INFORMATION DISCLOSURE CONTROL UNIT, INFORMATION DISCLOSURE CONTROL METHOD AND SERVICE PLATFORM COMPANY DEVICE IN SERVICE PROVISION SYSTEM

BACKGROUND OF THE INVENTION

Field of the Invention

[0001]

The present invention relates to an information disclosure control unit, an information disclosure control method and a service platform company device in a service provision system which enables transmission and reception of information between plural service receiving companies (plural service receiving company devices) through at least one service providing company (service providing company device).

[0002]

More specifically, for example, the present invention relates to an information disclosure control unit, an information disclosure control method and a service platform company device in a service provision system in which a service platform company providing a specific service (business service or reservation service) to plural competing companies (service providing companies) can generate analysis information useful for the users (service receivers) of the plural companies, in which provision of the information to the

outside is not a problem for the plural companies, and can provide the analysis information to a service receiving company which needs the analysis information.

Description of the Related Art

[0003]

With the development of the Internet, the number of service companies which provide useful services for different industry sectors and different lines of business is increasing: for example, such service companies include service companies which provide product information such as popular menus to restaurant businesses and wholesale and retail service companies which provide foodstuff to those service companies, and foodstuff producers.

[0004]

For example, in recent years there have been service provision systems which provide, to service providing companies which provide specific business services to service receiving companies such as restaurants using the Internet or web, service platforms as platforms for the specific business services, and support the businesses of the service receiving companies through the business services based on the service platforms.

[0005]

This kind of service provision system has a service

platform company device, a service providing company device, a service receiving company device, and a user terminal.

[0006]

The service platform company device is a system or device which provides a function (service) based on the provided service platform, for example, an SaaS (Software as a Service) type business system, to the service providing company device.

[0007]

The service providing company device is a system or device which receives a business system (business SaaS) based on the service platform provided by the service platform company device. It is also, for example, a system or device which customizes the business system in response to a request from the service receiving company (or directly from a user) and provides it to the service receiving company.

[0008]

The service receiving company device is, for example, a device which provides user information provided by the user to the service providing company device.

[0009]

The user terminal is, for example, a terminal which enables the user to enter user information and provides it to the service receiving company device. Also the user terminal may be the user’s portable terminal which automatically collects information on the portable terminal when the user

holds it up.

[0010]

For example, according to Patent Document 1 (JP-A-2009-93569), in the case of transfer from an SaaS environment to an SI environment, sunk cost and opportunity loss are reduced in a business service which has been initially used in the SaaS form; when the business service is transferred from an SaaS business environment (Company A) to an SI environment (City B), a service address list which records addresses for the business service is provided in City B and the addresses in the service address list are updated upon business service transfer. When the business data accumulated in Company A is to be transferred, a data address list which records business data addresses is provided in Company A and City B and the addresses in the address lists in both of them are updated upon business data transfer. For such updating, a technique which changes the access method so as to make the addresses logically identical is disclosed.

[0011]

Also, Non Patent Document 1 (http://www.meti.go.jp/policy/it_policy/daikoukai/igvp/contents/pdf/C-1.pdf) is a disclosure of technology entitled "Personal Information Anonymization Technology" and it discloses anonymization technology to use collected personal information as corporate assets.

Citation List

Patent Document

[0012]

Patent Document 1: JP-A-2009-93569

Non Patent Document

[0013]

Non Patent Document 1: http://www.meti.go.jp/policy/it_policy/daikoukai/igvp/contents/pdf/C-1.pdf

[0014]

According to the above service provision system, the service platform company can support the business of the service providing company. Also the service providing company can support the business of the service receiving company. Such business support can make the whole system work efficiently and improve the business efficiency.

[0015]

Also, each service providing company which provides such service and the service platform company usually store (accumulate) and manage data related to each user, for example, preferences and behavior record.

[0016]

Therefore, a system which can analyze user-related data and provide useful information based on the analysis result to the service receiving company (store or business) which

receives service from the service providing company, if available, is expected to improve business efficiency further.

[0017]

Here, “user” in the present invention refers to an individual, group or corporate and includes a specific user (an individual, a group, or a corporate which is identifiable) and an unspecific user (an individual, a group or a corporate which is unidentifiable or hardly identifiable). The terminal or the like which the user uses in this system is called “user terminal.” Hereinafter, in the present invention, the term “individual” concerning the user includes a group or corporate as a user.

[0018]

Also, “service receiving company” is a business entity which receives a main business support service (first service) through this system and the system component device installed on the part of the service receiving company is called “service receiving company device.” Here the expression “installed on the part of” does not mean only that the device is located in the service receiving company. The expression “installed on the part of” is used below in the same way.

[0019]

Also, “service providing company” is a business entity which provides the main business support service (first service) through this system and the system component device

installed on the part of the service providing company is called “service providing company device.”

[0020]

Also “service platform company” is a business entity which unifies a plurality of service providing companies and provides a service platform such as a business or reservation function (business service or reservation service) to the service providing companies and/or service receiving companies. In accordance with a contract, information is collected from the service receiving company device and/or service providing company device as needed and the information is, for example, analyzed and provided as analysis information (second service) to the service receiving company and/or service providing company. The system component device installed on the part of the service platform company is called “service platform company device.”

[0021]

Since the service platform company is a corporate which unifies plural service providing companies, if the service platform company can merge and analyze various data accumulated by the plural service providing companies, higher value-added analysis can be made and as a consequence, higher value-added analysis results can be provided as service to users including the service providing companies or/and service receiving companies.

[0022]

Today an IT environment in which large volumes of data can be analyzed is becoming available and it is technically possible to make high value-added analysis of large volumes of data as mentioned above.

[0023]

High value-added analysis refers to analysis for providing basic data which permits personalization (transmission by e-mail, etc. of information suitable for the preferences or attributes of each of the customers and prospective users) or recommendation for concurrent selling (service to analyze the users' preferences and select information for each user which may attract his/her interest and display it).

[0024]

However, when the service providing company or service platform company makes such high value-added analysis, a serious issue is how they respond to the following request of each service receiving company.

[0025]

For example, if service receiving companies belong to the same industry sector (for example, restaurants), each service receiving company may request that "information should not be provided to the stores (service receiving companies) of the same genre in the same area."

[0026]

Also a service receiving company which uses a business service company may request that “information should not be provided to other service receiving companies in the same industry sector.”

[0027]

There was no system that could respond to such request, namely a system that enabled the service providing company and service platform company to merge the various data collected from plural service receiving companies, make higher value-added analysis and provide it as service which might be mutually useful for business among the service receiving companies.

[0028]

Specifically, when exchange (transmission/reception) of information is made between service receiving companies and they do not want to disclose the information to their competitors, in the past the above request from service receiving companies was responded on an individual basis by not sending the information to the competitors.

[0029]

Furthermore, although a possible approach is to analyze the information collected from service receiving companies using statistical analysis technology, since the statistical analysis is analysis made by statistical processing, it is

impossible to presume individual service receiving companies from the analysis result and the service receiving companies cannot expect to obtain high value-added analysis information as mentioned above.

[0030]

On the other hand, a service receiving company may want to provide a particular piece of information in the information owned by the service providing company to other service providing companies or service receiving companies for profit. This is an idea that the service receiving company positively “sells” the information owned by it if there is no inconvenience for it. No system that considers charging means to meet this idea or request has been realized so far.

[0031]

Therefore, the present invention is intended to provide an information disclosure control unit in a service provision system including a service platform company which enables the service platform company to disclose exchange of information (transmission/reception of information) between plural service receiving companies (a plurality of service receiving company devices) through a service providing company.

[0032]

The present invention is also intended to provide an information disclosure control unit in a service provision system which can charge for disclosed information.

SUMMARY OF THE INVENTION

[0033]

In order to address the above problem, according to the present invention, in a service provision system which, through plural service providing companies and a service platform company targeting the plural service providing companies, provides service to plural service receiving companies, the service platform company collects information of each of the service receiving companies through the plural service providing companies and for sending to the service receiving company the analysis information obtained by analyzing the information, information disclosure control means is provided to perform control for deciding outputtable analysis information based on an information disclosure master (table scheme) including disclosure condition information as the information source of the service receiving company and the profile of the service receiving company (service receiving company which needs the analysis information) as the disclosure destination of the analysis information.

[0034]

More specifically, for example, the system is as follows.

The present invention provides an information disclosure control unit in a transmission/reception service provision system which includes plural service receiving company devices

that plural users use, a service providing company device of a service providing company that targets the service receiving companies of the plural service receiving company devices, and a service platform company device of a service platform company that provides support service to service receivers of the plural service receiving company devices through the service providing company device, in which the service platform company device collects information of each of the plural service receiving company devices through the service providing company device and analyzes the collected information and/or the collected information and sends the analysis information to the plural service receiving company devices through the plural service providing company devices; and the service platform company device includes means to collect information of each of the plural service receiving company devices from the plural service providing company devices and store the collected information in storage means, analyzing means to analyze the collected information and generate and output useful information for the service receiving companies, means to send analysis information analyzed by the analyzing means to the service receiving company devices through the service providing company device, and information disclosure control means to make a decision about information disclosure of the analysis information at the time of sending the analysis information to the service

receiving company devices through the service providing company; and the information disclosure control means includes an information disclosure master section created based on information disclosure conditions of the service receiving companies, including disclosure condition information to identify a service receiving company as a disclosure destination of the analysis information, and an information disclosure control section to control output of the analysis information; and at the time of sending the analysis information obtained by analyzing the information of each of the plural service receiving company devices through the service providing company, the information disclosure control section decides outputtable analysis information based on the disclosure condition information in the disclosure master section and the profile of the service receiving company as a disclosure destination of the analysis information so that the decided analysis information can be provided to the service receiving company device of the identified service receiving company.

[0035]

In the information disclosure control unit in the service provision system, the information disclosure master section includes an information disclosure master table that identifies a service receiving company as the destination of information disclosure or a service receiving company to which

information is not disclosed, based on identification information including the same industry sector and the same area, as the disclosure condition information.

[0036]

In the information disclosure control unit in the service provision system, the information disclosure master section further includes charge information to charge to a service receiving company as a destination of information disclosure when information of each of the plural service receiving companies is received and transmitted between the plural service receiving companies through at least one of the plural service providing companies.

[0037]

An information disclosure control method in a transmission/reception service provision system in the present invention which includes plural service receiving company devices that plural users use, a service providing company device of a service providing company that targets the service receiving companies of the plural service receiving company devices, and a service platform company device of a service platform company that provides a main business support service as service to service receivers of the plural service receiving company devices through the service providing company device, in which information of each of the plural service receiving company devices is sent through at least one

of the plural service providing company devices, the service platform company device collects the information of each of the plural service receiving company devices through the plural service providing company devices, analyzes the collected information and/or the collected information, identifies useful analysis information for the plural service receiving companies from the analysis information, and controls the identified analysis information in a way to be disclosable to the service receiving company devices through the service providing company device, and the he method includes the following steps:

collecting the information of each of the plural service receiving company devices through the plural service providing company devices;

merging the collected information and analyzing the merged information to generate analysis information;

deciding, from the analysis information, analysis information which can be provided to the plural service receiving companies, using service providing company profiles in the plural service providing company devices and an information disclosure master including condition information for information disclosure to the plural service receiving companies; and

providing the decided analysis information to the service receiving company device through the service providing service

company device.

[0038]

The information disclosure control method in the service provision system further includes the step of charging to a service receiving company as a destination of information disclosure when information of each of the plural service receiving companies is received and transmitted between the plural service receiving companies through at least one of the plural service providing companies.

Advantageous Effects of Invention

[0039]

According to the present invention, there can be provided an information disclosure control unit in a service provision system in which a service platform company generates useful service (analysis result) from information of each of plural service receiving companies (plural service receiving company devices) so that the service can be mutually disclosed between the service receiving companies (plural service receiving company devices).

[0040]

Also, since a service providing company device or a service platform company device processes original user information, even if processed information leaks from the service platform company device, the possibility that a

specific user is identified from the processed information is prevented.

[0041]

The other objects, elements and effects of the invention will more fully appear from the description of the embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

[0042]

Fig. 1 is a view illustrating the general configuration of a service provision system according to the present invention;

Fig. 2 is a block diagram illustrating the configuration of a service providing company device;

Fig. 3 is a block diagram illustrating an example of the configuration of a service platform company device;

Fig. 4 is a block diagram illustrating an example of the configuration of the control means (information disclosure control section) of the arithmetic unit of a service platform company server;

Fig. 5 is a block diagram illustrating an example of the analyzing section of the control means of the arithmetic unit of the service platform company server;

Fig. 6A is a view illustrating the table scheme of the table definition document (information disclosure mater table) T1 of an information disclosure master registered in an

information disclosure master DB 3123 and an example of the relation among its item names;

Fig. 6B is a view illustrating the table scheme of the definition document (service receiving company management mater table) T2 of a service receiving company integrated management master registered in a service receiving company integrated management master DB 3122 and an example of the relation among its item names;

Fig. 6C is a view illustrating the table scheme of the definition document (service providing company management mater table) T3 of a service providing company management master registered in a service providing company management master DB 3121 and the relation among its item names;

Fig. 6D is a view illustrating the table scheme of the definition document (service receiving company management mater table) T4 of a service receiving company management master registered in a service receiving company management master DB 2112 and the relation among its item names;

Fig. 6E is a view illustrating the table scheme of the definition document (disclosed data setting mater table) T5 of a disclosed data setting master registered in a disclosed information & analysis data DB 3124 and the relation among its item names;

Fig. 7 is a flowchart illustrating the processing sequence for information collection and user information

recording by the arithmetic unit of the service platform company server;

Fig. 8 is a flowchart illustrating the processing sequence for setting and registering information seller n and information purchaser m in an information disclosure master; and

Fig. 9 is a flowchart illustrating the processing sequence of the information disclosure control method for the service platform company server (processing sequence based on a seller service receiving company search request and a user information and/or analysis data acquisition request).

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0043]

Next, an embodiment will be described referring to drawings. First, a service provision system which supports the business of a service receiving company will be described.

[0044]

The service provision system includes a service platform company system or device (hereinafter called the service platform company device) which provides application service or SI, namely reservation function or business SaaS service (first service S1) to a service providing company, and a service providing company system or device (hereinafter called the service providing company device) which customizes the

first service in response to a request from a service receiving company (restaurant, etc.) and provides it to the service receiving company. The service receiving company (restaurant, etc.) provides eating and drinking service or supplies commodities to a user (consumer) and receives user information (original information) from the user.

[0045]

The service platform company device may be a device which provides not SaaS service but PaaS (Platform as a Service) service for lending a platform including an OS or ASP (Application Service Provider) service or the like.

[0046]

Next, the restaurant industry (restaurants), service providing companies for them and a service platform company will be mainly described.

[0047]

First, the service provision system is summarized. The service platform company device in the service provision system has an application server (hereinafter called the service platform company server) which provides reservation management service (application service), etc. to the service providing company device.

[0048]

The service providing company device has an application server (hereinafter called the service providing company

server) which customizes the reservation management service according to a request from a service receiving company and receives and manages reservation information of a user (consumer) from the service receiving company. In other words, the business of the service receiving company is supported by collaboration between the service platform company device and service providing company device.

[0049]

The system thus configured generally copes with a request of each service receiving company on an individual basis.

Therefore, the service platform company device provides the first service S1 to the service providing company device and the service providing company device only provides customized first service (service start) to service receiving companies and manages user information (original information) Ia, Ib based on the provided first service.

[0050]

An example of this service provision method may be SaaS. SaaS is an ICT utilization environment in which the service providing company or service receiving company can use a function (first service) provided by an information system (software) via a network without the need for construction/introduction of a new system.

[0051]

Generally, SaaS offers a merit that required service can

be quickly used as necessary without the need for construction of a special system. In addition, since SaaS makes it unnecessary to prepare a special internal environment, the time required to start operation of the function (service) can be shortened and cost can also be reduced. Also, the Internet or WAN is used and thanks to technical innovations of networks and browsers, the system can be operated as easily as when an in-house system is used.

In addition, a service providing company device or service receiving company which uses the SaaS or SI and operation/maintenance provided by the service platform company can expect cost reduction and increased sales.

[0052]

Each service providing company device is configured to individually manage specific user original information (original user information) related to users (including individuals, groups and companies) which is collected from service receiving companies.

[0053]

This means that the system has not been designed to enable positive sales promotion activity to a specific user using the original user information. In other words, no consideration has been given to positive utilization of the original user information.

[0054]

One reason for this is that the original user information collected by each service providing company from a service receiving company includes personal information which identifies an individual, a group or a company as a specific user.

[0055]

Therefore, conventionally, although depending on an agreement between a service platform company and a service providing company, original user information can be transmitted and received between them, generally original user information including personal information may not be provided from a service providing company device to a service platform company device as a third party or another service providing company device.

[0056]

In addition, it has been impossible to analyze information (original user information) of each service receiving company and exchange the information between service receiving companies.

[0057]

In view of the above circumstances, the present invention searches a seller service receiving company from plural pieces of information collected from the service receiving companies, for example, original user information (raw data) and/or anonymized user information obtained by anonymizing the

original user information (raw data) and provides the searched seller service receiving company’s user information to a purchaser service receiving company (hereinafter referred to as disclosure), and also merges original user information (raw data) and/or anonymized user information obtained by anonymizing the original user information (raw data), makes high value-added analysis of the information and discloses the analysis data to the purchaser service receiving company.

[0058]

In other words, information which is useful for each service receiving company and may be disclosed to the outside is identified as second service and made open so that the seller and purchaser service receiving companies can use it mutually. Next, an embodiment of the present invention will be described referring to drawings.

Example 1

[0059]

Fig. 1 is a view illustrating the general configuration of a service provision system according to the present invention. This embodiment will be described, assuming two service receiving companies a and b and two service providing companies A and B.

[0060]

The service provision system includes plural service

receiving companies a, b. . ., plural service receiving company devices 1, plural service providing companies A, B . . ., plural service providing company devices 2, and a service platform company device 3 of a service platform company H.

[0061]

For example, the plural service receiving company devices 1 of the plural service receiving companies a, b include plural stores a1, a2, . . an or plural corporates b1, b2, . . bn. The service receiving company devices 1 of the service receiving companies a, b output original user information Ia (Ia1, Ia2, . . 1an) and Ib (Ib1, Ib2, . . Ibn) to the service providing company devices 2 of the service providing companies A, B.

[0062]

The original user information Ia or Ib is sent from a user in response to the first service S1 (business/reservation function, etc.) provided from the service platform company device 3 of the service platform company H through the service provision system 2.

[0063]

Each service providing company device 2 receives original user information Ia, Ib and sends the original user information to the service platform company device 3 through a network 4. If the original user information cannot be sent

directly as raw data, the original user information is anonymized to the extent that the source of the original user information or the user cannot be identified and the anonymized user information Xia, XIb is sent as user information to the service platform company device 3. For this anonymization, for example, the above anonymization technology described in Non Patent Literature 1 is used.

[0064]

The service platform company device 3 includes a service platform company server 31. The service platform company server 31 has an I/O unit 311, a memory unit 312, and an arithmetic unit 313.

[0065]

The I/O unit 311 has a service receiving company information (user information) receiving section 3111, a disclosed information setting/disclosed information (seller service platform receiving company search & analysis data) acquisition request receiving section 3112, a service distributing section 3113, and a disclosed information distributing section 3114.

[0066]

The service receiving company information receiving section 3111 has a function to receive user information Ia, Ib and XIa, XIb sent from the service receiving company device 1 through the service providing company device 2.

[0067]

The disclosed information setting/disclosed information acquisition request receiving section 3112 has a function to receive, as a table scheme of an information disclosure master table, information to specify information disclosure conditions including whether or not the service receiving company a(b) wants to publicize or disclose (sell) its own user information to a third party service receiving company b(a), and if it wants to disclose (sell), it permits disclosure to a service receiving company in what industry sector or in which area, or charging condition (fee). It also has a function to receive a disclosed information acquisition request which will be described later.

[0068]

The service distributing section 3113 has a function for the service platform company device 3 to distribute the first service S1 to the service providing company device 2 and service receiving company device 1.

[0069]

The disclosed information distributing section 3114 has a function to distribute disclosed information (disclosable data) decided based on the table scheme of the information disclosure master table T1 which will be described later, as the second service S2, S2′ to the purchaser service receiving company device 1 through the service providing company device

2.

[0070]

The memory unit 312 has a service providing company management master DB 3121, a service receiving company integrated management master DB 3122 and an information disclosure master DB 3123.

[0071]

The service providing company management master DB 3121 has a service providing company master table T3. The service providing company master table T3 constitutes a table scheme which stores and manages profile information related to the service receiving company devices 2 of the service receiving companies A, B, for example, service providing company names (A, B, . . .), mail addresses, and addresses as shown in Fig. 6C.

[0072]

The service receiving company integrated management master DB 3122 has a service receiving company integrated management master table T2. The service receiving company integrated management master table T2 constitutes a table scheme which merges information sent from the service receiving company devices 1 of the service receiving companies a, b through the service providing company devices 2 of the service providing companies A, B and stores and manages the service receiving companies n (a1, a2, b1, b2. . .) in

association with the service providing company names (A, B, . . .), for example, as shown in Fig. 6B.

[0073]

The information disclosure master DB 3123 has an information disclosure master table T1. The information disclosure master table T1 constitutes a table scheme which stores and manages the information including the above information disclosure conditions entered from the service receiving company devices 1 of the service receiving companies a, b when setting the information. The information disclosure master table scheme (see Fig. 6A) will be described later.

[0074]

The arithmetic unit 313 has control means 3131 such as a CPU (see Fig. 3). The control means 3131 has an information disclosing section 31315 and the control section controls the above functions and has a function to search a seller service receiving company n (matching between the seller service receiving company n and purchaser service receiving company m) and decide whether or not to disclose the seller service receiving company n's information to the purchaser service receiving company m, based on the table scheme information of the information disclosure master table T1 of the information disclosure master DB 3123, analyze the information the disclosure of which is decided to be permitted, and give an instruction for disclosure of the information to the purchaser

service receiving company m through the service providing company. The disclosure instruction is given in response to an information acquisition request from a service receiving company.

Details of the above processes will be described later.

[0075]

Fig. 2 is a view illustrating the configuration of the service provision server 21 of the service providing company device 2. The service provision server 21 has a service receiving company information (user information) receiving section 2111, a service receiving company management master DB 2112, a first service (business/reservation function, etc.) DB 2113, a service distributing section 2114, a service receiving company information (user information) transmitting section 2115, a disclosed information (seller service receiving company search and analysis data) acquisition request transfer section 2116, a disclosed information transfer (transfer of seller service receiving company's disclosed information S2 (disclosed data d1, d2 . . .) to the purchaser service receiving company) section 2117, and control means 2118.

[0076]

As described above, disclosed information is the user information of the seller service receiving company n (available information) and analysis data obtained by analyzing the user information.

[0077]

The service receiving company information (user information) receiving section 2111 receives information (user information) of service receiving companies which is sent from the service receiving company devices 1 of the service receiving companies A, B. For example, as shown in Fig. 6D, seller service receiving companies n (a1, a2, b1, b2 . . .), industry sector, type of business, address (including the area) and so on are recorded, as the information of the service receiving companies, in the service receiving company management master table T4 of the service receiving company management master DB 2112.

[0078]

The service distributing section 2114 distributes the first service (main service) of the first service (business/reservation function, etc.) DB 2113 to the service receiving company device 1 in response to a request from the service receiving companies a, b.

[0079]

The disclosed information (seller service receiving company search and user information) acquisition request transfer section 2116 receives a seller service receiving company search request and a user information (including analysis data) disclosure request from each service receiving company device 1 and transfers the search request and

information disclosure request to the service platform company device 3.

[0080]

The service receiving company information (user information) transmitting section 2115 transfers the user information from the service receiving company device 1 as original user information and/or anonymized user information to the service platform company device 3.

[0081]

The seller service receiving company disclosed information transfer (of user information S2 & analysis data S2’ to the purchaser service receiving company) section 2117 receives information S2, S2’ for disclosure to the purchaser service receiving company m as sent from the service platform company device 3 which will be described later and transfers the disclosed information to the purchaser service receiving company device 1.

The control means 2118 is, for example, a CPU and has a control section to control the above function.

[0082]

Fig. 3 is a view showing the configuration of the service platform company server 31. The service platform company server 31 has an I/O unit 311, memory unit 312, and arithmetic unit 313.

[0083]

The control means 3131 of the arithmetic unit 313 has an information recording section 31311, an available information searching section 31312, an information disclosure decision section 31313, an information analyzing section 31314, and the information disclosing section 31315.

[0084]

The information recording section 31311 stores the user information Ia, Ib, etc. of the service receiving company device 1 in the user information storage area of the service receiving company integrated management master DB 3121 in the memory unit 312.

[0085]

When the available information searching section 31312 receives a seller service receiving company search request from the service receiving company device 1, it searches the service receiving company integrated management master DB 3122 to find whether or not there is a seller service receiving company which can provide information to a third party, based on the table scheme information of the information disclosure master table T1 of the information disclosure master DB 3123.

[0086]

If there is a seller service receiving company, the information disclosure decision section 31313 makes an information disclosure decision about whether or not to disclose the user information of the seller service receiving

company n to the purchaser service receiving company m, from the service receiving company integrated management master DB 3122.

[0087]

When the information analyzing section 31314 receives a request for analysis of the information of the seller service receiving company from the service receiving company device 1, it makes desired analysis of the user information of the seller service receiving company n from the service receiving company integrated management master DB 3122, which is permitted to be disclosed to the purchaser service receiving company m, or disclosable information.

[0088]

The information disclosing section 31315 performs disclosure processing by outputting the disclosable information to the information distributing section 3114 of the I/O unit 31.

[0089]

The memory unit 312 has the service receiving company integrated management master DB 3122, the information disclosure master DB 3123, and a disclosed information & analysis data DB 3124. The disclosed information & analysis data DB 3124 stores and manages information for disclosure to a third party (information permitted to be provided or sold) from the service receiving company integrated management

master DB 3122. The I/O unit 311 is as described above.

[0090]

Fig. 4 is a view showing the relation among the information disclosure decision section 31313, information analyzing section 31314 and information disclosing section 31315 of the arithmetic unit.

[0091]

The information disclosure decision section 31313 receives user information (service receiving company information) Ia1, Ib1. . . and/or its anonymized user information XIa1, XIb1. . . from the service providing company 2 and decides whether or not to disclose the user information to the service receiving company as a third party, namely whether or not to disclose the information of the seller service receiving company n to the purchaser service receiving company m, in reference to the information disclosure master table scheme (Fig. 6A) of the information disclosure master DB 3123. As a result of the decision, disclosable information S2 (disclosed data d1, d2, d3. . .) is stored in the disclosed information & analysis data table T5 (disclosed data setting master table scheme) in the disclosed information & analysis data DB 3124, for example, as shown in Fig. 6E, and outputted to the information disclosing section 31315.

[0092]

The information analyzing section 31314 performs

information analysis processing of the disclosable information S2 which the information disclosure decision section 31313 decides to be permitted to be disclosed. The analysis data S2′ obtained by the analysis processing is stored in the disclosed information & analysis data table T5 (disclosed data setting master table scheme) in the disclosed information & analysis data DB 3124. It is also outputted to the information disclosing section 31315. In this analysis processing, high value-added analysis can be made by merging user information from plural service receiving companies and analyzing it.

[0093]

When a disclosed information acquisition request is received from the service receiving company device 1, the information disclosing section 31315 outputs the disclosed information S2, S2′ of the information disclosure decision section 31313 and information analyzing section 31314 to the information distributing section 3114 of the I/O unit.

[0094]

Consequently, the information distributing section 3114 can distribute the disclosed information (seller user information) S2, S2′ to the service receiving company device 1 through the service providing company device 2.

[0095]

Fig. 5 is a view illustrating an example of the information analyzing section. The information analyzing

section 31314 has a processing section 313141 for extracting original user information Ia1, Ib1 from user information Ia1/IXa1, Ib1/IXb1, a processing section 313143 for extracting anonymized user information IXa1, IXb1, an information analysis processing section 313142 for analyzing original information, and an information analysis processing section 313144 for analyzing anonymized user information.

[0096]

The information analysis processing sections 313142 and 313144 make analysis upon receipt of the result from the information disclosure decision section 31313 and output the analysis results as disclosable information S2 and analysis data S2′.

[0097]

Fig. 6A is a view illustrating the table scheme of the information disclosure master table definition document (information disclosure master table) T1 registered in the information disclosure master DB 3123 and an example of the relation among its item names. For the sake of convenience, the figure includes “Description” and “Data source” columns in order to help understanding of the table scheme content.

[0098]

The table scheme of the information disclosure master table T1 includes plural item names. For example, the item names are Seller service receiving company id 611, Seller

disclosed data name 612, Purchaser service receiving company id 613, Disclosure setting flag 614, Fee 615, and so on.

[0099]

Seller service receiving company id 611 identifies the seller service receiving company and its data resource is a service receiver integrated id in the service receiving company integrated management master DB 3122. In other words, the service receiver integrated id means an id which is contained in the service receiving company integrated management master DB 3122.

[0100]

Seller disclosed data name 612 is data disclosed by the service receiving company as a seller.

Purchaser service receiving company id 613 identifies the purchaser service receiving company and its data source is a service receiver integrated id in the service receiving company integrated management master. In other words, the service receiver integrated id means an id which is contained in the service receiving company integrated management master DB 3122.

Disclosure setting flag 614 is a flag which determines whether or not to disclose information and its data source is as follows: 0: Not disclose, 1: Disclose. The flag setting will be described later.

Fee 615 indicates the information disclosure fee, namely

the selling price of the information, if the disclosure setting flag is set for “Disclose (1).” The data source is as follows: null for Not disclose (0) and the price agreed between the seller and the purchaser for Disclose (1).

[0101]

If “n (a1, a1, a7, a7)” is given as Seller service receiving company id 611, “S2, S2’ (d1, d1, d2, d2)” as Seller disclosed data name 612, “m (b1, b1, b2, b2)” as Purchaser service receiving company id 613, “1, 0 (1, 0, 0, 1)” as Disclosure flag 614, and “¥” as Fee 615, as shown in the figure, the fee is set at ¥600 for the relation among seller service receiving company id a1 corresponding to disclosure flag 1 and seller disclosed data name d1 and purchaser service receiving company id b1, and the fee is set at ¥500 for the relation among seller service receiving company id a1 and seller disclosed data name d1 and purchaser service receiving company id b1.

Disclosure setting flag 1, 0 and fee ¥ are among the disclosure setting conditions.

[0102]

The figure shows that with disclosure setting flag 1, the disclosed data d1 and d2 of seller service receiving companies a1 and a7 are disclosed (sold) to purchaser service receiving companies b1 and b2 for fees ¥600 and ¥500.

[0103]

On the other hand, the figure shows that with disclosure setting flag 0, the disclosed data d1 and d7 of seller service receiving companies a1 and a7 cannot be disclosed (sold) to purchaser service receiving companies b1 and b2.

[0104]

Therefore, to which purchaser service receiving company m the information of the seller service receiving company can be disclosed (sold) or not can be known by searching the seller service company n in reference to this information disclosure master table T1.

[0105]

Fig. 6B is a view illustrating the table scheme of the service receiving company integrated management master definition document (service receiving company management master table) T2 registered in the service receiving company integrated management master DB 3122 and an example of the relation among its item names. For the sake of convenience, the figure includes “Description” and “Data source” columns in order to help understanding of the table scheme content.

[0106]

The scheme table of the service receiving company integrated management master table T2 includes plural item names. For example, the item names are Service receiving company integrated ID 621, Service providing company ID 622, Service receiving company ID 623, Service receiving company

name 624 and so on.

[0107]

Service receiving company integrated ID 621 is a service receiving company integrated ID which integrates plural service receiving companies and its data source is a unique management ID given to the platform company to unify and manage all service receiving companies belonging to service companies in an integrated manner.

[0108]

Service providing company ID 622 is a service providing company ID and its data source is a service provider id in the service provision management master. In other words, the service provider id means an id which is contained in the service providing company management master 3121.

[0109]

Service receiving company ID 623 is the ID of a service receiving company and its data source is a service receiver id in the service receiving company management master. In other words, service receiver id means an id which is contained in the service receiving company management master 2112.

Service receiving company name 624 is the name of a service receiving company and a service receiver name in the service receiving company management master.

[0110]

If “t1, t2, t3, t4” are given as Service receiving

company integrated ID 621, “A, A, B, B” as Service providing company ID 622, “a1, a2, b1, b2” as Service receiving company ID 623, and “Nagomichaya, Italian-izakaya-gotandaten, Sozaikobo, Cerami-shoji” as Service receiving company name 624, the relation among these item names is as shown in the figure. Service receiving company integration means to integrate plural service receiving companies a, b. This integration makes it possible to merge collected information and analyze it.

[0111]

The figure shows the relation between service providing companies (A, B) and seller service receiving companies n (a1, a2, b1, b2). Specifically the figure shows that service providing company A is related to seller service receiving companies n (a1, a2) and service providing company B is related to seller service receiving companies m (b1, b2).

[0112]

Therefore, the relation between the service providing companies and seller service receiving companies can be known from this service receiving company integrated management master table T2.

[0113]

Fig. 6C is a view illustrating the table scheme of the service providing company management master definition document (service providing company management master table)

T3 registered in the service providing company management master DB 3121 and the relation with its item names. For the sake of convenience, the figure includes “Description” and “Data source” columns in order to help understanding of the table scheme content.

[0114]

The table scheme of the service providing company management master table T3 includes plural item names. For example, the item names are Service providing company ID 631, Service providing company name 632, Service providing company URL 633, Service providing company address 634 and so on.

[0115]

As for these item names, if A and B are given as Service providing company ID 631 and Inshokuten-no-hiroba and Office-doguichiba are given as Service providing company name 632, the relation among these item names including Service providing company URL 633 and Service providing company address 634 is as shown in the figure.

[0116]

Fig. 6D is a view illustrating the table scheme of the service receiving company management master definition document (service receiving company management master table) T4 registered in the service providing company management master DB 2112 and the relation among its item names. For the sake of convenience, the figure includes “Description” and

“Data source” columns in order to help understanding of the table scheme content.

[0117]

The table scheme of the service receiving company management master table T4 includes plural item names. For example, the item names are Service receiving company ID 641, Service receiving company name 642, Service receiving company industry sector/industry information 643, and Service receiving company address 644 and so on.

[0118]

As for these item names, for example, taking the case of Inshokuten-no-hiroba (see Fig. 6C) corresponding to Service providing company ID 632, the relation among these item names is as shown in the figure. For example, “a1, a2” are given as Service receiving company ID 641, “Nagomichaya, Italian-izakaya-gotandaten” as Service receiving company name 642, “Japanese-style pub, Western-style pub as Service receiving company industry sector/industry information 643 and “Tsukiji 1-1-1, Chuo-ku, Tokyo” and “Gotanda 2-2-2, Shinagawa-ku, Tokyo” as Service receiving company address and so on.

[0119]

As for these item names, for example, taking the case of Office-dogu-ichiba corresponding to service providing company ID B (see Fig. 6C), the relation is as shown in the figure. For example, “b1, b2, b3, b4, b5” are given as Service

receiving company ID 641, “Sozaikobo, Cerami-shoji, Moondrug, Oumioroshi, Ohataoroshi” as Service receiving company name 642, “Food product maker, Precision machine exporter, Drug store, Marine product wholesale, Fresh vegetable wholesale” as Service receiving company industry sector/industry information 643 and so on. In the service receiving company management master table T4, Service receiving company name 642, Service receiving company industry sector/industry information 643, and Service receiving company address 644 also represent the service receiving company’s profile. The profile may include other items such as mail address and telephone number, though not limited to them. The destination of disclosure can be controlled by specifying the information to be disclosed and the destination of analysis information disclosure including the service receiving company’s profile.

[0120]

Fig. 6E is a view illustrating the table scheme of the disclosed data setting master definition document (disclosed data setting master table) T5 registered in the disclosed information & analysis data DB 3124 and the relation among its item names. For the sake of convenience, the figure includes “Description” and “Data source” columns in order to help understanding of the table scheme content.

[0121]

The scheme table of the disclosed data setting master

table T5 includes plural item names. For example, the item names are Item number, Service receiving company, Data name, Data source and so on. Item number 651 includes unique numbers “1, 2, 3, 4.” Service receiving company 652 is the service receiving company which is the owner of data and its data source is a service receiving company integrated ID in the service receiving company integrated management master. In other words, the service receiving company ID means an ID which is contained in the service receiving company integrated management master 3111.

Data name 653 is the name of the data owned by the service receiving company and Data source 654 is the source of the data owned by the service receiving company. Here, if “t1, t1, t2, t2” are given as Service receiving company 652 and “d1, d2, d3, d4” as Data name 653, and “sales data of t1(=a1), user data of t1(=a1), anonymous user data of t1(=a1), sales data of t2=a2)” as Data source 654, the relation among these item names is as shown in the figure.

[0122]

Figs. 7 to 9 are flowcharts illustrating the processing sequences of the information disclosure control method in the service provision system according to the present invention.

Fig. 7 is a flowchart illustrating the processing sequence for user information collection and user information recording.

[0123]

At Step 1, original user information and/or anonymized user information obtained by anonymizing the original user information (hereinafter collectively called user information) of plural service receiving company devices 1 is collected through plural service providing company devices 2.

[0124]

At Step 2, the collected user information is registered in the service receiving company integrated management master DB 3122.

[0125]

Fig. 8 is a view illustrating the processing sequence for registering information disclosure master settings for seller service receiving company n and purchaser service receiving company m.

[0126]

At Step 1, a flag for information disclosure master/disclosure setting is specified for information disclosure default setting. Disclosure setting flag “0” means that information is not disclosed and disclosure setting flag “1” means that information is disclosed. This specification is based on the service receiving company’s intention.

[0127]

At Step 2, a decision is made as to whether seller service company n has intention to disclose to purchaser

service receiving company m.

[0128]

At Step 3, disclosure setting flag=1 is set for the seller service receiving company n which discloses and at Step 4, disclosure setting flag=0 (default) is set for the seller service receiving company n which discloses does not disclose.

[0129]

At Step 5, these disclosure settings are registered as information disclosure master settings in the information disclosure master DB. These steps are repeated for each service receiving company.

[0130]

Fig. 9 is a flowchart illustrating the processing sequence in which, upon reception of a seller service receiving company search request and a disclosed information acquisition request from a service receiving company, based on these requests, a seller service receiving company is searched for and distribution is made to the seller service receiving company, to the purchaser service receiving company.

[0131]

The service platform company device 3 first carries out the following steps. Specifically, when it receives a seller service receiving company search request from the service receiving company 1, at Step 1 it searches the disclosure information master DB 3123 for a seller service receiving

company n which “discloses” to the purchaser service receiving company m.

[0132]

If, as a result of this search, there is a seller service receiving company n which “discloses” to the purchaser service receiving company m, at Step 2 a decision is made as to whether or not original user information and/or anonymized user information can be disclosed.

[0133]

As a result of this decision, at Step 3, disclosable information in the original information and/or anonymized user information of the seller service receiving company n is provided to the purchaser service receiving company m. Furthermore, it is registered in the disclosed information & analysis data DB 3124 as necessary.

[0134]

Also at Step 4, disclosable information in the user information is analyzed and at Step 5, analysis data as the analysis result is registered in the disclosed information & analysis data DB 3124.

[0135]

Next, the service platform company device 3 carries out the following steps. Specifically, when it receives a request for acquisition of the disclosed information of the seller service receiving company from the service receiving company 1,

at Step 6 a decision is made as to whether or not there is an analysis data acquisition request. If, as a result of the decision there is an analysis data acquisition request, at Step 7 the analysis data of the seller service receiving company n is provided to the purchaser service receiving company m through the service providing company device 2. This disclosed information to be provided is extracted from the analysis data in the disclosed information & analysis data DB 3124.

[0136]

At Step 8, the purchaser service receiving company m is notified of the information fee and the seller service receiving company n is notified of the information sales fee. These fees are previously registered in the information disclosure master DB 3123 at the time of registering information disclosure master settings.

[0137]

The present invention is not limited to the above embodiment and includes other various forms of embodiments. For example, the above embodiment has been explained in detail for easy understanding of the present invention, but an embodiment of the invention need not include all the elements of the above embodiment. Some elements of an embodiment may be replaced by elements of another embodiment or elements of an embodiment may be added to another embodiment. Also, for some

elements of an embodiment, addition of other elements, deletion or replacement is possible.

[0138]

In addition, the above elements, functions, processing sections, processing means and so on may be, in part or whole thereof, implemented, for example, by hardware designed as an integrated circuit. Also, the above elements, functions and so on may be implemented by software in which a processor interprets and executes programs to implement the functions. The programs to implement functions and information including tables and files may be placed in a memory unit such as a memory, hard disk, or SSD (Solid State Drive) or a recording medium such as an IC card, SD card or DVD.

[0139]

Although the control lines and information lines which are considered necessary for explanation are shown herein, all the control lines and information lines of the product are not shown. It may be thought that actually almost all elements are interconnected.

Reference Signs List

[0140]

1... Service receiving company device

2... Service providing company device

21... Service providing company server

3... Service platform company device

31... Service platform company server

311... I/O unit

312... Memory unit

313... Arithmetic unit

3131... Control means (information disclosure control section)

3121... Service providing company management master DB

3122... Service receiving company integrated management master DB

3123... Information disclosure master DB

3124... Disclosed information & analysis data DB

313... Arithmetic unit

Claims

[Claim 1]

An information disclosure control unit in a service provision system comprising:

a plurality of service receiving company devices that a plurality of users use;

a service providing company device of a service providing company that targets the plurality of service receiving company devices; and

a service platform company device of a service platform company that provides support service to service receivers of the plurality of service receiving company devices through the service providing company device,

wherein the service platform company device collects information of each of the plurality of service receiving company devices through the service providing company device and analyzes the collected information and/or the collected information and sends the analysis information to the plurality of service receiving company devices through the plurality of service providing company devices;

the service platform company device including:

means to collect information of each of the plurality of service receiving company devices from the plurality of service providing company devices and store the collected

information in storage means;

analyzing means to analyze the collected information and generate and output useful information for the service receiving company;

means to send analysis information analyzed by the analyzing means to the service receiving company device through the service providing company device; and

information disclosure control means to make a decision about information disclosure of the analysis information at the time of sending the analysis information to the service receiving company device through the service providing company,

the storage means including:

an information disclosure master section including disclosure condition information to identify a service receiving company as a disclosure destination of analysis information obtained by the analyzing means,

the information disclosure control means including:

an information disclosure control section that makes a decision about information disclosure based on the information disclosure condition in the information disclosure master section and controls output of the analysis information obtained by the analyzing means,

wherein, at the time of sending the analysis information obtained by analyzing the information of each of the plurality of service receiving company devices through the service

providing company, the information disclosure control section decides outputtable analysis information based on the disclosure condition information in the disclosure master section and a profile of the service receiving company as a disclosure destination of the analysis information and

enables provision of the decided analysis information to a service receiving company device of the identified service receiving company.

[Claim 2]

The information disclosure control unit in a service provision system according to Claim 1,

wherein the information disclosure master section includes an information disclosure master table that identifies a service receiving company as the destination of information disclosure or a service receiving company to which information is not disclosed, based on identification information including the same industry sector and the same geographic area, as the disclosure condition information.

[Claim 3]

The information disclosure control unit in a service provision system according to Claim 1,

wherein the information disclosure master section further includes charge information to charge to a service receiving

company as a destination of information disclosure when information of each of the plurality of service receiving companies is received and transmitted between the plurality of service receiving companies through at least one of the plurality of service providing companies.

[Claim 4]

An information disclosure control method in a service provision system comprising:

a plurality of service receiving company devices that a plurality of users use;

a service providing company device of a service providing company that targets the plurality of service receiving company devices; and

a service platform company device of a service platform company that provides a main business support service to service receivers of the plurality of service receiving company devices through the service providing company device,

wherein information of each of the plurality of service receiving company devices is sent through at least one of the plurality of service providing company devices;

the service platform company device collects the information of each of the plurality of service receiving company devices through the plurality of service providing company devices, analyzes the collected information and/or the

collected information, identifies useful analysis information for the plurality of service receiving companies from the analysis information, and controls the identified analysis information in a way to be disclosable to the service receiving company devices through the service providing company device,

the method comprising the steps:

collecting the information of each of the plurality of service receiving company devices through the plurality of service providing company devices;

analyzing the collected information or merging the information and analyzing the merged information to generate analysis information;

deciding, from the analysis information, analysis information which can be provided to the plurality of service receiving companies using service providing company profiles in the plurality of service providing company devices and an information disclosure master including condition information for information disclosure to the plurality of service receiving companies; and

providing the decided analysis information to the service receiving company device through the service providing service company device.

[Claim 5]

The information disclosure control method in a service provision system according to Claim 4, further comprising the step of:

charging to a service receiving company as a destination of information disclosure when information of each of the plurality of service receiving companies is received and transmitted between the plurality of service receiving companies through at least one of the plurality of service providing companies.

[Claim 6]

A service platform company device which collects information of each of a plurality of service receiving company devices through the service providing company device and analyzes the collected information and/or the collected information and sends the analysis information to the plurality of service receiving company devices through the plurality of service providing company devices,

the service platform company device comprising:

means to collect information of each of the plurality of service receiving company devices from the plurality of service providing company devices and store the collected information in storage means;

analyzing means to analyze the collected information and generate and output useful information for the service

receiving company;

means to send analysis information analyzed by the analyzing means to the service receiving company device through the service providing company device; and

information disclosure control means to make a decision about information disclosure of the analysis information at the time of sending the analysis information to the service receiving company device through the service providing company,

the storage means including:

an information disclosure master section including disclosure condition information to identify a service receiving company as a disclosure destination of analysis information obtained by the analyzing means,

the information disclosure control means including:

an information disclosure control section that makes a decision about information disclosure based on the information disclosure condition in the information disclosure master section and controls output of the analysis information obtained by the analyzing means,

wherein, at the time of sending the analysis information obtained by analyzing the information of each of the plurality of service receiving company devices through the service providing company, the information disclosure control section decides outputtable analysis information based on the disclosure condition information in the disclosure master

section and

provides the decided analysis information to a service receiving company device of the identified service receiving company.