system is also known. A personal computer of a user is connected to an application service provider (ASP) via a network such as the Internet. An accessible period is set for each application of evaluation version so that there is no charge within a trial period and, only when the user wants to use the application even after the trial period, the user is authorized to use the application by paying a license fee for the product version.

Citation List

Patent Documents

[0004]

Patent Document 1: Japanese Patent Application Laid-Open No. 2002-175436

Patent Document 2: Japanese Patent Application Laid-Open No. 2007-286899

Patent Document 3: Japanese Patent No. 3679760

Summary of the Invention

Problem to be Solved by the Invention

[0005]

In the portal site provision apparatus described in Patent Document 1, for example, charging is a prerequisite in the case of using a paid application. However, even in the case where, after starting using the application, the user decides the application is unnecessary and stops using it halfway, a normal charge could be incurred.

[0006]

In the application execution system described in Patent Document 2, the accessible period is set for the evaluation version so that there is no charge within the trial period. Only when the user wants to use the application even after the trial period, the user is authorized to use the application by paying the license fee for the

"DB") 6, 7, and 8 for storing user information, content information, and log information. Although the schematic block diagram in FIG. 1 shows only the specific structure of the application vendor and omits the specific structures of the content vendor and the service vendor, each of the content vendor and the service vendor equally includes a program for operating the content or service provided by the vendor and DBs (not shown) for storing user information, content information, and log information.

[0016]

The portal system 1 includes a web server 10, a DB server ~~20~~11, and a record collection server 40. The web server 10 includes a portal server ~~11~~10A. The DB server ~~20~~11 includes a DB 21 for storing user information, a DB 22 for storing use procedure conversion rule information, a DB 23 for storing use record information, a DB 24 for storing amount conversion information, a DB 25 for storing weighting information, a DB 26 for storing use record analysis result information, a DB 27 for storing recovery fee information, a DB 28 for storing distribution fee information, a DB 29 for storing log conversion information, and a DB 30 for storing log-converted standard log information (the DBs 29 and 30 are shown in FIG. 10). The record collection server 40 includes a record collection system 41.

[0017]

The client terminal 3 of the user includes a typical personal computer, notebook-size personal computer, PDA, mobile phone, smartphone, tablet terminal, or the like. The client terminal 3 includes at least a communication function of transmitting information to the portal server ~~11~~10A via the network 4, a display function such as a display of displaying information from the portal server ~~11~~10A or each of the servers 2A, 2B, and 2C of the provision vendors, and an input function such as a keyboard, a pointing device, or a touch panel. The communication function, the display function, and the input function will be described later.

[0018]

A process at the beginning of service use is described below, with reference to a block diagram in FIG. 2 and a flowchart in FIG. 3. When a user information

transmission unit 31 (communication function) in the client terminal 3 of the user transmits user information at the beginning of service use (step S1), a user information registration unit 50 in the web server 10 registers the user information transmitted from the client terminal 3, in a user information table T stored in the user information DB 21 (step S2). FIG. 4 shows an example of the user information table T. The user information table T stores data including: a user code; a user name; a user address, age, OS used, and whether or not to use encryption as procedure information 1 to procedure information n; a belonging company name; a use state of each of service 1 to service n provided by the vendor; a user contract state; a deletion flag; a login date and time; a logout date and time; a terminal identification code; a login state; a use start date and time; and a use end date and time. The user information registration unit 50 determines the contract possibility for the user. For example, if the user is a corporate member, the user information registration unit 50 compares the information with corporate member information, to determine the belonging state of the user. The user information registration unit 50 also determines whether or not the use is limited, according to the past record, etc. (step S3). The user information registration unit 50 thus identifies the user (step S4). In the case where the user information registration unit 50 fails to identify the user, the user information registration unit 50 changes the user information table T and sets the deletion flag for the user (step S5). In the case where the user information registration unit 50 identifies the user in step S4, on the other hand, a use procedure conversion and transmission unit 51 converts the user information according to a rule defined in a use procedure conversion rule table 10T stored in the use procedure conversion rule DB 22 in the DB server 11, and transmits the converted user information to each of the servers 2A, 2B, and 2C of the provision vendors (step S6). The use procedure conversion rule table 10T stores information for defining a rule when performing a use procedure for each provision vendor. As an example, as shown in FIG. 5, the use procedure conversion rule table 10T stores data including: an application name (hereafter simply referred to as “app name”) provided by the

vendor; a conversion number indicating a conversion rule for the use procedure; user procedure information; a type attribute (character string or numeric); and the number of digits. Thus, the use procedure conversion and transmission unit 51 transmits the user information converted according to the use procedure conversion rule table 10T to each of the servers 2A, 2B, and 2C of the provision vendors, and a use procedure processing unit 60 in each of the servers 2A, 2B, and 2C registers the user information in the user information DB 6 in the server (step S7). The use procedure processing unit 60 in each of the servers 2A, 2B, and 2C also transmits the user information registered in the user information DB 6 to a user authentication unit 52 in the web server 10, to set a use flag in the user information DB 21 in the DB server 11 (step S8). The user authentication unit 52 transmits a registration completion notification to the client terminal 3 of the user. A user authentication result display unit 32 (display function) in the client terminal 3 of the user displays the registration completion notification (step S9).

[0019]

Once the user has contracted the portal site in the above-mentioned manner, the user is able to receive various applications, content, and services provided on the portal site. A process at the time of such service use is described below, mainly with reference to a block diagram in FIG. 6 and a flowchart in FIG. 7. When the user information transmission unit 31 in the client terminal 3 of the user transmits the user information to the portal site at the time of service use (step S10), a user specifying unit 53 searches the user information table T in the user information DB 21 to specify the user, and acquires the information of the service contracted by the user (step S11). The use procedure conversion and transmission unit 51 transmits the user information converted according to the use procedure conversion rule table 10T stored in the use procedure conversion rule DB 22, to the use procedure processing unit 60 in each of the servers 2A, 2B, and 2C of the provision vendors (step S12). The use procedure processing unit 60 searches the user information table T in the user information DB 6 of the vendor for the corresponding

storage unit 84. Each use log stored in the log storage unit 8A in the DB 8 of each vendor is transmitted from the log transmission unit 8B to the log reception unit 80 in the record collection system 41. After the standardization by the log conversion unit 81, the use record is quantified as points, and stored in the use record information DB 23. This process is described below, with reference to a flowchart in FIG. 11.

[0023]

For example, when the user uses an application, the corresponding operation history is left as a log. The log is stored in the log information DB 8 in the application server 2 as any of log information tables 20Ta to 20Tc shown in FIGS. 12A, 12B, and 12C (step S40), and the log transmission unit 8B transmits the log to the DB server 11 in the portal site (step S41). The log reception unit 80 in the record collection system 41 receives the log information transmitted to the DB server 11 (step S42). The log is converted in standard form based on log conversion information, and the resulting log information (standard) is stored in the log information DB 30. A rule used when standardizing the log is a conversion rule defined in a log conversion information table 30T shown in FIG. 13. The log conversion information table 30T defines a rule for classifying logs not unified among vendors or types of apps provided, according to use function. In detail, the portal site provides various applications, content, and services and, when the user uses a paid application, content, or service, the user pays a use fee to the provision vendor (incentive). On the other hand, regarding various free services such as guide services or reservation services, for example, when the user makes a reservation or buys a product via a link on the portal site, a result reward (affiliate) may be paid to the operator of the portal site. Accordingly, a rule for classifying each application, content, or service as incentive or affiliate is defined. As an example, as shown in FIG. 13, the log conversion information table 30T stores data including; an app name; a rule type; a record type (incentive or affiliate); a type (~~document~~book name, reservation type, information type); a process (information type); and a use time (reference time). Log information summarized in the record collection system 41 is

converted according to the rule defined in the log conversion information table 30T, and the resulting log information (standard) is stored in the log information DB 30 in the DB server ~~10~~11 (step S43). The log type analysis unit 82 analyzes the log standardized in this way (step S44), classifies the log according to type, e.g. book content such as an electronic book, a reservation service for travel, move, etc., and a provision app such as map search, game, sightseeing guide, or route search as shown in FIGS. 14A, 14B, and 14C, and stores it in any of analyzed log information tables 40Ta to 40Tc. Further, the weighting unit 83 performs weighting in order to calculate a distribution amount (incentive) or a recovery amount (affiliate) according to the use record (step S45), and the use record storage unit 84 stores it in the use record information DB 23 in the DB server 11.

[0024]

The weighting process is described in detail below. The portal site according to the present invention provides various applications, content, and services, and there is a need to calculate a distribution amount paid from the portal operator to the provision vendor as an incentive fee, or a recovery amount paid from the provision vendor to the portal operator for a free application, content, or service, according to the use record. In the present invention, the use record is quantified as points to calculate the distribution amount or the recovery amount. In the case of quantifying the use record as points, however, if the evaluation is based only on the use time, the use time for an electronic book or the like differs for each person even though the same number of pages are read. To quantify the use record as points by fair evaluation, a rule is defined for each application, content, or service, and stored in a weight information table 50T. As an example, as shown in FIG. 15, the weight information table 50T stores data including: an app name; an information type (e.g. electronic book, game, transfer guide, etc.); a process type (page reference or page change in the case of an electronic book, reference in the case of a game, search in the case of transfer guide, etc.); a service number; a weight value; and use time conversion. In FIG. 15, for example, a rule in the case where the user views a book

site operator performs a fee distribution or fee recovery process for each provision vendor. This fee distribution and recovery system is described below. As shown in FIG. 18, the record collection system 41 in the record collection server 40 includes an execution planning unit 88, a use record extraction unit 89, a recovery and distribution information analysis unit 90, a use record transmission unit 91, a record correction unit 92, a recovery calculation unit 93, a distribution calculation unit 99, and a use information and fee transmission unit 100. The use record information DB 23 in the DB server ~~20~~11 stores a use record table 60T storing use record information shown in FIG. 20, and the use record analysis result DB 26 stores an analysis result table 70T shown in FIG. 21. The analysis result table 70T stores information about distribution (incentive) or recovery (affiliate) as a result of analyzing the use record table 60T. The amount conversion information DB 24, the recovery fee information DB 27, and the distribution fee information DB 28 store an amount conversion information table 80T, a recovery fee information table 90T, and a distribution fee information table 100T, respectively. The amount conversion information table 80T stores information for calculating the distribution amount or the recovery amount according to the use record of the application, content, service, or the like used by the user. As an example, as shown in FIG. 22, the amount conversion information table 80T stores data including: a type (distribution or recovery); points as a result of quantifying the use record; a conversion rate between points and a distribution amount or a recovery amount; a target year; and a target month. The analysis results converted according to the conversion rates in the amount conversion information table 80T are reflected in the recovery fee information table 90T and the distribution fee information table 100T shown in FIGS. 23 and 24. The vendor terminal 70 includes a record reference unit 73, a record approval unit 74, and a use information and fee display unit 75.

[0027]

A process for performing fee distribution or fee recovery for each provision vendor in the above-mentioned structure is described below, with reference to a

CLAIMS

1. A portal site use record collection system for a portal site that is connectable with servers of a plurality of vendors for providing a plurality of applications, content, services, and the like and a client terminal of a user via a network, the portal site use record collection system comprising

a record collection system for collecting, as a log, a use history of the client terminal transmitted from a vendor that provides an application, content, or service used by the user, to collect use record information based on the log,

wherein the record collection system includes a use record database (DB) for recording a quantified use record, and summarizes points generated as a result of the quantification and calculates a fee for the vendor.

2. The portal site use record collection system according to claim 1, comprising:

a log conversion unit for defining a rule for converting, according to use function, the log transmitted from the vendor that provides the application, content, or service, and standardizing the log according to the conversion rule;

a weighting unit for setting an evaluation basis when calculating the points as the fee; and

a use record storage unit for summarizing the points evaluated by the weighting unit.

3. The portal site use record collection system according to claim 1 or 2, wherein the portal site includes an application, content, or service for which a use fee (incentive) according to the use record is paid and an application, content, or service for which a result reward (affiliate) is obtained according to the use record, and

wherein the log conversion unit classifies the log as incentive or affiliate and stores the classified log in the use record DB.

CLAIMS

1. A portal site use record collection system for a portal site that is connectable with servers of a plurality of vendors for providing a plurality of applications, content, or services, and a client terminal of a user via a network,

wherein the portal site includes an application, content, or service for which a use fee is paid and an application, content, or service for which a result reward is obtained, the portal site employs a fixed charging system when the user contracts with the portal site, so that no charge is required when the user uses an application, content, or a service provided on the portal site, and the portal site comprises a record collection server which collects, as a log, a use history of the client terminal transmitted from the server of each vendor, and collects use record information based on the log,

the record collection server includes an execution planning unit which schedules a period for extracting the use record, a use record extraction unit which extracts the use record within the scheduled period, a recovery and distribution information analysis unit which determines a type of the record whether the use record is a use record with fee to be distributed or a use record with fee to be recovered, a distribution calculation unit which calculates a distribution fee based on a conversion rate in a distribution fee information table, a use record transmission unit which transmits the use record of the service to the server of each vendor, a recovery calculation unit which calculates a recovery fee, a use information and fee transmission unit which transmits the distribution fee or the recovery fee to the server of each vendor, and a use record DB which records the use record as points generated as a result of quantification,

the system is configured to, when a user transmits a user information from the client terminal at a beginning of service use of the user, register the user information transmitted from the client terminal to a user information DB of the portal site, and to transmit the user information to each server of the server of the vendor to

store the same as the user information in each server of the vendor,

the portal site system is configured to specify the user having accessed the portal site on the basis of the user information in the user information DB of the portal site system, and with the server of the vendor, to confirm a use possibility of the application, content, or service by the user information stored in the server of each vendor when the specified user selects the application, content or service provided by the portal site system, to execute use procedure processing between the user and the vendor, and to store the log as the use history as a log information of the server of each vendor, and

the use record collection system analyzes the log information transmitted from the server of each vendor, quantifies the use record of the user as points, stores the same in the use record information DB, calculates the fee distribution amount and the fee recovery amount according to the use record quantified as points, and performs a fee distribution and fee recovery process for the server of each vendor.

2. The portal site use record collection system according to claim 1, comprising:

a log conversion unit which defines a rule for converting, according to use function, the log information transmitted from the vendor system of the application, content, or service, and which standardizes the log information according to the conversion rule, a use record DB which quantifies and records the points based on the standardized log information, and a weighting unit which sets an evaluation basis when calculating the points as the fee,

wherein the weighting unit includes a weight information table which sets a weight value for each application, content, or service, and which defines a rule for each application, content, or service, quantifies the use record as points according to the rule of the weight information table when the user uses any of the application, content, or service, calculates the distribution amount as the use fee or the recovery

amount as the result reward according to the point, and stores the same as the use record information, and

the portal site performs the fee distribution process and the fee recovery process to each vendor system based on the use record information.

3. A use record collecting method in a portal site using a portal site use record collection system that is connectable with servers of a plurality of vendors for providing a plurality of applications, content, or services, and a client terminal of a user via a network according to claim 1, the use record collecting method comprising the steps of:

(a) a step of recording, when a user transmits a user information from the client terminal to the portal site at a beginning of service use of the user, the user information to a user information DB of the portal site;

(b) a step of transmitting the user information registered in the user information DB to each server of the server of the vendor, and storing the same as the user information in the server of each vendor;

(c) a step of transmitting the user information from the client terminal of the user to the portal site at time of service use, and acquiring information of the service contracted by the user;

(d) a step by the server of the vendor of searching the registered user information, extracting applications, content, or services available to the user, confirming use possibility, executing a process according to each program, and transmitting the use record as a log to the portal site;

(e) a step of scheduling with an execution planning unit, and analyzing a use history of the user from the log of the use record transmitted from the server of the vendor within the scheduled period and extracting the use record with a record extracting unit;

(f) a step of determining a type of the record, whether the use record transmitted from the server of the vendor is a fee distribution or fee recovery;

(g) a step of quantifying, when the type of the reco0rd is determined as a distribution fee in step (f), the use record of the user as points, and calculating the distribution fee based on a conversion rate in a distribution fee information table and based on the use record quantified as points;

(h) a step of transmitting, when the type of the record is determined as a recovery fee in step (f), the use record of the service to each vendor with a use record transmission unit;

(i) a step by the server of each vendor of referencing the use record of the service transmitted from the portal site, obtaining approval of the transmitted use record, and transmitting an approval result;

(j) a step of storing a service use as fee recovery, and calculating the recovery fee with a recovery calculation unit; and

(k) a step of transmitting the distribution fee calculated in step (g) and the recovery fee calculated in step (j) to each vendor with a use information and fee transmission unit.