. By specific operation, it can add and the reproduction limiting method which can sell each data can be deleted.

[0052](User-class change screen) The user-class change screens 4101 and 4102 are explained using drawing 13 and drawing 14.

[0053]In the sales terminal 20, the user-class change screens 4101 and 4102 are used in order to change a specific user's user class. First, a salesperson inputs the user ID of the user who changes the user ID 4111 as his salesperson, the password 4112, and an user class using the user-class change screen 1 (4101). Next, the user class of the user concerned is changed using the user-class change screen 2 (4102). The user ID 4114 of the user who is going to change an user class, and the present user class 4115 of the user concerned are displayed on the user-class change screen 2 (4102), and the user class 4116 after change is inputted into it.

[0054](Regenerative data selection picture) The regenerative data selection picture 5000 is explained using drawing 15.

[0055]The regenerative data selection picture 5000 is used in order to choose the data which a user is going to reproduce in the user terminal 40. The data number 5010, the data name 5020, and the purchase style 5030 of each data are displayed. The available unit 5032 which remains is displayed on the purchase style 5030 of each data at the time among the purchased reproduction limiting method (accumulation reproduction frequency accumulation reproduction time, refreshable time, refreshable period) 5031 and the unit purchased [the]. The file name of this data is used for a data name, and the input 5033 of a data number performs selection of data.

[0056]Next, each processing in this example using the system configuration, the data structure, and screen specifications which were expressed above is explained.

[0057](Processing of a sales terminal)

(1) Explain the sales processing of a sales processing sales terminal using drawing 16.

[0058]Processing accompanying sale of DVD10 in the sales terminal 20 is performed in the following procedures.

[0059]The sales processing 1000 will display the request message which sets the user card 60 to a buyer to the card reader 205 on the customer side display device 202, if a sales processing start key is inputted (1002), The user ID 611, the password 612, and the term of validity 613 which are stored in the user card 60 are read (1003). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1004), and the input of a password is received (1005). And coincidence with the password 612 read from the user card 60 is inspected (1006).

[0060]When the user card 60 is not shown from a customer, the message which requires the input of user ID of a buyer is displayed on the customer side display device 202 (1030), and the input of user ID is received (1031). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1041), and the input of a password is received (1042). And in [transmit this user ID and the password which were entered into the center apparatus 30 (1032), and] the center apparatus 30, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are registered into the user management file 700 of the center apparatus 30] is inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30 (1033).

[0061]And if correspondence of user ID and a password is inharmonious, a password will display an inharmonious message on the customer side display

device 202 (1007). When it does not have user ID, it is dealt with as an unspecified user by inputting "9999" as user ID. The handling as an unspecified user can make impossible pursuit of the fact of this user that purchased this data, and can protect this user's personal information.

[0062]If a password is in agreement, the sales processing 1000 will display the message which requires the set to the DVD drive 207 of DVD10 on the salesperson side display device 203 (1020a), and will read the disk serial number of DVD (1021a). The serial number of DVD10 is inputted by the input which used (1034), the bar code reader 201, and the keyboard 204 when there was no DVD drive 207 in the sales terminal 20 (1021b).

[0063]And the serial number of sales terminal ID which specifies a sales terminal as the center apparatus 30, the user ID which the buyer inputted, and DVD set to the DVD drive 207 is transmitted (1008), and the sales amount according to purchase style of each data is received from the center apparatus 30 (1009). And the purchase data selection picture 800 which requires the input of the number of data, and the purchase style of each data which was shown in the customer side display device 202 at drawing 9, and to purchase, It displays as a table of the sales amount of the name 820 of each data stored in DVD10, and the sales amount 831 of each purchase style (1010), and the input of the data number 810 and the purchase style 830 is received (1011). The input of a data number and a purchase style is displayed as a total of 840 of the selling price of the data which the amount of money for a purchase schedule chose while it is carried out until an end is directed, and an input is performed. The sales amount is asked to the center apparatus 30 because the sales amount may change with a user's purchase performance, a vender's sales performance, a selling area, sales promotion periods, etc.

[0064]When not asking the center apparatus 30 the sales amount (off-line processing), (1035), The sales amount of each data is searched from the data sales file 750 memorized by the memory storage 211 in the sales terminal 40 (1013), and it displays as a table of the name of each data, and the sales amount of each purchase style (1010).

[0065]Next, the data number of the data which the customer purchased, and a purchase style are transmitted to the center apparatus 30 (1015). And it is generated according to the purchase style of each data sold from the center apparatus 30, the enciphered fee collection control data 500 is received (1016), and it records on DVD10 (1018). When unrecordable on DVD10, it is enciphered and the fee collection control data 500 is recorded on a user card (1020). When unrecordable on a user card, or when the user does not have a user card, the fee collection control data 500 enciphered using the printer 206 of a sales terminal is

printed (1022).

[0066](2) Explain the selling price change processing in the selling price change processing sales terminal 20 using drawing 17.

[0067]If a selling price change processing start key is inputted, the selling price change processing 1100, To the salesperson side display device 203, a vender's user ID, a password, And the selling price change screen 1 (4001) shown in drawing 11 which requires the input of the disk serial number of DVD is displayed (1101), and the disk serial number of DVD10 is inputted by the input using the bar code reader 201 or the keyboard 204 (1102).

[0068]And the serial number of sales terminal ID, user ID, a password, and DVD is transmitted to the center apparatus 30 (1103). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the password 712] which are registered into the user management file 700 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The selling price change processing 1100 receives the coincidence inspection result of the password (1104), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display device 202 (1105). If a password is in agreement, the sales amount according to purchase style of each data before change will be received from the center apparatus 30 (1106). And the selling price change screen 2 (4002) shown in drawing 12 which requires the input of selling price ***** of the salesperson side display device 203, the name 4020 of each data stored in DVD10, and each purchase style 4030 -- it displays as a table of the sales amount 4031 before another change (1107), and the input of the sales amount 4032 after change is received (1108). An input is performed until an end is directed. Next, the sales amount according to purchase style of each data after change is transmitted to the center apparatus 30 (1109). In the center apparatus 30, the contents of the data sales file 750 are updated to the sales amount according to purchase style of each received data (3406).

[0069](3) Explain the user-class change processing in the user-class change processing sales terminal 20 using drawing 18.

[0070]If an user-class change processing start key is inputted, the user-class change processing 1200, The user-class change screen 1 (4101) shown in drawing 13 which requires the input of the user ID of the user who changes a vender's user ID, a password, and an user class into the salesperson side display device 203 is displayed (1201), and the input of them 4111-4113 is performed (1202). And the user ID of sales terminal ID, user ID, a password, and a change target is transmitted to the center apparatus 30 (1203). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the

password 712] which are registered into the user management file 700 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The user-class change processing 1200 receives the coincidence inspection result of the user ID and password (1204), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display 203 (1205). If a password is in agreement, the user class of the user concerned before change will be received from the center apparatus 30 (1206), The user-class change screen 2 (4102) shown in drawing 14 which requires the input of the change of an user class to the salesperson side display device 203 is displayed (1207), and the input of the new user class 4116 is received (1208). Next, the user ID of each user after change and a new user class are transmitted to the center apparatus 30 (1209). In the center apparatus 30, the user class 714 of the user ID 711 which received is updated in the user management file 700.

[0071](4) Explain the accounting information data changing in the accounting information data changing processing sales terminal 20 using drawing 19.

[0072]In the fee collection control data 500, when the center control 548 is specified, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 40. It is specified when a vender and the donor of data want to change if needed, the conditions 500 required for reproduction, i.e., the fee collection control data, of the data. The directions which change the fee collection control data 500 registered into DB311 of the center apparatus 30 are performed in the sales terminal 20.

[0073]If an accounting information data changing processing start key is inputted, the accounting information data changing processing 1300 will display the message which requires a vender's user ID and the input of a password on the salesperson side display device 203 (1301), and will perform those inputs (1302). And sales terminal ID, user ID, and a password are transmitted to the center apparatus 30 (1303). In the center apparatus 30, a salesperson's user ID 711 and the coincidence of correspondence-related [of the password 712] which are registered into the user management file 700 of DB311 of the center apparatus 30 are inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30. The fee collection control data change processing 1300 receives the coincidence inspection result of user ID and a password (1304), and if the correspondence relation between user ID and a password is inharmonious, it will display a message with an inharmonious password on the salesperson side display 203 (1305). If a password is in agreement, the fee collection control data of the user concerned before change will be received from the center apparatus 30 (1306), The contract modification screen 900 shown in drawing 10 which requires the

input of change of a reproduction limiting method (lapsed time after accumulation reproduction frequency accumulation reproduction time, refreshable time, a refreshable period, and sale) to the salesperson side display device 203 is displayed (1307), and the input of a new reproduction limiting method is received (1308). An input is performed until an end is directed. Next, the reproduction limiting method after change is transmitted to the center apparatus 30 (1309). In the center apparatus 30, the fee collection control data 500 based on a new reproduction limiting method is generated about the user ID which received, and the fee collection control data data 740 of the user management file 700 of the user concerned is updated.

[0074](Processing of a user terminal)

(1) Explain the regeneration in a regeneration user terminal using drawing 20.

[0075]If DVD10 is set to the DVD drive 407, the user terminal processing 1500 will read the fee collection control data 500 memorized by DVD10 (1501), and will memorize it as the fee collection control data 500 in the memory storage 411 of the user terminal 40 (1502). And the regenerative data selection picture 5000 which requires the input of the table of the data number of each data stored in DVD10, a data name, and a reproduction limiting method (unrestricted **, such as the remaining number of times of refreshable and refreshable time) and the number of the data to reproduce is displayed on the display 403 (1503). If the number 5033 of the data to reproduce is inputted by the user (1504), Based on the fee collection control data (at the at an accumulation reproduction frequency limit value, an accumulation-reproduction-time limit value, a refreshable time limit value, refreshable inaugural year days and months, the end date time of refreshable, the time of a refreshable end date) 500 memorized by the memory storage 411, it is inspected whether the data specified by this number is refreshable (1505). In being refreshable, it reproduces by decoding this data using a releasing scramble key (1507). The fee collection control data 500 in the memory storage 411 is rewritten simultaneously (1508). And if extraction from the DVD drive 407 of DVD10 is directed, the fee collection control data 500 in the memory storage 411 will be written in the fee collection control data 500 in DVD10 (1512), and the fee collection control data of DVD10 will be updated.

[0076]When it is not DVD-RAM that DVD10 can rewrite but DVD-ROM which cannot perform rewriting, the fee collection control data 500 is memorized by the user card 60. Therefore, read-out of the fee collection control data 500 from DVD10 of the above-mentioned processings 1501-1512 and writing are transposed to the thing to the user card 60.

[0077]In the fee collection control data 500, when the center control 548 is specified as data, connection with the center apparatus 30 becomes indispensable

when reproducing the data in the user terminal 40. It is specified when a vender and the donor of data want to change the purchase style of data, and the selling price if needed. That is, the user terminal processing 1500 transmits user ID and terminal ID to a center apparatus (1509), The fee collection control data 500 in the time of corresponding to those user ID and terminal ID is acquired from the fee collection control data 740 stored in the user management file 700 in the center apparatus 30, and it memorizes to the memory storage 411 (1510). And reproduction is judged based on the fee collection control data 500 (1505).

[0078]When performing reproduction restrictions of data by accumulation reproduction frequency, an accumulation reproduction frequency limit value is inspected, when it is not 0, it becomes refreshable, and a decrement is carried out by reproduction start.

[0079]When performing reproduction restrictions of data by accumulation reproduction time, an accumulation-reproduction-time limit value is inspected, when it is not 0 minute, it becomes refreshable, and a decrement is carried out for every per minute after a reproduction start.

[0080]When performing reproduction restrictions of data in refreshable time, the reproduction point from the head of data becomes refreshable until it results in a refreshable time limit value. In this case, rewriting of a refreshable time limit value is not performed.

[0081]When performing reproduction restrictions of data in a refreshable period, the time of refreshable inaugural year days and months and the end date time of refreshable are inspected, and it becomes refreshable when the time of reproduction is included between the time of refreshable inaugural year days and months, and the end date time of refreshable.

[0082]It becomes refreshable, when performing reproduction restrictions of data by after-sale lapsed time and the time of reproduction is before the time of a refreshable end date.

[0083](2) Explain the contract modification processing in a contract modification processing user terminal using drawing 21.

[0084]In the user terminal 40, if the additional purchase of unpurchased data and change (change of a reproduction limiting method) of a purchase style are directed by the user among the data in DVD10, the user terminal 40 will perform contract modification processing 1600. The contract modification processing 1600 performs processing similar to the sales processing in the sales terminal 20.

[0085]If a contract modification key is inputted, the contract modification processing 1600 will display the message which requires the set to the card reader of a user card on the display 403 (1602), and will read the user ID, the password, and the term of validity which are stored in the user card (1603).

[0086]Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1604), and the input of a password is received (1605). And coincidence with the password 612 read from the user card 60 is inspected (1006).

[0087]When the user card 60 is not shown from a customer, the message which requires the input of user ID of a buyer is displayed on the customer side display device 202 (1630), and the input of user ID is received (1631). Next, the message which requires the input of a password of a buyer is displayed on the customer side display device 202 (1641), and the input of a password is received (1642). And in [transmit this user ID and the password which were entered into the center apparatus 30 (1032), and] the center apparatus 30, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are registered into the user management file 700 of the center apparatus 30] is inspected, and the result is transmitted to the sales terminal 20 from the center apparatus 30 (1633).

[0088]And if the correspondence relation between user ID and a password is in agreement, the message which requires the set to the DVD drive 407 of DVD10 will be displayed on the display 403 (1620), and the disk serial number of DVD10 will be read (1621). To the center apparatus 30, and user terminal ID, inputted user ID, The data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407, User ID [which is memorized by the fee collection control data 500 / of a buyer] 520 and sales terminal ID530 is transmitted (1608), and the sales amount according to purchase style of each data is received from the data sales file 750 stored in DB311 of the center apparatus 30 (1609). And the contract modification screen 900 shown indrawing 10 which requires the input of the number of data, and the purchase style of each data purchased on the display 403, It displays as the name 920 of each data stored in DVD10, and the table 930 of the sales amount (difference with a purchased purchase style) of each purchase style (1610), and the input of the data number 910 and the purchase style 932 is received (1611). While the input of a data number and a purchase style is performed until an end is directed, and an input is performed, the amount of money 940 for a schedule is displayed (2510). Next, the data number of the purchased data and a purchase style are transmitted to the center apparatus 30 (1615). And in the center apparatus 30, according to each sold data and its purchase style, the fee collection control data 500 is generated (1616), and it enciphers (1617), and records on DVD10 set to the DVD drive 407 of the user terminal 40 (1618). When it cannot record on DVD10, the enciphered fee collection control data 500 is recorded on the user card 60 (1620). When unrecordable on the user card 60, or when the user does not possess the user card,

the ***** data enciphered using the printer 406 is printed (1622).

[0089](Processing of a center apparatus) Each processing of the center apparatus 30 in connection with each processings 1000-1600 of the sales terminal 20 and the user terminal 40 mentioned above is explained.

[0090](1) Explain password verification processing of the password verification center apparatus 30 using drawing 22.

[0091]If the user ID and the password for password verification are received from the user terminal 20 or the sales terminal 40 (3101), the password verification processing 3100, Coincidence of correspondence-related [of the user ID 711 and the password 712 which are stored in the user management file 700] is inspected (3102), and the message which shows coincidence or an inharmonious result is replied to the user terminal 20 or the sales terminal 40 (3103).

[0092](2) Explain the sales processing of the sales processing center apparatus 30 using drawing 23.

[0093]The user ID into which sales terminal ID and a buyer inputted the sales processing 3200 with the sales terminal, If the data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407 of the sales terminal 40 is received from the sales terminal 40 (3201), The user class (A, B, C, D) 714 of the user who reads the user management file 700 first and has the user ID which received is acquired (3202). Next, the data sales table 750 is inspected and the selling price corresponding to the received disk serial number or each data data number of DVD10 is acquired (3203). The selling price is acquired according to the purchase style applicable to an user class, and transmits to the sales terminal 40 (3204). And if the purchased data number and its purchase style are received from the sales terminal 40 (3205), according to the purchase style of each sold data, the fee collection control data 500 will be generated (3206), and it will encipher (3207), and will reply to the sales terminal 40 (3208). The generated this fee collection control data is registered as the fee collection control data 740 of the user management file 700 (3209).

(3) Explain contract modification processing of the contract modification processing center device 30 using drawing 24.

[0094]The user ID into which user terminal ID and a user inputted the sales processing 3300 with the user terminal 40, The data number of the data stored in the disk serial number of DVD10 or this DVD10 set to the DVD drive 407 of the user terminal 40, If purchase style [of each data before change], user ID [which is memorized by the fee collection control data 500 / of a buyer] 520, and sales terminal ID530 is received from the user terminal 40 (3301), The user class (A, B, C, D) 714 of the user who reads the user management file 700 first and has the user ID which received is acquired (3302). Next, the selling price of each data of one or

more data numbers of the data which inspects the data sales table 750 and is contained in DVD of the disk serial number of DVD10 which received, or the received data number is acquired (3303). The selling price is acquired according to the purchase style applicable to an user class, calculates the difference of the selling price with the purchase style before change (3304), and transmits to a user terminal (3305).

[0095](4) Explain the selling price change processing of the selling price change processing center apparatus 30 using drawing 25.

[0096]The selling price change processing 3400 Sales terminal ID from the sales terminal 40, user ID, If the disk serial number of password and DVD10 is received (3401), A salesperson's user ID 711 and coincidence of correspondence-related [of the password 712] are inspected using the user management file 700 stored in DB311 (3402), and the result is transmitted to the sales terminal 20 (3403). If a password is in agreement, the data sales file 750 will be read and the sales amount according to purchase style of each data before change will be transmitted to the sales terminal 40 (3404). Next, the sales amount according to purchase style of each data after change is received from the sales terminal 40 (3405). And the data sales file 750 is updated to the sales amount according to purchase style of each received data (3406).

[0097](5) Explain the user-class change processing of the user-class change processing center apparatus 30 using drawing 26.

[0098]The user-class change processing 3500 From the sales terminal 40 to sales terminal ID. If user ID, a password, and the user class of the user who changes are received (3501), A salesperson's user ID and coincidence of correspondence-related [of a password] are inspected using the user management file 700 stored in DB311 (3502), and the result is transmitted to the sales terminal 40 (3503). If a password is in agreement, the user class 714 of the user before change will be transmitted to the sales terminal 40 (3504). Next, each user's user ID and user class after change are received from the sales terminal 40 (3505), and the user class 714 of the user management file 700 is updated (3406).

[0099](6) Explain the fee collection control data change processing of the fee collection control data change center apparatus 30 using drawing 27.

[0100]In the fee collection control data 500, when the center control 748 is specified, connection with the center apparatus 30 becomes indispensable when reproducing the data in the user terminal 20. It is specified when a vender and the donor of data want to change if needed, the conditions required for reproduction, i.e., the fee collection control data, of the data.

[0101]The fee collection control data change processing 3600 as an update request of the fee collection control data 500 from the sales terminal 40, user ID, a disk

serial number, and a new playback limiting method (accumulation reproduction frequency accumulation reproduction time.) If refreshable time and a refreshable period are received (3601), a salesperson's user ID and coincidence of correspondence-related [of a password] will be inspected using the user management file 700 stored in DB311 (3602), and the result will be transmitted to the sales terminal 40 (3603). If a password is in agreement, based on the playback limiting method concerned, the new fee collection control data 500 is raw-**(ed), the user management file 700 registered into DB311 will be read, and the fee collection control data 740 corresponding to user ID 711 and disk serial 720 received number will be rewritten.

[0102](Working example which changes a reproduction limiting method by an user class) In above-mentioned working example, although the selling price of the data to a user was changed by the user class, working example which changes the unit (reproduction frequency, regeneration time, refreshable period) of the reproduction limiting method for a sales unit price by an user class is also considered. In this case, if an user class is changed, the unit of the purchased reproduction limiting method can be changed later.

[0103](Working example in data broadcasting) In above-mentioned working example, the buyer carried DVD which is a physical memory medium, and one gestalt of the off-line data distribution which is set to its own user terminal and reproduced was shown. However, distribution etc. distribute data to the hotel image server of the picture image data using data broadcasting and a satellite from a center apparatus on-line at a user terminal, end accumulation is carried out into a user terminal, and it can apply equally also to the system reproduced and used later.

[0104]

[Effect of the Invention]In the off-line data utilization system with which the acquisition time of data differs from the utilization time of data in this invention, it is possible to set up various reproduction limiting methods (the number of times of refreshable, refreshable time, a refreshable period, unrestricted **) as a standard of the fee collection to data. After sale of data, the additional purchase of data is performed and a user or a vender can make a change of a reproduction limiting method. Thus, in this invention, the purchase style of the fine data in consideration of the classification of data or the customer's classification is realizable.

CLAIMS

[Claim(s)]

[Claim 1] In an off-line distribution system of data which acquires and uses data from the exterior of a user terminal in a user terminal, a method (accumulation reproduction frequency.) of restricting use of this data set up to this data before this user terminal acquired this data during accumulation reproduction time and a regeneration phase or a refreshable portion -- specifying -- with a use limiting method alteration means whose change is enabled, after this user terminal acquires this data. A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no allowed use of this data based on a method of restricting use set up to this data when using this data in a user terminal.

[Claim 2] In an off-line distribution system of data which consists of a connectable center apparatus and a user terminal mutually by a communication line, A means to distribute fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of said data and this data to a user terminal from a center apparatus, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 3] In an off-line distribution system of data which consists of a connectable user terminal and a sales terminal mutually by a communication line, A data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in said sales terminal, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 4] In an off-line distribution system of data which consists of a connectable user terminal, a center apparatus, and a sales terminal mutually by a communication line, In a data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation

reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in a sales terminal, and a user terminal, A reproduction limiting method alteration means which changes a method (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) of restricting use of this data currently recorded on a center apparatus, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 5]An off-line distribution system of data which consists of a connectable user terminal, a center apparatus, and a sales terminal mutually by a communication line characterized by comprising the following.

A data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in a sales terminal.

A reproduction limiting method alteration means which changes how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data currently recorded on a center apparatus in a center apparatus or a sales terminal.

A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about how to restrict reproduction about this data from a center apparatus, and is used by a reproduction decision means.

A reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 6]A fee collection control method of off-line data forming a means to change a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) of restricting this use, for every user in Claims 1, 2, 3 and 4 and 5.

[Claim 7]A fee collection control method of off-line data forming a means to change a unit per selling price of a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or

refreshable portion) which restricts this use for every user in Claims 1, 2, 3 and 4 and 5.

[Claim 8]A fee collection control method of off-line data forming a means to change the number of times of a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) which restricts this use, or the selling price per time for every user in Claims 1, 2, 3 and 4 and 5.

[Claim 9]Two or more data is stored in the same storage in Claims 1, 2, 3 and 4 and 5, A fee collection control method of off-line data forming a means it shall be [a means] different for every data in a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) of restricting use of this data.

[Claim 10]A fee collection control method of off-line data having stored two or more data in the same storage, and describing how (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) to restrict this data use, about this each data in Claims 1, 2, 3 and 4 and 5.

[Claim 11]A fee collection control method of off-line data which made one selectable in Claims 1, 2, 3 and 4 and 5 out of two or more methods of restricting use of this data.

[Claim 12]In an off-line distribution system of data which acquires and uses data from the exterior of a user terminal in a user terminal, a method (accumulation reproduction frequency.) of restricting use of this data set up to this data before this user terminal acquired this data during accumulation reproduction time and a regeneration phase or a refreshable portion -- specifying -- with a use limiting method alteration means whose change is enabled, after this user terminal acquires this data. A fee collection control device of off-line data consisting of a reproduction decision means which judges whether it is the no allowed use of this data based on a method of restricting use set up to this data when using this data in a user terminal.

[Claim 13]In an off-line distribution system of data which consists of a connectable center apparatus and a user terminal mutually by a communication line, A means to distribute fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of said data and this data to a user terminal from a center apparatus, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee

collection control device of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 14]In an off-line distribution system of data which consists of a connectable user terminal and a sales terminal mutually by a communication line, A data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in said sales terminal, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control device of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 15]In an off-line distribution system of data which consists of a connectable user terminal, a center apparatus, and a sales terminal mutually by a communication line, In a data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in a sales terminal, and a user terminal, A reproduction limiting method alteration means which changes a method (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) of restricting use of this data currently recorded on a center apparatus, A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control device of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 16]An off-line distribution system of data which consists of a connectable user terminal, a center apparatus, and a sales terminal mutually by a communication line characterized by comprising the following.

A data selling tool which adds fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data to said data, in a sales terminal.

A reproduction limiting method alteration means which changes how (a

refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of this data currently recorded on a center apparatus in a center apparatus or a sales terminal.

A fee collection control data update means used as the new fee collection control data which a user terminal acquires information about how to restrict reproduction about this data from a center apparatus, and is used by a reproduction decision means.

A reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 17]A fee collection control device of off-line data forming a means to change a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) of restricting this use, for every user in Claims 12, 13, 14 and 15.

[Claim 18]A fee collection control device of off-line data forming a means to change a unit per selling price of a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) which restricts this use for every user in Claims 12, 13, 14 and 15.

[Claim 19]A fee collection control device of off-line data forming a means to change the number of times of a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) which restricts this use, or the selling price per time for every user in Claims 12, 13, 14 and 15.

[Claim 20]Two or more data is stored in the same storage in Claims 12, 13, 14 and 15, A fee collection control device of off-line data forming a means it shall be [a means] different for every data in a method (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) of restricting use of this data.

[Claim 21]A fee collection control device of off-line data having stored two or more data in the same storage, and describing how (during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase or refreshable portion) to restrict this data use, about this each data in Claims 12, 13, 14 and 15.

[Claim 22]A fee collection control device of off-line data which made one selectable in Claims 12, 13, 14 and 15 out of two or more methods of restricting use of this data.

[Claim 23] In an off-line distribution system of data which consists of a connectable user terminal and a sales terminal mutually by a communication line, A data selling tool which memorizes fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of said data, in said sales terminal to a memory medium, A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data in a memory medium is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 24] In an off-line distribution system of data which consists of a connectable user terminal and a sales terminal mutually by a communication line, A data selling tool which adds a method (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) of restricting use of this data to said data, in said sales terminal, A user terminal with directions of fee collection control data added to this data. A fee collection control data update means used as the new fee collection control data which acquires information about a method of restricting reproduction about this data from a center apparatus, and is used by a reproduction decision means, A fee collection control method of off-line data consisting of a reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

[Claim 25] An off-line distribution system of data which consists of a connectable user terminal and a sales terminal mutually by a communication line characterized by comprising the following.

A data selling tool which memorizes fee collection control data which described how (a refreshable portion is specified during accumulation reproduction frequency, accumulation reproduction time, and a regeneration phase) to restrict use of said data, in said sales terminal to a memory medium.

A fee collection control data update means which a user terminal uses as the new fee collection control data which acquires information about how to restrict reproduction about this data from a center apparatus, and is used by a reproduction decision means with directions of fee collection control data in this memory medium.

A reproduction decision means which judges whether it is the no for which this fee collection control data is used, and which is allowed use of this data when using this data in a user terminal.

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 8037766 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Linda Lim |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 17-JUL-2010 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 16:40:29 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|------------------------|----|
| Submitted with Payment | no |
|------------------------|----|

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|----------------------|-----------------------------------|--|------------------|------------------|
| 1 | Transmittal Letter | Supplemental_IDS_Cover_Letter.pdf | 71218 <small>88d124175090047b298ab6a9817375301cd984f8</small> | no | 2 |

Warnings:

Information:

| | | | | | |
|---|---|--------------------------------------|--|----|-----|
| 2 | Information Disclosure Statement (IDS) Filed (SB/08) | Supplemental_IDS.pdf | 71724 | no | 1 |
| | | | 4536f2ff6b4e14376d043c5b30a88c6be5909d34 | | |
| Warnings: | | | | | |
| Information: | | | | | |
| This is not an USPTO supplied IDS fillable form | | | | | |
| 3 | Foreign Reference | 080379_000110US_JP_10_269 291.pdf | 12364757 | no | 140 |
| | | | 8ba796faeb1e93b50234da862ecbf03c64f80d58 | | |
| Warnings: | | | | | |
| Information: | | | | | |
| 4 | Foreign Reference | 080379_000110US_JP_11_531 84.pdf | 3089644 | no | 34 |
| | | | 2b74b0612f38332b89bca89e41d74cb4ddf ea63f | | |
| Warnings: | | | | | |
| Information: | | | | | |
| 5 | Foreign Reference | 080379_000110US_JP_11_212 785.pdf | 2682909 | no | 37 |
| | | | fe9b8dd1b8843a2fff3c3067006782e3c67a 823e | | |
| Warnings: | | | | | |
| Information: | | | | | |
| 6 | Foreign Reference | 080379_000110US_JP_11_213 010.pdf | 3739413 | no | 43 |
| | | | 68067c396a3825a2d3256b026eb4acce3f6f da05 | | |
| Warnings: | | | | | |
| Information: | | | | | |
| 7 | Foreign Reference | 080379_000110US_JP_11_272 762.pdf | 5693595 | no | 76 |
| | | | b8a788c517d53abdc79bd96dc1fd5500726 0cef8 | | |
| Warnings: | | | | | |
| Information: | | | | | |
| Total Files Size (in bytes): | | | 27713260 | | |

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on July 17, 2010

PATENT
Attorney Docket No.: 080379-000110US
Client Reference No.: PN759544USB

TOWNSEND and TOWNSEND and CREW LLP

By: *Linda Fein*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hermen-ard Hulst et al.

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS
SYSTEMS

Customer No.: 20350

Confirmation No.: 1812

Examiner: Le, Thien Minh

Art Unit: 2887

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER
37 CFR §1.97 and §1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of references numbered 1-3 are not enclosed. Copies of the remaining references [in compliance with the requirements of 37 CFR §1.98(a)(2)] are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

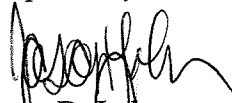
As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Jason D. Lchr
Reg. No. 48,163

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
JDL:lml
62773286 v1

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on 07-27-10

PATENT
Attorney Docket No.: 080379-000110US
Client Ref: PN759544USB

TOWNSEND and TOWNSEND and CREW LLP

By: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hermen-ard Hulst, et al.

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS
SYSTEMS

Confirmation No.: 1812

Examiner: Le, Thien Minh

Art Unit: 2887

REQUEST FOR CORRECTION OF
INVENTIVE ENTITY UNDER 37 CFR
1.48(b)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants respectfully request Correction of Inventorship under 37
C.F.R. §1.48(b) by **removing** currently named inventor **Hermen-ard Hulst**, who was
originally properly included as an inventor in the parent application. However, the
contribution of **Hermen-ard Hulst** is not being claimed in this application.

Hermen-ard Hulst, et al.
Application No.: 12/014,558
Page 2

PATENT

The Commissioner is authorized to charge Deposit Account No. 201430
for the processing fee of \$130 set forth in 37 C.F.R. § 1.17(i) for filing this Request.

Respectfully submitted,



Jason D. Lohr
Reg. No. 48,163

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Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
JDL:atm

62786264 v1

Electronic Patent Application Fee Transmittal

| | |
|---|-------------------------------------|
| Application Number: | 12014558 |
| Filing Date: | 15-Jan-2008 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Filer: | Jason Donald Lohr/Anna Marie Arante |
| Attorney Docket Number: | 080379-000110US |

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--|----------|----------|--------|----------------------|
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Patent-Appeals-and-Interference: | | | | |
| Post-Allowance-and-Post-Issuance: | | | | |
| Extension-of-Time: | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|---|----------|----------|--------|----------------------|
| Miscellaneous: | | | | |
| Processing Fee, except for Provis. apps | 1808 | 1 | 130 | 130 |
| Total in USD (\$) | | | | 130 |

Electronic Acknowledgement Receipt

| | |
|---|-------------------------------------|
| EFS ID: | 8102382 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Anna Marie Arante |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 27-JUL-2010 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 19:31:55 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|--|-----------------|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | \$130 |
| RAM confirmation Number | 5532 |
| Deposit Account | 201430 |
| Authorized User | |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|---|---|--|------------------|------------------|
| 1 | Request under Rule 48 correcting inventorship | 2010_07_27_Request_Correct_Inventive_Entity_080379_000110US.pdf | 42289 0cea602a0a07915736d1d4b85fbc9ada68936b6 | no | 2 |

Warnings:**Information:**

| | | | | | |
|---|-------------------------|--------------|--|----|---|
| 2 | Fee Worksheet (PTO-875) | fee-info.pdf | 30271 44040953cf95daa8735cfdbe59e9dbede98e12b | no | 2 |
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Warnings:**Information:**

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|-------------------------------------|-------|
| Total Files Size (in bytes): | 72560 |
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 12/014,558 | 01/15/2008 | Hermen-ard Hulst | 080379-000110US | 1812 |

20350 7590 09/01/2010
TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

| |
|----------|
| EXAMINER |
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LE, THIEN MINH

| | |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2887

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

09/01/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 12/014,558 | Applicant(s) HULST ET AL. | |
| | Examiner THIEN M. LE | Art Unit 2887 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 6/18/2010.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 24-34, 63-66 and 69-72 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 24-30 and 69-71 is/are allowed.
- 6) Claim(s) 31, 33, 34, 63, 65, 66 and 72 is/are rejected.
- 7) Claim(s) 32 and 64 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 January 2008 is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. 10/111/716.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/17/2010.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

The response to the restriction requirement filed on 6/18/2010 has been entered. Claims 1-23, 35-62, 67-68 and 73-74 have been canceled. Claims 24-34, 63-66 and 69-72 remain for examination.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 31, 33-34, 63, 65-66 and 71-72 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. 7,334,720. Although the conflicting claims are not identical, they are not patentably distinct from each other because they essentially reciting the same limitations.

Claim 31 is rejected in view of claim 3 of the '720 patent in that it recites:

3. A data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier, the terminal comprising:

a first interface for communicating with the data supplier;

a data carrier interface for interfacing with the data carrier;

a program store storing code;

and a processor coupled to the first interface, the data carrier interface, and the program store for implementing the stored code, the code comprising:

code to read payment data from the data carrier and to forward the payment data to a payment validation system (considered as the steps of receiving a request for a data item, and receiving payment data as recited in claim 31);

code to receive payment validation data from the payment validation system;

code responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier (considered as the steps of reading the requested data from a content provider and transmitting the read data to the requester);

and code responsive to the payment validation data to receive at least one access rule from the data supplier and to write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

As can be seen, though the claim languages are not identical, they are essentially reciting the same limitations. Thus, the patent protections have been granted to the earlier filed application.

Claim 33 is rejected in view of claim 3 of the '720 patent.

Claim 34 is rejected in view of claims 2 and 3 of the '720 patent.

Claim 62 is rejected in view of claim 3 of the '720 patent.

Claim 65 is rejected in view of claim 3 of the '720 patent.

Claim 66 is rejected in view of claims 2-3 of the '720 patent.

Claim 72 is rejected in view of claim 3 of the '720 patent.

The entire set of claims of the '720 patent is herein presented for further reviews:

1. A method of controlling access to content data on a data carrier, the data carrier comprising non-volatile data memory storing content memory and non-volatile parameter memory storing use status data and use rules, the method comprising: receiving a data access request from a user for at least one content item of the content data stored in the non-volatile data memory; reading the use status data and use rules from the parameter memory that pertain to use of the at least one requested content item; evaluating the use status data using the use rules to determine whether access to the at least one requested content item stored in the content memory is permitted; and displaying to the user whether access is permitted for each of the at least one

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requested content item stored in the non-volatile data memory.

2. A method as claimed in claim 1 wherein said parameter memory further stores payment data and further comprising selecting one of said use rules dependent upon said payment data.

3. A data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier, the terminal comprising: a first interface for communicating with the data supplier; a data carrier interface for interfacing with the data carrier; a program store storing code; and a processor coupled to the first interface, the data carrier interface, and the program store for implementing the stored code, the code comprising: code to read payment data from the data carrier and to forward the payment data to a payment validation system; code to receive payment validation data from the payment validation system; code responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier; and code responsive to the payment validation data to receive at least one access rule from the data supplier and to write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

4. A data access terminal as claimed in claim 3 further comprising code to transmit at least a portion of the payment validation data to the data supplier or to a destination received from the data supplier.

5. A data access terminal as claimed in claim 3 further comprising code to retrieve from the data supplier and output to a user stored data identifier data and associated value data and use rule data for a data item available from the data supplier.

6. A data access terminal as claimed in claim 5 further comprising code to write use rule data for a data item into the data carrier with the associated data item.

7. A data access terminal as claimed in claim 5 further comprising code to read a stored value from the data carrier, code to compare said stored value with said value data, and code to provide a modified output to a user of one or more of said stored data identifier data, said value data and said use rule data, in response to a result of the comparison.

8. A data access terminal according to claim 3 further comprising code for user input of access control data, code to output the access control data to the data carrier, and code to receive access permission data and output data to the user in response to the received access permission data.

9. A data access terminal as claimed in claim 8 further comprising code to output a data erasure warning in response to the received access permission data.

10. A data access terminal according to claim 3 further comprising code to read reward data from the data carrier and to write modified reward data to the

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data carrier in response to said retrieval of data from the data supplier.

11. A data access terminal according to claim 3 further comprising: code to read identity data from the data carrier; code to transmit the identity data to the data supplier; code to receive user characterizing data from the data supplier; code to retrieve supplementary data in response to said characterizing data; and code to output the supplementary data.

12. A data access terminal according to claim 3 further comprising a cash input device coupled to the processor, to provide cash input value data; and code to update payment data in the data carrier, in accordance with the cash input value data.

13. A data access terminal according to claim 3 integrated with a mobile communication device, a personal computer, an audio/video player, and/or a cable or satellite television interface device.

14. A method of providing data from a data supplier to a data carrier, the method comprising: reading payment data from the data carrier; forwarding the payment data to a payment validation system; retrieving data from the data supplier; writing the retrieved data into the data carrier; receiving at least one access rule from the data supplier; and writing the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.

15. A method of providing data from a data supplier according to claim 14 further comprising: receiving payment validation data from the payment validation system; and transmitting at least a portion of the payment validation data to the data supplier.

16. A method of providing data as claimed in claim 15, wherein the payment validation system comprises a payment processor at the data supplier.

17. A method of providing data as claimed in claim 16, further comprising: reading a stored value from the data carrier; comparing the stored value with said value data; and outputting to a user information indicating the result of said comparing.

18. A method of providing data as claimed in claim 14, further comprising: retrieving from the data supplier a stored data item identifier and associated value data; and writing the stored second data item identifier and associated value data for the data item into the data carrier.

Allowable Subject Matter

Claims 24-30 and 69-71 are allowed.

Claims 32 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose a computer system for providing data to a data requester comprising: (i) a computer interface, (ii) a data access data store; (iii) a program store; (iv) a processor; (v) a code to receive a request; (vi) a code to receive payment data; (viii) a code to read data; (ix) a code to transmit the read data; and having the functions and characteristics as recited in claim 24. The prior art also fails to disclose the limitations of claims 32, 64 and 69-71.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THIEN M. LE whose telephone number is (571)272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve S. Paik can be reached on (571) 272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2887

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thien M. Le/
Primary Examiner, Art Unit 2887

| | | | |
|-----------------------------------|---------------------------------------|---|-------------|
| Notice of References Cited | Application/Control No. 12/014,558 | Applicant(s)/Patent Under Reexamination HULST ET AL. | |
| | Examiner THIEN M. LE | Art Unit 2887 | Page 1 of 1 |

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| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|--|-----------------|-----------------|----------------|
| * | A | US-7,334,720 | 02-2008 | Hulst et al. | 235/380 |
| * | B | US-2008/0041938 | 02-2008 | Wise, Kurt | 235/380 |
| * | C | US-2006/0249570 | 11-2006 | Seifert et al. | 235/380 |
| * | D | US-6,993,507 | 01-2006 | Meyer et al. | 705/40 |
| * | E | US-6,554,192 | 04-2003 | Tingl, Ronald | 235/487 |
| * | F | US-5,740,369 | 04-1998 | Yokozawa et al. | 709/217 |
| * | G | US-7,677,446 | 03-2010 | Wise, Kurt | 235/380 |
| | H | US- | | | |
| | I | US- | | | |
| | J | US- | | | |
| | K | US- | | | |
| | L | US- | | | |
| | M | US- | | | |

FOREIGN PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification |
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| | R | | | | | |
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NON-PATENT DOCUMENTS

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.


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 www.uspto.gov

BIB DATA SHEET
CONFIRMATION NO. 1812

| SERIAL NUMBER | FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. | | |
|---|---|--|-------------------------|---|---------------------|---------------------------|
| 12/014,558 | 01/15/2008 | 235 | 2887 | 080379-000110US | | |
| APPLICANTS Hermen-ard Hulst, Amsterdam, NETHERLANDS; Patrick RACZ, St. Heller, NJ; | | | | | | |
| ** CONTINUING DATA ***** This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720 which is a CON of 10/111,716 09/17/2002 ABN which is a 371 of PCT/GB00/04110 10/25/2000 | | | | | | |
| ** FOREIGN APPLICATIONS ***** UNITED KINGDOM 9925227.2 11/25/1999 | | | | | | |
| ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 02/04/2008 | | | | | | |
| Foreign Priority claimed | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Met after Allowance | STATE OR COUNTRY | SHEETS DRAWINGS | TOTAL CLAIMS | INDEPENDENT CLAIMS |
| 35 USC 119(a-d) conditions met | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Initials | NETHERLANDS | 17 | 71 | 16 |
| Verified and Acknowledged | / Thien M. Le/ Examiner's Signature | | | | | |
| ADDRESS TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 UNITED STATES | | | | | | |
| TITLE DATA STORAGE AND ACCESS SYSTEMS | | | | | | |
| FILING FEE RECEIVED 3140 | FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following: | | | <input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit | | |

EAST Search History

EAST Search History (Prior Art)

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|-------|--|---|------------------|---------|---------------------|
| L1 | 11006 | (235/451,380,382,492).CCLS. | US-PGPUB; USPAT | OR | OFF | 2010/08/29 20:17 |
| L2 | 6900 | (711/100,101,103).CCLS. | US-PGPUB; USPAT | OR | OFF | 2010/08/29 20:17 |
| L3 | 17872 | l1 or l2 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2010/08/29 20:17 |
| L4 | 6513 | receiv\$4 near20 payment near20 data | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2010/08/29 20:17 |
| L5 | 64 | receiv\$4 near20 payment near20 data near40 supplier | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2010/08/29 20:18 |
| L6 | 9 | receiv\$4 same (payment near5 (data or information)) same supplier same validation | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2010/08/29 20:18 |
| L7 | 10 | receiv\$4 same (payment near5 (data or information)) same supplier same validation | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:19 |
| L8 | 237 | receiv\$4 same (payment near5 (data or information)) same (payment near5 distribution) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:19 |
| L9 | 11 | l8 and l3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:19 |

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| L12 | 3 | I3 and I6 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:19 |
| L13 | 3 | I3 and I7 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:20 |
| L14 | 11 | I3 and I8 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:20 |
| L15 | 13 | I9 or I11 or I12 or I13 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/08/29 20:20 |
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EAST Search History (Interference)

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8/ 29/ 2010 8:21:29 PM

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| | | | | | |
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| Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) | | | | <i>Complete if Known</i> | |
| | | | | Application Number | 12/014,558 |
| | | | | Filing Date | January 15, 2008 |
| | | | | First Named Inventor | HULST, Hermen-ard |
| | | | | Art Unit | 2876 |
| Examiner Name | Le, Thien Minh | | | | |
| Sheet | 1 | of | 1 | Attorney Docket Number | 080379-000110US |


| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|-----------------|-----------------------------------|-----------------------------|---|---|
| Examiner Initials* | Cite No. ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number | Kind Code ² (if known) | | | |
| | 1 | US-5,845,281 | A | 12-01-1998 | Benson et al. | |
| | 2 | US-5,933,498 | A | 08-03-1999 | Schneck et al. | |
| | 3 | US-6,018,720 | A | 01-25-2000 | Fujimoto | Corresponds to JP 11-53184 |

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|--------------------------|-----------------------|---------------------------|---------------------|-----------------------------------|-----------------------------|---|---|-------------------------------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | 4 | JP | 10-269291 | A | 10-09-1998 | Sony Corp. | | <input checked="" type="checkbox"/> |
| | 5 | JP | 11-53184 | A | 02-26-1999 | Seta:KK | Corresponds to US 6,018,720 | <input checked="" type="checkbox"/> |
| | 6 | JP | 11-212785 | A | 08-06-1999 | Casio Comput. Co. Ltd. | | <input checked="" type="checkbox"/> |
| | 7 | JP | 11-213010 | A | 08-06-1999 | Planet Computer:KK | | <input checked="" type="checkbox"/> |
| | 8 | JP | 11-272762 | A | 10-08-1999 | Hitachi Ltd. | | <input checked="" type="checkbox"/> |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|---|--------------------------|
| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
| | | | <input type="checkbox"/> |

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|--------------------|------------|-----------------|------------|
| Examiner Signature | /Thien Le/ | Date Considered | 08/29/2010 |
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

| | | |
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| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

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| N | Non-Elected |
| I | Interference |

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| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | |
|-------|----------|------------|------------|--|--|--|--|--|--|
| Final | Original | 01/19/2010 | 08/29/2010 | | | | | | |
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| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

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| N | Non-Elected |
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| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | |
|-------|----------|------------|------------|--|--|--|--|--|--|
| Final | Original | 01/19/2010 | 08/29/2010 | | | | | | |
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| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

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| ✓ | Rejected |
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| N | Non-Elected |
| I | Interference |

| | |
|---|-----------------|
| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | |
|-------|----------|------------|------------|--|--|--|--|--|--|
| Final | Original | 01/19/2010 | 08/29/2010 | | | | | | |
| | 73 | - | - | | | | | | |
| | 74 | - | - | | | | | | |

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|--|--|--|
| Search Notes  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

| | | | |
|-----------------|--------------------|-------------|-----------------|
| SEARCHED | | | |
| Class | Subclass | Date | Examiner |
| 235 | 451, 380, 382, 492 | 8/29/2010 | LTM |
| 711 | 100, 101, 103 | 8/29/2010 | LTM |

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| SEARCH NOTES | | |
| Search Notes | Date | Examiner |
| EAST, Reviewed parent application for double patenting | 8/29/2010 | LTM |

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| INTERFERENCE SEARCH | | | |
| Class | Subclass | Date | Examiner |
| | | | |

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I hereby certify that this correspondence is being filed via
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on November 8, 2010.

PATENT
Docket No.: 080379-000110US

TOWNSEND and TOWNSEND and CREW LLP

By: _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Patrick RACZ, *et al.*

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS
SYSTEMS

Customer No.: 20350

Confirmation No.: 1812

Examiner: Le, Thien Minh

Art Unit: 2876

PETITION TO CHANGE ORDER OF
NAMES OF JOINT INVENTORS IN
THE HEADING OF THE PATENT
APPLICATION UNDER 37 CFR 1.182

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Applicants respectfully request that the order of the inventor names be changed to reflect inventor Patrick Racz as first-named inventor. Both inventors are listed on the most recent filing receipt and based on the pending claims should be listed as inventors on the present application. Only the order of the inventors should be changed. The corrected order of inventor names is listed below:

Patrick S. Racz, a citizen of the United Kingdom, residing at
19 Royal Square
St. Heller, JE1 4WA Jersey

Hermen-ard Hulst, a citizen of Netherlands, residing at

It is respectfully requested that this change be reflected on all subsequent correspondence from the United States Patent and Trademark Office directed to this application and that any patent issuing from this application, or a continuation thereof, names the inventors in the order listed above.

A revised Substitute Application Data Sheet showing the new order of inventor names for inventors Patrick Racz and Hermen-ard Hulst is attached.

The Commissioner is hereby authorized to deduct the required fee of \$400 pursuant to 37 CFR 1.17(f) from the undersigned's Deposit Account No. 20-1430. Pleased deduct any additional fees from, or credit any overpayment to, the above-noted deposit account.

If it is believed a telephone conference would be helpful, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



Jason D. Lohr
Reg. No. 48,163

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
JDL:sep
62983848 v1

Electronic Patent Application Fee Transmittal

| | |
|---|---------------------------------|
| Application Number: | 12014558 |
| Filing Date: | 15-Jan-2008 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Filer: | Jason Donald Lohr/Scott Pugh |
| Attorney Docket Number: | 080379-000110US |

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--|----------|----------|--------|----------------------|
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Petition fee- 37 CFR 1.17(f) (Group I) | 1462 | 1 | 400 | 400 |

Patent-Appeals-and-Interference:

Post-Allowance-and-Post-Issuance:

Extension-of-Time:

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|----------------------------------|----------|----------|--------|----------------------|
| Miscellaneous: | | | | |
| Statutory or terminal disclaimer | 1814 | 1 | 140 | 140 |
| Total in USD (\$) | | | | 540 |

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 8788732 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Scott Pugh |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 08-NOV-2010 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 13:59:45 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|--|-----------------|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | \$540 |
| RAM confirmation Number | 223 |
| Deposit Account | 201430 |
| Authorized User | |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|----------------------|------------------------------|--|------------------|------------------|
| 1 | | Response_080379_000110US.pdf | 501769 94048fc39f61cf1c36b9ff39253a3b32c86d68b8 | yes | 15 |

Multipart Description/PDF files in .zip description

| Document Description | Start | End |
|---|-------|-----|
| Amendment/Req. Reconsideration-After Non-Final Reject | 1 | 9 |
| Terminal Disclaimer Filed | 10 | 10 |
| Application Data Sheet | 11 | 13 |
| Petition for review by the Office of Petitions. | 14 | 15 |

Warnings:

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on November 8/2010

PATENT
Attorney Docket No.: 080379-000110US
Client Ref. No.: PN759544USB

TOWNSEND and TOWNSEND and CREW LLP

By: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Patrick RACZ, *et al.*

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS
SYSTEMS

Customer No.: 20350

Confirmation No. 1812

Examiner: Le, Thien Minh

Technology Center/Art Unit: 2876

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In response to the Office Action mailed September 1, 2010, please enter the following amendments and remarks:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 7 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1 – 23. (Cancelled)

24. (Original) A computer system for providing data to a data requester, the system comprising:

a communication interface;

a data access data store for storing records of data items available from the system, each record comprising a data item description and a pointer to a data provider for the data item;

a program store storing code implementable by a processor;

a processor coupled to the communications interface, to the data access data store, and to the program store for implementing the stored code, the code comprising:

code to receive a request for a data item from the requester;

code to receive from the communications interface payment data comprising data relating to payment for the requested data item;

code responsive to the request and to the received payment data, to read data for the requested data item from a content provider; and

code to transmit the read data to the requester over the communications interface.

25. (Original) A computer system as claimed in claim 24, wherein said data access data store further comprises payment distribution information indicating to whom payments should be made for a data item; and further comprising code to output payment data for a data item for making payments for the item when the item is supplied to a said requester.

26. (Previously Presented) A computer system as claimed in claim 24, wherein said data access data store further comprises data item access rule data for output to the requester with said data item.

27. (Original) A computer system as claimed in claim 26, further comprising code to select access rule data for output with a data item in response to said payment data.

28. (Original) A computer system as claimed in claim 27, wherein said data access data store further comprises requester reward data associated with a said data item, and said code further comprises code to update said reward data in response to said payment data.

29. (Previously Presented) A computer system as claimed in claim 24, further comprising an access control data store coupled to said processor for storing access control data comprising a requester identifier, corresponding requester system access data and payment system data for identifying a payment system for use by the requester.

30. (Previously Presented) A computer system as claimed in claim 24, further comprising content synthesis code to generate substantially complete item data from partial item data provided from two or more sources.

31. (Original) A method of providing data to a data requester comprising:
receiving a request for a data item from the requester;
receiving payment data from the requester relating to payment for the requested data;
reading the requested data from a content provider responsive to the received payment data; and
transmitting the read data to the requester.

32. (Original) A method of providing data to a data requester as claimed in claim 31 further comprising:
reading payment distribution information from a data store; and

outputting payment data to a payment system for distributing the payment for the requested data.

33. (Previously Presented) A method of providing data to a data requester as claimed in claim 31 further comprising:

transmitting data access rule data to requester with the read data.

34. (Original) A method of providing data to a data requester as claimed in claim 33 further comprising:

selecting said access rule data dependent upon said payment data.

Claims 35 – 62. (Cancelled)

63. (Currently Amended) A data access system comprising:
a data supply computer system for forwarding data from a data provider to a data access terminal;

[[a]] an electronic payment system for confirming an electronic payment;
a data access terminal for communicating with the data supply system to write data from the data supply system onto a data carrier; and

a data carrier for storing data from the data supply system and payment data;
wherein data is forwarded from the data provider to the data carrier on validation of payment data provided from the data carrier to the electronic payment system.

64. (Original) A data access system according to claim 63 further comprising a payment distribution store and wherein the electronic payment system makes payments according to data in the payment distribution store associated with the forwarded data on confirmation of the payment and/or provision of the forwarded data to the card.

65. (Previously Presented) A data access system according to claim 63 further comprising a data use rule data store and wherein data use rule data is provided to the data carrier with the forwarded data for controlling user access to the forwarded data.

66. (Original) A data access system according to claim 65 wherein the data use rule data is selected dependent upon the payment data.

Claims 67 – 68. (Cancelled)

69. (Currently Amended) A computer system for providing data to a data requester, the system comprising:

a communication interface;

a data access data store for storing records of data items available from the system, each record comprising a data item description and a resource locator identifying a data provider for the data item;

a program store storing code implementable by a processor;

a processor coupled to the communications interface, to the data access data store, and to the program store for implementing the stored code, the code comprising:

code to receive a request for a data item from the requester;

code to receive from the communications interface payment data comprising data relating to payment for the requested data item;

code, responsive to the request and to the received payment data to output the item data to the requester over the communication interface; wherein

said data access data store further comprises payment distribution information indicating to whom payments should be made for a data item; and

further comprising code to output payment data for a data item for making payments for the item when the item is supplied to a said requester.

70. (Currently Amended) A computer system for providing data to a data requester, the system comprising:

a communication interface;

a data access data store for storing records of data items available from the system, each record comprising a data item description and location data identifying an electronic address for a provider for the data item;

a program store storing code implementable by a processor;

a processor coupled to the communications interface, to the data access data store, and to the program store for implementing the stored code, the code comprising:

code to receive a request for a data item from the requester;

code to receive from the communications interface payment data comprising data relating to payment for the requested data item;

code responsive to the request and to the received payment data to output the item data to the requester over the communication interface; wherein

said data access data store further comprises data item access rule data for output to the requester with a said data item; and

further comprising code to select access rule data for output with a data item in response to said payment data.

71. (Original) A method of providing data to a data requester comprising:
receiving a request for a data item from the requester;
receiving payment data from the requester relating to payment for the requested data;

transmitting the requested data to the requester;

reading payment distribution information from a data store; and

outputting payment data to a payment system for distributing the payment for the requested data.

72. (Original) A method of providing data to a data requester comprising:
receiving a request for a data item from the requester;
receiving payment data from the requester relating to payment for the requested data;

transmitting the requested data to the requester; and

transmitting data access rule data to requester with the read data.

Claims 73-74. (Cancelled)

REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed September 1, 2010. Claims 24-34, 63-66, and 69-72 were pending in the present application. The present Amendment amends claims 63, 69, and 70 to correct non-substantive typographical errors, without adding or canceling any claims, leaving pending in the application claims 24-34, 63-66, and 69-72.

I. Allowed Claims

Claims 24-30 and 69-71 are allowed.

II. Double Patenting

Claims 31, 33-34, 63, 65-66, and 71-72 are rejected on the ground of non-statutory obviousness-type double patenting as allegedly being unpatentable over claims of U.S. Patent No. 7,334,720. Although Applicants do not necessarily agree with the rejections, a timely filed terminal disclaimer is submitted with the present Amendment in order to overcome the rejection and provide for issuance of the allowable claims. Applicants therefore respectfully request that the rejections be withdrawn, and submit that claims 31, 33-34, 63, 65-66, and 71-72 are in condition for allowance.

III. Objections to the Claims

Claims 32 and 64 are objected to as being dependent upon a rejected base claim. As claims 31 and 63, from which these claims depend, are now in condition for allowance as discussed above, it is respectfully submitted that these claims also are in condition for allowance. Applicants therefore respectfully request that the objections to claims 32 and 64 be withdrawn and the claims allowed.

IV. Reasons for Allowance

Applicants respectfully submit that the reasons for allowance set forth on page 7 of the Office Action are not the only reasons for allowance of the pending claims, and that the record as a whole should be examined, along with the relevant art, when analyzing the allowability of the claims.

V. Amendments to the Claims

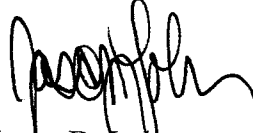
Unless otherwise specified or addressed in the remarks section, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter. In addition, by focusing on specific claims and claim elements in the discussion above, Applicants do not imply that other claim elements are disclosed or suggested by the references. In addition, any characterizations of claims and/or cited art are being made to facilitate expeditious prosecution of this application. Applicants reserve the right to pursue at a later date any other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by another prosecution. Accordingly, reviewers of this or any child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present disclosure.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



Jason D. Lohr
Reg. No. 48,163

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
Attachments
JDL:atm
62899431 v1

**TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

 Docket Number (Optional)
080379-000110US

 In re Application of: Patrick RACZ, *et al.*

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS SYSTEMS

The owner*, Smartflash Technologies Limited, of 100% interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,334,720 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

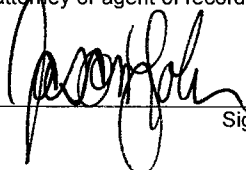
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

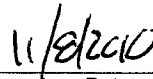
1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. The undersigned is an attorney or agent of record. Reg. No. 48,163



Signature



Date

Jason D. Lohr

Typed or printed name

925-472-5000

Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

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*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Supplemental Application Data Sheet

Application Information

Application number:: 12/014,558
Filing Date:: January 15, 2008
Application Type:: Regular
Subject Matter:: Utility
Title:: DATA STORAGE AND ACCESS SYSTEMS
Attorney Docket Number:: 080379-000110US
Request for Early Publication:: No
Request for Non-Publication:: No
Suggested Drawing Figure:: 1
Total Drawing Sheets:: 17
Small Entity?:: No
Petition included?:: No
Secrecy Order in Parent Appl.: No

Applicant Information

Applicant Authority Type:: Inventor
Primary Citizenship Country:: United Kingdom
Status:: Full Capacity
Given Name:: Patrick
Middle Name::
Family Name:: RACZ
City of Residence:: Saint Heller
State or Province of Residence::
Country of Residence:: Jersey
Street of Mailing Address:: 19 Royal Street
City of Mailing Address:: Saint Heller
State or Province of mailing address::

Country of mailing address:: Jersey
Postal or Zip Code of mailing address:: JE1 4WA

Applicant Authority Type:: Inventor
Primary Citizenship Country:: Netherlands
Status:: Full Capacity
Given Name:: Hermen-ard
Middle Name::
Family Name:: Hulst
Name Suffix::
City of Residence:: Amsterdam
State or Province of Residence::
Country of Residence:: Netherlands
Street of Mailing Address:: Van Tuyl van Serooskerweg 75hs
City of Mailing Address:: Amsterdam
State or Province of mailing address::
Country of mailing address:: Netherlands
Postal or Zip Code of mailing address:: 1076 JG

Correspondence Information

Correspondence Customer Number:: 20350

Representative Information

Representative Customer Number:: 20350

Domestic Priority Information

| Application:: | Continuity Type:: | Parent Application:: | Parent Filing Date:: |
|--------------------------------|------------------------------------|--------------------------|----------------------|
| This Application 11/336,758 | Continuation of Continuation of | 11/336,758 10/111,716 | 01/19/06 09/17/02 |

Foreign Priority Information

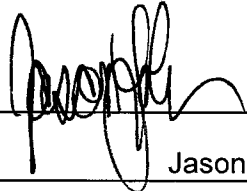
| | | |
|----------------|----------------------|---------------|
| Country:: | Application number:: | Filing Date:: |
| PCT | GB00/04110 | 10/25/00 |
| United Kingdom | 9925227.2 | 11/25/99 |

Assignee Information

Assignee Name:: Smartflash Technologies Limited
Street of mailing address:: 1070908 Palm Grove House, P.O. Box 438
City of mailing address:: Wickhams' Cay, Road Town
State or Province of mailing address:: Tortola
Country of mailing address:: British Virgin Islands
Postal or Zip Code of mailing address::

Submitted by:

Signature



Date


11/9/2010

Printed Name

Jason D. Lohr

Registration Number

48,163

| | | |
|--|--|--|
| Application Number  | Application/Control No. 12/014,558 | Applicant(s)/Patent under Reexamination HULST ET AL. |
| | | |

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|-----------------------------|--|
| Document Code - DISQ | Internal Document – DO NOT MAIL |
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|----------------------------|--|---|
| TERMINAL DISCLAIMER | <input type="checkbox"/> APPROVED | <input checked="" type="checkbox"/> DISAPPROVED |
| Date Filed : 11/08/10 | This patent is subject to a Terminal Disclaimer | |

| |
|---|
| Approved/Disapproved by: The person who signed the terminal disclaimer: [] has failed to state his/her capacity to sign for the business entity. (See FP 14.28) [] is not recognized as an officer of the assignee. (See FP 14.29) [X] does not have power of attorney. (FP 14.29.01) Jean Proctor |
|---|

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**

 Docket Number (Optional)
080379-000110US

 In re Application of: Patrick RACZ, *et al.*

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS SYSTEMS

The owner*, Smartflash Technologies Limited, of 100% interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,334,720 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

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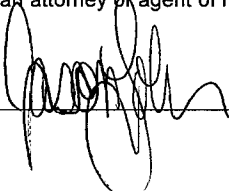
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. The undersigned is an attorney or agent of record. Reg. No. 48,163



 Signature January 14, 2011
Date

 Jason D. Lohr
 Typed or printed name

 (925) 472-5000
 Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Patrick RACZ, et al.

Application No./Patent No.: 12/014,558 Filed/Issue Date: January 15, 2008

Titled: DATA STORAGE AND ACCESS SYSTEMS

Smartflash Technologies Limited, a Corporation
(Name of Assignee) (Type of Assignee: corporation, partnership, university, government agency, etc.)

states that it is:

- 1. the assignee of the entire right, title, and interest in;
- 2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____%); or
- 3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 024710, Frame 0796, or for which a copy thereof is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet (s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

January 14, 2011
Date

Jason D. Lohr, Reg. No. 48,163
Printed or Typed Name

Attorney of Record
Title

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number:

20350

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

| Name | Registration Number | Name | Registration Number |
|------|---------------------|------|---------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b). I further authorize any of the above-identified practitioners to execute a Statement Under 37 CFR 3.73(b) on the undersigned's behalf to certify the chain of title and establish the undersigned's ownership in any and all patent applications in which rights have been assigned to the undersigned.

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number:

20350

OR

| | | | |
|--|-------|-----|--|
| <input type="checkbox"/> Firm or Individual Name | | | |
| Address | | | |
| City | State | Zip | |
| Country | | | |
| Telephone | Email | | |

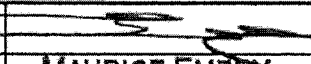
Assignee Name and Address:

Smartflash Technologies Limited
1070908 Palm Grove House, P.O. Box 438
Wickhams' Cay, Road Town
Tortola
British Virgin Islands

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

| | | | |
|-----------|---|--------------------|--------------------------|
| Signature |  | Date | 19.01.2011 |
| Name | MAURICE EMERY | JEAN MAURICE EMERY | Telephone +41 32 7232500 |
| Title | a director | a director | |

63097047 v1

For and on behalf of Kestrel S.A.,
acting in its capacity as corporate director
of Smartflash Technologies Ltd

Electronic Patent Application Fee Transmittal

| | | | | |
|--|---------------------------------|----------|--------|----------------------|
| Application Number: | 12014558 | | | |
| Filing Date: | 15-Jan-2008 | | | |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS | | | |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst | | | |
| Filer: | Jason Donald Lohr/Scott Pugh | | | |
| Attorney Docket Number: | 080379-000110US | | | |
| Filed as Large Entity | | | | |
| Utility under 35 USC 111(a) Filing Fees | | | | |
| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Patent-Appeals-and-Interference: | | | | |
| Post-Allowance-and-Post-Issuance: | | | | |
| Extension-of-Time: | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|----------------------------------|----------|----------|--------|----------------------|
| Miscellaneous: | | | | |
| Statutory or terminal disclaimer | 1814 | 1 | 140 | 140 |
| Total in USD (\$) | | | | 140 |

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 9239175 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Scott Pugh |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 14-JAN-2011 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 17:30:28 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|------------------------|----|
| Submitted with Payment | no |
|------------------------|----|

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|----------------------|---------------------------|---|------------------|------------------|
| 1 | | TDPOA_080379_000110US.pdf | 208342 <small>75e7a71c1897ec07b3b9d03c6b598da0b6801066</small> | yes | 3 |

| Multipart Description/PDF files in .zip description | | | |
|---|-------|-----|--|
| Document Description | Start | End | |
| Terminal Disclaimer Filed | 1 | 1 | |
| Power of Attorney | 2 | 2 | |
| Assignee showing of ownership per 37 CFR 3.73(b). | 3 | 3 | |

Warnings:

Information:

| | | | | | |
|---|-------------------------|--------------|--|----|---|
| 2 | Fee Worksheet (PTO-875) | fee-info.pdf | 29954 | no | 2 |
| | | | 7ae4c4f17b78ab798a0ff232f17786825001 130d | | |

Warnings:

Information:

| | | | | | |
|-------------------------------------|--|--|--------|--|--|
| Total Files Size (in bytes): | | | 238296 | | |
|-------------------------------------|--|--|--------|--|--|

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Patent Application Fee Transmittal

| | |
|---|---------------------------------|
| Application Number: | 12014558 |
| Filing Date: | 15-Jan-2008 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Filer: | Jason Donald Lohr/Scott Pugh |
| Attorney Docket Number: | 080379-000110US |

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--|----------|----------|--------|----------------------|
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Patent-Appeals-and-Interference: | | | | |
| Post-Allowance-and-Post-Issuance: | | | | |
| Extension-of-Time: | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|----------------------------------|----------|----------|--------|----------------------|
| Miscellaneous: | | | | |
| Statutory or terminal disclaimer | 1814 | 1 | 140 | 140 |
| Total in USD (\$) | | | | 140 |

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 9239774 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Scott Pugh |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 14-JAN-2011 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 20:07:07 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|--|-----------------|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | \$140 |
| RAM confirmation Number | 6820 |
| Deposit Account | 201430 |
| Authorized User | |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|-------------------------|--------------|---|------------------|------------------|
| 1 | Fee Worksheet (PTO-875) | fee-info.pdf | 29954 b5a2df28f5f1e5e33c37fe985650e4392039e6bb | no | 2 |

Warnings:**Information:**

| | |
|-------------------------------------|-------|
| Total Files Size (in bytes): | 29954 |
|-------------------------------------|-------|

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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New International Application Filed with the USPTO as a Receiving Office

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NUMBER | FILING OR 371(C) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE |
|--------------------|-----------------------|-----------------------|------------------------|
| 12/014,558 | 01/15/2008 | Hermen-ard Hulst | 080379-000110US |

CONFIRMATION NO. 1812

POA ACCEPTANCE LETTER

20350
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834



Date Mailed: 01/25/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/14/2011.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/stephanos/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

| | | | | | |
|--|---|----|---|--------------------------|-------------------|
| Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> | | | | Complete if Known | |
| | | | | Application Number | 12/014,558 |
| | | | | Filing Date | January 15, 2008 |
| | | | | First Named Inventor | HULST, Hermen-ard |
| | | | | Art Unit | 2887 |
| | | | | Examiner Name | Le, Thien Minh |
| Sheet | 1 | of | 1 | Attorney Docket Number | 080379-000110US |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number Kind Code ² (if known) | | | |
| | 1 | US-2003/0168515 A1 | 09-11-2003 | Gray | |
| | 2 | US-4,697,073 | 09-29-1987 | Hara | |
| | 3 | US-5,532,466 A | 07-02-1996 | Konno et al. | |
| | 4 | US-5,744,787 A | 04-28-1998 | Teicher | |
| | 5 | US-5,936,220 A | 08-10-1999 | Hoshino et al. | |
| | 6 | US-6,142,369 A | 11-07-2000 | Jonstromer | |
| | 7 | US-7,000,836 B2 | 02-21-2006 | Saeki | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|-----------------------|---------------------------|---------------------|-----------------------------------|--------------------------------|--|---|--------------------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | | | | | | | | <input type="checkbox"/> |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|---|--------------------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
| | | | <input type="checkbox"/> |

| | | | |
|--------------------|--|-----------------|--|
| Examiner Signature | | Date Considered | |
|--------------------|--|-----------------|--|

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ² Applicant's unique citation designation number (optional). ³ See Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Electronic Patent Application Fee Transmittal

| | |
|---|---------------------------------|
| Application Number: | 12014558 |
| Filing Date: | 15-Jan-2008 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Filer: | Jason Donald Lohr/Linda Lim |
| Attorney Docket Number: | 080379-000110US |

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--|----------|----------|--------|----------------------|
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Patent-Appeals-and-Interference: | | | | |
| Post-Allowance-and-Post-Issuance: | | | | |
| Extension-of-Time: | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|---|----------|----------|--------|----------------------|
| Miscellaneous: | | | | |
| Submission- Information Disclosure Stmt | 1806 | 1 | 180 | 180 |
| Total in USD (\$) | | | | 180 |

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 9473415 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Hermen-ard Hulst |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Linda Lim |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 18-FEB-2011 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 00:46:13 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|--|-----------------|
| Submitted with Payment | yes |
| Payment Type | Deposit Account |
| Payment was successfully received in RAM | \$180 |
| RAM confirmation Number | 6276 |
| Deposit Account | 201430 |
| Authorized User | |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|--|--|--------------------------------------|---|------------------|------------------|
| 1 | | 080379_000110US_Supplemental_IDS.pdf | 120329 9996fd89e3761c9809358904d7a376a4227f1c129 | yes | 3 |
| Multipart Description/PDF files in .zip description | | | | | |
| | Document Description | | Start | End | |
| | Transmittal Letter | | 1 | 2 | |
| | Information Disclosure Statement (IDS) Filed (SB/08) | | 3 | 3 | |

Warnings:

Information:

| | | | | | |
|---|-------------------------|--------------|---|----|---|
| 2 | Fee Worksheet (PTO-875) | fee-info.pdf | 30248 7e1647df8f9aca214f962994bc5d5580d4d0639e | no | 2 |
|---|-------------------------|--------------|---|----|---|

Warnings:

Information:

Total Files Size (in bytes): 150577

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

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I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on February 17, 2011

PATENT
Attorney Docket No.: 080379-000110US
Client Reference No.: PN759544USB

KILPATRICK TOWNSEND & STOCKTON LLP

By: Linda Lin

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Hermen-ard Hulst, et al.

Application No.: 12/014,558

Filed: January 15, 2008

For: DATA STORAGE AND ACCESS
SYSTEMS

Customer No.: 20350

Confirmation No.: 1812

Examiner: Le, Thien Minh

Art Unit: 2887

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER
37 CFR §1.97 and §1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are not enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Some of the references cited in this Supplemental IDS were cited in an Office Action mailed on January 13, 2011, in related U.S. Patent Application No. 12/943,847. Copies

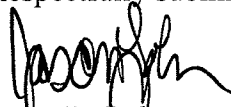
of the Office Actions in U.S. Patent Application No. 12/943,847 are available on PAIR and are believed to be readily accessible to the Examiner.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This Supplemental IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Jason D. Lohr
Reg. No. 48,163

KILPATRICK TOWNSEND & STOCKTON LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
JDL:lm1

63120919 v1



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 6 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/014,558, 01/15/2008, 2887, 3140, 080379-000110US, 71, 16

CONFIRMATION NO. 1812

CORRECTED FILING RECEIPT



20350
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

Date Mailed: 02/22/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Patrick RACZ, St. Heller, NJ;
Hermen-ard Hulst, Amsterdam, NETHERLANDS;

Power of Attorney: The patent practitioners associated with Customer Number 20350

Domestic Priority data as claimed by applicant

This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720
which is a CON of 10/111,716 09/17/2002 ABN
which is a 371 of PCT/GB00/04110 10/25/2000

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)
UNITED KINGDOM 9925227.2 11/25/1999

If Required, Foreign Filing License Granted: 02/04/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/014,558

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

DATA STORAGE AND ACCESS SYSTEMS

Preliminary Class

235

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
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**TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO CA 94111-3834**

MAILED

FEB 24 2011

OFFICE OF PETITIONS

In re Application of :
Racz et al. :
Application No. 12/014,558 :
Filed: January 15, 2008 :
Attorney Docket No. 080379-000110US :

ON PETITION

This is a decision on the petition under 37 CFR 1.182, filed November 8, 2010, to change the order of the names of the inventors.

The petition is **GRANTED**.

The order of the names of the inventors will be changed as follows:

- 1. PATRICK RACZ
- 2. HERMEN-ARD HULST

A Corrected Filing Receipt reflecting the above changes is enclosed.

This matter is now being referred to Technology Center AU 2887 to await examination.

Telephone inquiries regarding this decision should be directed to Joan Olszewski at (571) 272-7751. All other inquiries should be directed to the Technology Center.

/Liana Walsh/
Liana Walsh
Petitions Examiner
Office of Petitions

Enclosure: Corrected Filing Receipt



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY.DOCKET.NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/014,558, 01/15/2008, 2887, 3140, 080379-000110US, 71, 16

CONFIRMATION NO. 1812

CORRECTED FILING RECEIPT



20350
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

Date Mailed: 02/22/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Patrick RACZ, St. Heller, NJ;
Hermen-ard Hulst, Amsterdam, NETHERLANDS;

Power of Attorney: The patent practitioners associated with Customer Number 20350

Domestic Priority data as claimed by applicant

This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720
which is a CON of 10/111,716 09/17/2002 ABN
which is a 371 of PCT/GB00/04110 10/25/2000

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)

UNITED KINGDOM 9925227.2 11/25/1999

If Required, Foreign Filing License Granted: 02/04/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/014,558

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

DATA STORAGE AND ACCESS SYSTEMS

Preliminary Class

235

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as


set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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| Application Number  | Application/Control No. 12/014,558 | Applicant(s)/Patent under Reexamination RACZ ET AL. | |
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| Document Code - DISQ | Internal Document – DO NOT MAIL |
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| TERMINAL DISCLAIMER | <input checked="" type="checkbox"/> APPROVED | <input type="checkbox"/> DISAPPROVED |
| Date Filed : 1/14/11 | This patent is subject to a Terminal Disclaimer | |

| |
|---------------------------------|
| Approved/Disapproved by: |
| jean proctor |



NOTICE OF ALLOWANCE AND FEE(S) DUE

20350 7590 03/29/2011
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER
LE, THIEN MINH
ART UNIT PAPER NUMBER

2887

DATE MAILED: 03/29/2011

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/014,558 01/15/2008 Patrick RACZ 080379-000110US 1812

TITLE OF INVENTION: DATA STORAGE AND ACCESS SYSTEMS

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional YES \$755 \$300 \$0 \$1055 06/29/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

20350 7590 03/29/2011
KILPATRICK TOWNSEND & STOCKTON LLP
 TWO EMBARCADERO CENTER
 EIGHTH FLOOR
 SAN FRANCISCO, CA 94111-3834

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

| |
|--------------------|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 12/014,558 | 01/15/2008 | Patrick RACZ | 080379-000110US | 1812 |

TITLE OF INVENTION: DATA STORAGE AND ACCESS SYSTEMS

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | YES | \$755 | \$300 | \$0 | \$1055 | 06/29/2011 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|----------------|----------|----------------|
| LE, THIEN MINH | 2887 | 235-380000 |

| | |
|---|---|
| <p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p> | <p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p> |
|---|---|

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent) : Individual Corporation or other private group entity Government

| | |
|---|--|
| <p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p> | <p>4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p> |
|---|--|

5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Values: 12/014,558, 01/15/2008, Patrick RACZ, 080379-000110US, 1812

20350 7590 03/29/2011
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

LE, THIEN MINH

ART UNIT PAPER NUMBER

2887

DATE MAILED: 03/29/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 144 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 144 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability

| | | |
|--------------------------------------|------------------------------------|--|
| Application No. 12/014,558 | Applicant(s) RACZ ET AL. | |
| Examiner THIEN M. LE | Art Unit 2887 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to an amendment filed on 11/8/2010 and a TD filed on 1/14/2011.
- 2. The allowed claim(s) is/are 24-34,63-66 and 69-72.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 2/18/2011
- 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- 6. Interview Summary (PTO-413), Paper No./Mail Date _____.
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.

DETAILED ACTION

The amendment filed on 11/8/2010 has been entered. The Terminal Disclaimer filed on 1/14/2011 has been approved. The information disclosure statement filed on 2/18/2011 has been entered. Claims 1-23, 35-62, 67-68, and 73-74 have been canceled. Claims 24-34, 63-66 and 69-72 remain for examination.

Allowable Subject Matter

Claims 24-34, 63-66 and 69-72 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose a computer system for providing data to a requester comprising: (i) a communication interface; (ii) a data access data store; (iii) a program store; (iv) a processor; (v) code to receive request; (vi) code to receive payment data; (vii) code to read data; (viii) and code to transmit the read data; and having the functions and characteristics as recited in claim 24. The prior art also fails to disclose limitations of claims 31, 63 and 69-72.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to THIEN M. LE whose telephone number is (571)272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

Art Unit: 2887

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve S. Paik can be reached on (571) 272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thien M. Le/
Primary Examiner, Art Unit 2887

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| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

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| N | Non-Elected |
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| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | | |
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| Final | Original | 01/19/2010 | 08/29/2010 | 03/23/2011 | | | | | | |
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| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

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| - | Cancelled |
| ÷ | Restricted |

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| N | Non-Elected |
| I | Interference |

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|---|-----------------|
| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | |
|-------|----------|------------|------------|------------|--|--|--|--|--|
| Final | Original | 01/19/2010 | 08/29/2010 | 03/23/2011 | | | | | |
| | 37 | ÷ | - | - | | | | | |
| | 38 | ÷ | - | - | | | | | |
| | 39 | ÷ | - | - | | | | | |
| | 40 | ÷ | - | - | | | | | |
| | 41 | ÷ | - | - | | | | | |
| | 42 | ÷ | - | - | | | | | |
| | 43 | ÷ | - | - | | | | | |
| | 44 | ÷ | - | - | | | | | |
| | 45 | ÷ | - | - | | | | | |
| | 46 | ÷ | - | - | | | | | |
| | 47 | ÷ | - | - | | | | | |
| | 48 | ÷ | - | - | | | | | |
| | 49 | ÷ | - | - | | | | | |
| | 50 | ÷ | - | - | | | | | |
| | 51 | ÷ | - | - | | | | | |
| | 52 | ÷ | - | - | | | | | |
| | 53 | ÷ | - | - | | | | | |
| | 54 | ÷ | - | - | | | | | |
| | 55 | ÷ | - | - | | | | | |
| | 56 | ÷ | - | - | | | | | |
| | 57 | ÷ | - | - | | | | | |
| | 58 | - | - | - | | | | | |
| | 59 | ÷ | - | - | | | | | |
| | 60 | ÷ | - | - | | | | | |
| | 61 | ÷ | - | - | | | | | |
| | 62 | ÷ | - | - | | | | | |
| 12 | 63 | ÷ | ✓ | = | | | | | |
| 13 | 64 | ÷ | O | = | | | | | |
| 14 | 65 | ÷ | ✓ | = | | | | | |
| 15 | 66 | ÷ | ✓ | = | | | | | |
| | 67 | ÷ | - | - | | | | | |
| | 68 | ÷ | - | - | | | | | |
| 16 | 69 | ÷ | = | = | | | | | |
| 17 | 70 | ÷ | = | = | | | | | |
| 18 | 71 | ÷ | = | = | | | | | |
| 19 | 72 | ÷ | ✓ | = | | | | | |

| | | |
|---|--|--|
| Index of Claims  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

| | |
|---|-----------------|
| ✓ | Rejected |
| = | Allowed |

| | |
|---|-------------------|
| - | Cancelled |
| ÷ | Restricted |

| | |
|---|---------------------|
| N | Non-Elected |
| I | Interference |

| | |
|---|-----------------|
| A | Appeal |
| O | Objected |

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

| CLAIM | | DATE | | | | | | | |
|-------|----------|------------|------------|------------|--|--|--|--|--|
| Final | Original | 01/19/2010 | 08/29/2010 | 03/23/2011 | | | | | |
| | 73 | - | - | - | | | | | |
| | 74 | - | - | - | | | | | |

| | | | | | |
|--|---|----|---|--------------------------|-------------------|
| Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> | | | | Complete if Known | |
| | | | | Application Number | 12/014,558 |
| | | | | Filing Date | January 15, 2008 |
| | | | | First Named Inventor | HULST, Hermen-ard |
| | | | | Art Unit | 2887 |
| | | | | Examiner Name | Le, Thien Minh |
| Sheet | 1 | of | 1 | Attorney Docket Number | 080379-000110US |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number Kind Code ² (if known) | | | |
| LTM | 1 | US-2003/0168515 A1 | 09-11-2003 | Gray | ↘ |
| | 2 | US-4,697,073 | 09-29-1987 | Hara | |
| | 3 | US-5,532,466 A | 07-02-1996 | Konno et al. | |
| | 4 | US-5,744,787 A | 04-28-1998 | Teicher | |
| | 5 | US-5,936,220 A | 08-10-1999 | Hoshino et al. | |
| | 6 | US-6,142,369 A | 11-07-2000 | Jonstromer | |
| LTM | 7 | US-7,000,836 B2 | 02-21-2006 | Saeki | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|--------------------------|---------------------------|---------------------|-----------------------------------|-----------------------------------|--|---|--------------------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | | |
| | | | | | | | | <input type="checkbox"/> |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|--------------------------|---|--------------------------|
| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T ⁶ |
| | | | <input type="checkbox"/> |

| | | | |
|-----------------------|---------------|--------------------|-----------|
| Examiner Signature | /Thien M. Le/ | Date Considered | 3/23/2011 |
|-----------------------|---------------|--------------------|-----------|

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ² Applicant's unique citation designation number (optional). ³ See Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

EAST Search History

EAST Search History (Prior Art)

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|---|---|------------------|---------|---------------------|
| L1 | 1621 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2011/03/23 08:49 |
| L2 | 269 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2011/03/23 08:49 |
| L3 | 29 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verification | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2011/03/23 08:49 |

| | | | | | | |
|----|------|--|---|----|----|---------------------|
| L4 | 17 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verifying | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2011/03/23 08:49 |
| L5 | 100 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same number | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2011/03/23 08:49 |
| S1 | 1448 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/07/08 18:05 |
| S2 | 245 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/07/08 18:06 |

| | | | | | | |
|----|----|---|---|----|----|---------------------|
| S3 | 26 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verification | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/07/08 18:06 |
| S4 | 14 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verifying | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/07/08 18:06 |
| S5 | 90 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same number | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2010/07/08 18:06 |

EAST Search History (I nterference)

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--------------|-----|------------------|---------|------------|
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| L6 | 33 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same number | USPAT; UPAD | OR | ON | 2011/03/23 08:51 |
| L7 | 518 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) | USPAT; UPAD | OR | ON | 2011/03/23 08:51 |
| L8 | 13 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verification | USPAT; UPAD | OR | ON | 2011/03/23 08:51 |
| L9 | 7 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same verifying | USPAT; UPAD | OR | ON | 2011/03/23 08:52 |

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|-----|------|---|----------------|----|----|---------------------|
| L10 | 33 | database same (payment near10 (system or computer or terminal)) same ((host or central or provider) near10 (computer or terminal or system)) same (authorization or validation) same number | USPAT; UPAD | OR | ON | 2011/03/23 08:52 |
| L11 | 5758 | data adj2 provider | USPAT; UPAD | OR | ON | 2011/03/23 08:56 |
| L12 | 1 | (data adj2 provider) same requester same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:56 |
| L13 | 1 | (content adj2 provider) same requester same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:57 |
| L14 | 3 | (provider) same requester same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:57 |
| L15 | 54 | (processor) same request\$4 same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:57 |
| L16 | 14 | (data adj2 provider) same request\$4 same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:57 |
| L17 | 5 | (content adj2 provider) same request\$4 same (payment adj2 data) | USPAT; UPAD | OR | ON | 2011/03/23 08:58 |

3/ 23/ 2011 8:58:27 AM


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BIB DATA SHEET
CONFIRMATION NO. 1812

| SERIAL NUMBER | FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. | |
|--|---|-----------------------------------|---|-------------------------------|-------------------------------------|
| 12/014,558 | 01/15/2008 | 235 | 2887 | 080379-000110US | |
| APPLICANTS Patrick RACZ, St. Heller, NJ; Hermen-ard Hulst, Amsterdam, NETHERLANDS; | | | | | |
| ** CONTINUING DATA ***** This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720 which is a CON of 10/111,716 09/17/2002 ABN which is a 371 of PCT/GB00/04110 10/25/2000 | | | | | |
| ** FOREIGN APPLICATIONS ***** UNITED KINGDOM 9925227.2 11/25/1999 | | | | | |
| ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 02/04/2008 | | | | | |
| Foreign Priority claimed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 35 USC 119(a-d) conditions met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Verified and / Thien M. Le/ Acknowledged Examiner's Signature | <input type="checkbox"/> Met after Allowance Initials | STATE OR COUNTRY NJ | SHEETS DRAWINGS 17 | TOTAL CLAIMS 71 | INDEPENDENT CLAIMS 16 |
| ADDRESS KILPATRICK TOWNSEND & STOCKTON LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 UNITED STATES | | | | | |
| TITLE DATA STORAGE AND ACCESS SYSTEMS | | | | | |
| FILING FEE RECEIVED 3140 | FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following: | | <input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit | | |

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| Search Notes  | Application/Control No. 12014558 | Applicant(s)/Patent Under Reexamination HULST ET AL. |
| | Examiner THIEN M LE | Art Unit 2887 |

| SEARCHED | | | |
|----------|--------------------|-----------|----------|
| Class | Subclass | Date | Examiner |
| 235 | 451, 380, 382, 492 | 8/29/2010 | LTM |
| 711 | 100, 101, 103 | 8/29/2010 | LTM |
| updated | same as above | 3/23/2011 | LTM |

| SEARCH NOTES | | |
|--|-----------|----------|
| Search Notes | Date | Examiner |
| EAST, Reviewed parent application for double patenting | 8/29/2010 | LTM |
| updated | 3/23/2011 | LTM |

| INTERFERENCE SEARCH | | | |
|---------------------|----------|-----------|----------|
| Class | Subclass | Date | Examiner |
| 235 | 380, 382 | 3/23/2011 | LTM |

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Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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| <i>Dana Kaye</i> | (Depositor's name) |
| <i>[Signature]</i> | (Signature) |
| <i>4/4/11</i> | (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 12/014,558 | 01/15/2008 | Patrick RACZ | 080379-000110US | 1812 |

TITLE OF INVENTION: DATA STORAGE AND ACCESS SYSTEMS

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | YES | \$755 | \$300 | \$0 | \$1055 | 06/29/2011 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|----------------|----------|----------------|
| LE, THIEN MINH | 2887 | 235-380000 |

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- Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.
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- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. Stockton LLP

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- (A) NAME OF ASSIGNEE: SMARTFLASH TECHNOLOGIES LIMITED
- (B) RESIDENCE: (CITY and STATE OR COUNTRY) ROAD TOWN, TORTOLA

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

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Authorized Signature *[Signature]* Date 4/4/2011

Typed or printed name Jason D. Lohr Registration No. 48,163

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Electronic Patent Application Fee Transmittal

| | |
|---|---------------------------------|
| Application Number: | 12014558 |
| Filing Date: | 15-Jan-2008 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Patrick RACZ |
| Filer: | Jason Donald Lohr/Dana Kane |
| Attorney Docket Number: | 080379-000110US |

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--|----------|----------|--------|----------------------|
| Basic Filing: | | | | |
| Pages: | | | | |
| Claims: | | | | |
| Miscellaneous-Filing: | | | | |
| Petition: | | | | |
| Patent-Appeals-and-Interference: | | | | |
| Post-Allowance-and-Post-Issuance: | | | | |
| Utility Appl issue fee | 2501 | 1 | 755 | 755 |
| Publ. Fee- early, voluntary, or normal | 1504 | 1 | 300 | 300 |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|---------------------------|----------|----------|--------|----------------------|
| Extension-of-Time: | | | | |
| Miscellaneous: | | | | |
| Total in USD (\$) | | | | 1055 |

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 9806409 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Patrick RACZ |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Dana Kane |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 04-APR-2011 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 18:17:09 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|--|---------------|
| Submitted with Payment | yes |
| Payment Type | Credit Card |
| Payment was successfully received in RAM | \$1055 |
| RAM confirmation Number | 5122 |
| Deposit Account | 201430 |
| Authorized User | LOHR,JASON D. |

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| 1 | Issue Fee Payment (PTO-85B) | iss.PDF | 116888 <small>2f16cb2db0c95b146709ec4987d7065e97dfe48c</small> | no | 1 |

Warnings:

Information:

| | | | | | |
|---|-------------------------|--------------|--|----|---|
| 2 | Fee Worksheet (PTO-875) | fee-info.pdf | 31704 <small>025a0883169029e8ba3502dd6eda5f63ad7fb3c3</small> | no | 2 |
|---|-------------------------|--------------|--|----|---|

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

I hereby certify this document was filed with the USPTO via EFS-WEB on April 5, 2011.

Kilpatrick Townsend Stockton LLP

By :



PATENT

87790-743055 (080379-000110US)

PN759544USB

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Patrick Racz et al.

Application No.: 12/014,558

Filed: 01/15/2008

For: DATA STORAGE AND ACCESS SYSTEMS

Customer No.: 20350

Confirmation No. 1812

Examiner: Thien Minh LE

Technology Center/Art Unit: 2887

REQUEST FOR SECOND CORRECTED FILING RECEIPT

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Alexandria, VA 22313-1450

Commissioner:

Applicants respectfully request a Second Corrected Filing Receipt for the above-referenced application. A marked copy of the First Corrected Filing Receipt is attached.

Under the section entitled Applicants, please delete [NJ] and insert Jersey therefor.

Applicants believe no fee is due for this correction as the inventor's address is correct on the originally filed Application Data Sheet of January 15, 2008.

Racz et al.
Application No.: 12/014,558
Page 2

PATENT

The assistance of the Office is greatly appreciated in this matter.

Respectfully submitted,



Jason D. Lohr
Reg. No. 48,163

KILPATRICK TOWNSEND & STOCKTON LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: xTTCPhone
Fax: 415-576-0300
Attachments
JDL:dk
63236300 v1

Electronic Acknowledgement Receipt

| | |
|---|---------------------------------|
| EFS ID: | 9815576 |
| Application Number: | 12014558 |
| International Application Number: | |
| Confirmation Number: | 1812 |
| Title of Invention: | DATA STORAGE AND ACCESS SYSTEMS |
| First Named Inventor/Applicant Name: | Patrick RACZ |
| Customer Number: | 20350 |
| Filer: | Jason Donald Lohr/Dana Kane |
| Filer Authorized By: | Jason Donald Lohr |
| Attorney Docket Number: | 080379-000110US |
| Receipt Date: | 05-APR-2011 |
| Filing Date: | 15-JAN-2008 |
| Time Stamp: | 17:38:13 |
| Application Type: | Utility under 35 USC 111(a) |

Payment information:

| | |
|------------------------|----|
| Submitted with Payment | no |
|------------------------|----|

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|-----------------|--------------------------------------|-----------|--|------------------|------------------|
| 1 | Request for Corrected Filing Receipt | req.PDF | 49451 <small>91e8e64bb3f1edf81dfb15ac2f2728d31dc57b92</small> | no | 2 |

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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United States Patent and Trademark Office
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www.uspto.gov

Table with 6 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/014,558, 01/15/2008, 2887, 3440, 080379-000110US, 71, 16

CONFIRMATION NO. 1812

CORRECTED FILING RECEIPT



20350
KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

Date Mailed: 04/07/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Patrick RACZ, St. Heller, JERSEY;
Hermen-ard Hulst, Amsterdam, NETHERLANDS;

Power of Attorney: The patent practitioners associated with Customer Number 20350

Domestic Priority data as claimed by applicant

This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720
which is a CON of 10/111,716 09/17/2002 ABN
which is a 371 of PCT/GB00/04110 10/25/2000

Foreign Applications (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.)

UNITED KINGDOM 9925227.2 11/25/1999

If Required, Foreign Filing License Granted: 02/04/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/014,558

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

DATA STORAGE AND ACCESS SYSTEMS

Preliminary Class

235

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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Bib Data Sheet

CONFIRMATION NO. 1812

| | | | | |
|------------------------------------|---|---------------------|-------------------------------|---|
| SERIAL NUMBER 12/014,558 | FILING OR 371(c) DATE 01/15/2008 RULE | CLASS 235 | GROUP ART UNIT 2887 | ATTORNEY DOCKET NO. 080379-000110US |
|------------------------------------|---|---------------------|-------------------------------|---|

APPLICANTS
 Patrick RACZ, St. Heller, JERSEY;
 Hermen-ard Hulst, Amsterdam, NETHERLANDS;

**** CONTINUING DATA *******
 This application is a CON of 11/336,758 01/19/2006 PAT 7,334,720
 which is a CON of 10/111,716 09/17/2002 ABN
 which is a 371 of PCT/GB00/04110 10/25/2000

**** FOREIGN APPLICATIONS *******
 UNITED KINGDOM 9925227.2 11/25/1999

IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** SMALL ENTITY **
 ** 02/04/2008

| | | | | | |
|---|-----------------------------------|-----------------------------|---------------------------|---------------------------------|--|
| Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no | STATE OR COUNTRY JERSEY | SHEETS DRAWING 17 | TOTAL CLAIMS 71 | INDEPENDENT CLAIMS 16 | |
| 35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance | | | | | |
| Verified and Acknowledged | Examiner's Signature _____ | Initials _____ | | | |

ADDRESS
 20350

TITLE
 DATA STORAGE AND ACCESS SYSTEMS

| | | |
|------------------------------------|---|--|
| FILING FEE RECEIVED 3440 | FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following: | <input type="checkbox"/> All Fees |
| | | <input type="checkbox"/> 1.16 Fees (Filing) |
| | | <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) |
| | | <input type="checkbox"/> 1.18 Fees (Issue) |
| | | <input type="checkbox"/> Other _____ |
| | | <input type="checkbox"/> Credit |



| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|------------|------------|---------------------|------------------|
| 12/014,558 | 05/17/2011 | 7942317 | 080379-000110US | 1812 |

20350 7590 04/27/2011
KILPATRICK TOWNSEND & STOCKTON LLP
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EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 245 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Patrick RACZ, St. Heller, JERSEY;

AO 120 (Rev. 08/10)

| | |
|---|---|
| TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 | REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK |
|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas Tyler Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

| | | |
|---|-----------------------------|--|
| DOCKET NO. 6:13-cv-448 | DATE FILED 5/29/2013 | U.S. DISTRICT COURT Eastern District of Texas Tyler Division |
| PLAINTIFF Smartflash LLC and Smartflash Technologies Limited | | DEFENDANT Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung Telecommunications America, LLC, HTC Corporation, HTC America, Inc., Exedea, Inc. and Game Circus LLC |
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 7,334,720 | 2/26/2008 | Smartflash LLC |
| 2 7,942,317 | 5/17/2011 | Smartflash LLC |
| 3 8,033,458 | 10/11/2011 | Smartflash LLC |
| 4 8,061,598 | 11/22/2011 | Smartflash LLC |
| 5 8,118,221 | 2/21/2012 | Smartflash LLC |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| | | |
|-------------------------|---|-------------------------------|
| DATE INCLUDED | INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading | |
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 8,336,772 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| |
|--------------------|
| DECISION/JUDGEMENT |
|--------------------|

| | | |
|-------|-------------------|------|
| CLERK | (BY) DEPUTY CLERK | DATE |
|-------|-------------------|------|

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

| | |
|---|---|
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|---|---|

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas Tyler Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

| | | |
|---|-----------------------------|---|
| DOCKET NO. 6:13-cv-447 | DATE FILED 5/29/2013 | U.S. DISTRICT COURT Eastern District of Texas Tyler Division |
| PLAINTIFF Smartflash LLC and Smartflash Technologies Limited | | DEFENDANT Apple Inc., Robot Entertainment, Inc., Kingsisle Entertainment, Inc. and Game Circus LLC |
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK |
| 1 7,334,720 | 2/26/2008 | Smartflash LLC |
| 2 7,942,317 | 5/17/2011 | Smartflash LLC |
| 3 8,033,458 | 10/11/2011 | Smartflash LLC |
| 4 8,061,598 | 11/22/2011 | Smartflash LLC |
| 5 8,118,221 | 2/21/2012 | Smartflash LLC |

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

| | | | |
|-------------------------|---|-------------------------------|--|
| DATE INCLUDED | INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading | | |
| PATENT OR TRADEMARK NO. | DATE OF PATENT OR TRADEMARK | HOLDER OF PATENT OR TRADEMARK | |
| 1 8,336,772 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

In the above—entitled case, the following decision has been rendered or judgement issued:

| |
|--------------------|
| DECISION/JUDGEMENT |
|--------------------|

| | | |
|-------|-------------------|------|
| CLERK | (BY) DEPUTY CLERK | DATE |
|-------|-------------------|------|

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy