

DESCRIPTION

Title of Invention

ADVERTISEMENT APPARATUS

Technical Field

[0001]

The present invention relates to a technology for verifying effects of advertisements.

Background Art

[0002]

Advertisements are often made for the purpose of promoting sales of products or services. How a product or service is selling is directly linked to the sales amount, which is an important management index, and the cost-effectiveness of advertisements closely related to the management index should be accurately grasped.

[0003]

Under such circumstances, attempts are being actively made to accurately grasp the cost-effectiveness of advertisements, and, for example, Patent Literatures 1 and 2 propose techniques for measuring the cost-effectiveness of advertisements using broadcasting.

Citation List

Patent Literature

[0004]

Patent Literature 1: JP 2022-183317 A

Patent Literature 2: JP 2022-140015 A

Summary of Invention

Technical Problem

[0005]

In recent years, however, to effectively influence individual users, advertisement delivery to user terminals such as smartphones is regarded as important, while the above conventional techniques have the problem of not being applicable to measurement of an effect of an advertisement that is delivered to user terminals.

Therefore, in view of the above problem, the present invention aims to provide an advertisement apparatus that increases accuracy of effect measurement related to advertisements that are delivered to user terminals.

Solution to Problem

[0006]

An embodiment of an advertisement apparatus disclosed herein characteristically includes: a purchasing behavior storage unit that stores first user identification information and purchasing behavior information about users identified by the first user identification information,

the first user identification information and the purchasing behavior information being associated with each other; an advertisement delivering unit that delivers an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different second user identification information for each of the user terminals; a user identifying unit that identifies the first user identification information matching the second user identification information by comparing the first user identification information with the second user identification information; and an effect measuring unit that calculates reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among the users identified by the matching first user identification information, on a basis of purchase history information regarding the predetermined product or service, the purchase history information being included in the purchasing behavior information associated with the matching first user identification information.

[0007]

Further, an embodiment of an advertisement apparatus disclosed herein includes: a purchasing behavior storage unit that stores first user identification information and purchasing behavior information about a user identified by the first user identification information, the first user

identification information and the purchasing behavior information being associated with each other; an advertisement delivering unit that delivers an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different first user terminal identification information for each of the user terminals; a replacement information storage unit that stores the first user identification information and second user terminal identification information linked with the first user identification information, the first user identification information and the second user terminal identification information being associated with each other; a user identifying unit that identifies the first user identification information linked with the second user terminal identification information matching the first user terminal identification information, by comparing the first user terminal identification information with the second user terminal identification information; and an effect measuring unit that calculates reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among users identified by the first user identification information linked with the matching second user terminal identification information, on a basis of purchase history information regarding the predetermined product or service, the purchase history

information being included in the purchasing behavior information associated with the first user identification information linked with the matching second user terminal identification information.

Advantageous Effects of Invention

[0008]

An advertisement apparatus disclosed herein increases accuracy of effect measurement related to advertisements that are delivered to user terminals.

Brief Description of Drawings

[0009]

Fig. 1 is a diagram illustrating an outline of an advertisement apparatus according to the present embodiment.

Fig. 2 is a functional block diagram of the advertisement apparatus according to the present embodiment.

Fig. 3 is a diagram illustrating an example of a purchasing behavior storage unit according to the present embodiment.

Fig. 4 is a diagram illustrating an example of a replacement information storage unit according to the present embodiment.

Fig. 5 is a diagram illustrating an example hardware configuration of the advertisement apparatus according to the present embodiment.

Fig. 6 is a flowchart illustrating the flow of an example process to be performed by the advertisement apparatus according to the present embodiment.

Fig. 7 is a flowchart illustrating the flow of an example process to be performed by the advertisement apparatus according to the present embodiment.

Description of Embodiments

[0010]

An embodiment for carrying out the present invention will be described below with reference to the drawings.

(Operating Principles of Advertisement Apparatus according to Present Embodiment)

[0011]

Referring to Figs. 1 to 4, operating principles of an advertisement apparatus (hereinafter referred to simply as the "present apparatus") 100 according to the present embodiment will be described below. Fig. 1 is a diagram illustrating the relations of connection between the present apparatus 100 and other devices, and Fig. 2 is a functional block diagram of the present apparatus 100. Figs. 3 and 4 are diagrams illustrating examples of storage

units 110 and 120.

[0012]

As illustrated in Fig. 1, the present apparatus 100 is connected to user terminals 300 via a communication network 310. The communication network 310 may be in a wired form or a wireless form. Further, the user terminal 300 may be a portable information terminal such as a smartphone, or may be a notebook or desktop personal computer.

[0013]

As illustrated in Fig. 2, the present apparatus 100 includes a purchasing behavior storage unit 110, a replacement information storage unit 120, an advertisement delivering unit 130, a user identifying unit 140, and an effect measuring unit 150. Note that the present apparatus 100 may not have a form directly including the purchasing behavior storage unit 110 and the replacement information storage unit 120, and may have any form that can use the information stored in the purchasing behavior storage unit 110 and the replacement information storage unit 120 via the communication network 310.

[0014]

The purchasing behavior storage unit 110 associates first user identification information 220 with purchasing behavior information 260 about users 290 identified by the

first user identification information 220, and stores the information 220 and 260. The first user identification information 220 is a member ID at a retailer, for example. The first user identification information 220 may include information for identifying attributes of the users 290, such as age, sex, address, and family structure.

[0015]

The purchasing behavior information 260 is purchase history information 270 related to products/services, and is information that indicates detailed information regarding purchases of products/services, such as when, where, what, and for how much the users have made purchases.

[0016]

Fig. 3 is a diagram illustrating an example of the purchasing behavior storage unit 110. As illustrated in Fig. 3, for example, the purchasing behavior storage unit 110 stores the purchasing behavior information 260 indicating that the user 290 identified by the "first user identification information 220: 10000" has purchased instant noodles at a convenience store for 150 yen on July 3. Also, the purchasing behavior storage unit 110 stores the purchasing behavior information 260 indicating that the user 290 identified by the "first user identification information 220: 1000N" has purchased 200 grams of beef at

a supermarket for 600 yen on July 3.

[0017]

Note that the information 220 and 260 stored in the purchasing behavior storage unit 110 may be collected by an application installed in the user terminals 300, and may be delivered to the present apparatus 100.

[0018]

The replacement information storage unit 120 associates the first user identification information 220 with second user terminal identification information 250 linked with the first user identification information 220, and stores the information 220 and 250. The second user terminal identification information 250 is information for identifying the user terminals 300, in a case where user terminals 300 and an application installed in the user terminals 300 are designated, and an advertisement 210 is delivered thereto. The second user terminal identification information 250 is what is called an advertisement identifier (advertisement ID).

[0019]

Fig. 4 is a diagram illustrating an example of the replacement information storage unit 120. As illustrated in Fig. 4, the replacement information storage unit 120 associates, for example, the first user identification information 220, which is 10000, with the second user

terminal identification information 250, which is AJJJJ, and stores the information 220 and 250. Also, the replacement information storage unit 120 associates, for example, the first user identification information 220, which is 1000M, with the second user terminal identification information 250, which is AJJJM, and stores the information 220 and 250. In this manner, the user terminal identification information 250 is irregular character string information.

[0020]

Note that the information 220 and 250 stored in the replacement information storage unit 120 may be collected by an application installed in the user terminals 300, and may be delivered to the present apparatus 100.

[0021]

The advertisement delivering unit 130 designates different second user identification information 230 for each user terminal 300, and delivers the advertisement 210 related to a predetermined product/service, to a plurality of (a large number of) user terminals 300.

[0022]

Here, the second user identification information 230 is a member ID at a retailer, for example. For example, the advertisement delivering unit 130 may deliver the advertisement 210 by designating the member ID 230 at the

retailer, to the retailer's sales promotion application installed in the user terminals 300.

[0023]

Also, the advertisement delivering unit 130 may be designed to designate different first user terminal identification information 240 for each user terminal 300, and deliver the advertisement 210 related to a predetermined product/service, to a plurality of (a large number of) user terminals 300.

[0024]

Here, the first user terminal identification information 240 is information for identifying the user terminals 300, in a case where user terminals 300 and an application installed in the user terminals 300 are designated, and the advertisement 210 is delivered thereto. The first user terminal identification information 240 is what is called an advertisement identifier (advertisement ID).

[0025]

The user identifying unit 140 compares the first user identification information 220 with the second user identification information 230, and identifies the first user identification information 220 matching the second user identification information 230. Here, it is assumed that the number of users 290 to be identified by the second

user identification information 230 is larger than the number of users 290 to be identified by the first user identification information 220.

[0026]

The user identifying unit 140 performs a process of selecting the user 290 whose information is stored in the purchasing behavior storage unit 110, from among the users 290 who have received the advertisement 210 delivered by the advertisement delivering unit 130.

[0027]

Also, the user identifying unit 140 may be designed to compare the first user terminal identification information 240 with the second user terminal identification information 250, and identify the first user identification information 220 linked with the second user terminal identification information 250 matching the first user terminal identification information 240. Here, it is assumed that the number of users 290 to be identified by the first user terminal identification information 240 is larger than the number of users 290 to be identified by the second user terminal identification information 250.

[0028]

The user identifying unit 140 performs a process of selecting the user 290 whose information is stored in the purchasing behavior storage unit 110, from among the users

290 who have received the advertisement 210 delivered by the advertisement delivering unit 130.

[0029]

The effect measuring unit 150 performs a process, on the basis of the purchase history information 270 related to the target product/service of the advertisement 210 as included in the purchasing behavior information 260 associated with the first user identification information 220 identified by the user identifying unit 140. The effect measuring unit 150 calculates reaction-to-advertisement information 280 indicating how many users 290 have purchased the target product/service of the advertisement 210 among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140.

[0030]

The effect measuring unit 150 may also be designed to calculate the reaction-to-advertisement information 280 regarding the users 290 who have purchased the target product/service of the advertisement 210 within a predetermined period from the delivery date of the advertisement 210, among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140. This makes it possible to more precisely measure the effect of the advertisement 210.

[0031]

The effect measuring unit 150 may also be designed to calculate the reaction-to-advertisement information 280 indicating how many users 290 have purchased the target product/service of the advertisement 210 among the number of people to whom the advertisement 210 has been delivered by the advertisement delivering unit 130.

[0032]

The effect measuring unit 150 may also be designed to calculate the reaction-to-advertisement information 280 based on the number of users who have purchased the target product/service of the advertisement 210 a predetermined number of times or more within a predetermined period, or may calculate the reaction-to-advertisement information 280 by limiting the purchase status for each attribute/time zone of the users 290 to gender or the like.

On the basis of the above operating principles, the present apparatus 100 increases the accuracy of effect measurement related to the advertisement 210 that is delivered to the user terminals 300.

(Hardware Configuration of Advertisement Apparatus According to Present Embodiment)

[0033]

Referring now to Fig. 5, an example hardware configuration of the present apparatus 100 is described.

Fig. 5 is a diagram illustrating an example hardware configuration of the present apparatus 100. As illustrated in Fig. 5, the present apparatus 100 includes a central processing unit (CPU) 510, a read-only memory (ROM) 520, a random access memory (RAM) 530, an auxiliary storage device 540, a communication interface (I/F) 550, an input device 560, a display device 570, and a storage medium I/F 580.

[0034]

The CPU 510 is a device that executes a program stored in the ROM 520, and performs arithmetic processing on data loaded into the RAM 530 according to an instruction of the program, to control the entire present apparatus 100. The ROM 520 stores the program to be executed by the CPU 510, and data. When the CPU 510 executes the program stored in the ROM 520, the program to be executed and data are loaded into the RAM 530, which temporarily holds operation data during operation.

[0035]

The auxiliary storage device 540 is a device that stores an operating system (OS) that is the basic software, an application program according to the present embodiment, and the like, together with related data. The auxiliary storage device 540 is a hard disk drive (HDD), a flash memory, or the like, for example.

[0036]

The communication I/F 550 is an interface that is connected to the communication network 310 such as a wired or wireless local area network (LAN) or the Internet, and exchanges data with other devices 300 that provide communication functions.

[0037]

The input device 560 is a device such as a keyboard for inputting data to the present apparatus 100. The display device (output device) 570 is a device formed with a liquid crystal display (LCD) or the like, and functions as a user interface when the user uses the functions of the present apparatus 100 or performs various settings. The storage medium I/F 580 is an interface for transmitting and receiving data to and from a storage medium 590 such as a CD-ROM, a DVD-ROM, or a USB memory.

[0038]

Each of the units included in the present apparatus 100 may be implemented by the CPU 510 executing a program that is stored in the ROM 520 or the auxiliary storage device 540 and corresponds to the respective units. Also, each of the units included in the present apparatus 100 may have a form in which processing related to each corresponding unit is realized as hardware. Further, a program according to the present invention may be read from an external server device via the communication I/F 550, or

a program according to the present invention may be read from the storage medium 590 via the storage medium I/F 580, to cause the present apparatus 100 to execute the program.

(Example Process to Be Performed by Advertisement Apparatus According to Present Embodiment)

(1) An example process of designating the user identification information 230 and delivering the advertisement 210

[0039]

Referring now to Fig. 6, an example process to be performed by the present apparatus 100 to designate the user identification information 230 and deliver the advertisement 210 is described. Fig. 6 is a flowchart illustrating the flow of an example process to be performed by the present apparatus 100 to designate the user identification information 230 and deliver the advertisement 210.

[0040]

In S10, the advertisement delivering unit 130 designates different second user identification information 230 for each user terminal 300, and delivers the advertisement 210 related to a predetermined product/service to a plurality of (a large number of) user terminals 300.

[0041]

Here, the second user identification information 230 is a member ID at a retailer, for example. For example, the advertisement delivering unit 130 may deliver the advertisement 210 by designating the member ID at the retailer, to the retailer's sales promotion application installed in the user terminals 300.

[0042]

In S20, the user identifying unit 140 compares the first user identification information 220 with the second user identification information 230, and identifies the first user identification information 220 matching the second user identification information 230. Here, it is assumed that the number of users 290 to be identified by the second user identification information 230 is larger than the number of users 290 to be identified by the first user identification information 220.

[0043]

The user identifying unit 140 performs a process of selecting the user 290 whose information is stored in the purchasing behavior storage unit 110, from among the users 290 who have received the advertisement 210 delivered by the advertisement delivering unit 130.

[0044]

In S30, the effect measuring unit 150 performs a process, on the basis of the purchase history information

270 related to the target product/service of the advertisement 210 as included in the purchasing behavior information 260 associated with the first user identification information 220 identified in S20. The effect measuring unit 150 calculates the reaction-to-advertisement information 280 indicating how many users 290 have purchased the target product/service of the advertisement 210 among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140.

[0045]

The effect measuring unit 150 may also be designed to calculate the reaction-to-advertisement information 280 regarding the users 290 who have purchased the target product/service of the advertisement 210 within a predetermined period from the delivery date of the advertisement 210, among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140. This makes it possible to more precisely measure the effect of the advertisement 210.

By performing the process as described above, the present apparatus 100 can increase the accuracy of the effect measurement regarding the advertisement 210 that is delivered to the user terminals 300.

(2) An example process of designating the user

terminal identification information 240 and delivering the advertisement 210

[0046]

Referring now to Fig. 7, an example process to be performed by the present apparatus 100 to designate the user terminal identification information 240 and deliver the advertisement 210 is described. Fig. 6 is a flowchart illustrating the flow of an example process of designating the user terminal identification information 240 and delivering the advertisement 210.

[0047]

In S110, the advertisement delivering unit 130 designates different first user terminal identification information 240 for each user terminal 300, and delivers the advertisement 210 related to a predetermined product/service to a plurality of (a large number of) user terminals 300.

[0048]

Here, the first user terminal identification information 240 is information for identifying the user terminals 300, in a case where user terminals 300 and an application installed in the user terminals 300 are designated, and the advertisement 210 is delivered thereto. The first user terminal identification information 240 is what is called an advertisement identifier (advertisement

ID) .

[0049]

In S120, the user identifying unit 140 compares the first user terminal identification information 240 with the second user terminal identification information 250, and identifies the first user identification information 220 linked with the second user terminal identification information 250 matching the first user terminal identification information 240. Here, it is assumed that the number of users 290 to be identified by the first user terminal identification information 240 is larger than the number of users 290 to be identified by the second user terminal identification information 250.

[0050]

The user identifying unit 140 performs a process of selecting the user 290 whose information is stored in the purchasing behavior storage unit 110, from among the users 290 who have received the advertisement 210 delivered by the advertisement delivering unit 130.

[0051]

In S130, the effect measuring unit 150 performs a process, on the basis of the purchase history information 270 related to the target product/service of the advertisement 210 as included in the purchasing behavior information 260 associated with the first user

identification information 220 identified in S120. The effect measuring unit 150 calculates the reaction-to-advertisement information 280 indicating how many users 290 have purchased the target product/service of the advertisement 210 among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140.

[0052]

The effect measuring unit 150 may also be designed to calculate the reaction-to-advertisement information 280 regarding the users 290 who have purchased the target product/service of the advertisement 210 within a predetermined period from the delivery date of the advertisement 210, among the users 290 identified by the first user identification information 220 identified by the user identifying unit 140. This makes it possible to more precisely measure the effect of the advertisement 210.

By performing the process as described above, the present apparatus 100 can increase the accuracy of the effect measurement regarding the advertisement 210 that is delivered to the user terminals 300.

[0053]

Although embodiments of the present invention have been described in detail so far, the present invention is not limited to these specific embodiments, and various

modifications and changes may be made to them within the scope of the invention disclosed in the claims.

Reference Signs List

[0054]

100	Advertisement apparatus
110	Purchasing behavior storage unit
120	Replacement information storage unit
130	Advertisement delivering unit
140	User identifying unit
150	Effect measuring unit
210	Advertisement
220	First user identification information
230	Second user identification information
240	First user terminal identification information
250	Second user terminal identification information
260	Purchasing behavior information
270	Purchase history information
280	Reaction-to-advertisement information
290	User
300	User terminal
310	Communication network
510	CPU
520	ROM
530	RAM

540	Auxiliary storage device
550	Communication interface
560	Input device
570	Output device
580	Storage medium interface
590	Storage medium

CLAIMS

[Claim 1]

An advertisement apparatus comprising:

a purchasing behavior storage unit that stores first user identification information and purchasing behavior information about a user identified by the first user identification information, the first user identification information and the purchasing behavior information being associated with each other;

an advertisement delivering unit that delivers an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different second user identification information for each of the user terminals;

a user identifying unit that identifies the first user identification information matching the second user identification information by comparing the first user identification information with the second user identification information; and

an effect measuring unit that calculates reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among users identified by the matching first user identification information, on a basis of purchase history information regarding the predetermined product or service, the

purchase history information being included in the purchasing behavior information associated with the matching first user identification information.

[Claim 2]

The advertisement apparatus according to claim 1, wherein the effect measuring unit calculates the reaction-to-advertisement information regarding a user who has purchased the predetermined product or service within a predetermined period from a delivery date of the advertisement delivered by the advertisement delivering unit, among the users identified by the matching first user identification information.

[Claim 3]

An advertisement apparatus comprising:

a purchasing behavior storage unit that stores first user identification information and purchasing behavior information about a user identified by the first user identification information, the first user identification information and the purchasing behavior information being associated with each other;

an advertisement delivering unit that delivers an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different first user terminal identification information for each of the user terminals;

a replacement information storage unit that stores the first user identification information and second user terminal identification information linked with the first user identification information, the first user identification information and the second user terminal identification information being associated with each other;

a user identifying unit that identifies the first user identification information linked with the second user terminal identification information matching the first user terminal identification information, by comparing the first user terminal identification information with the second user terminal identification information; and

an effect measuring unit that calculates reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among users identified by the first user identification information linked with the matching second user terminal identification information, on a basis of purchase history information regarding the predetermined product or service, the purchase history information being included in the purchasing behavior information associated with the first user identification information linked with the matching second user terminal identification information.

[Claim 4]

The advertisement apparatus according to claim 3, wherein the effect measuring unit calculates the reaction-to-advertisement information regarding a user who has purchased the predetermined product or service within a predetermined period from a delivery date of the advertisement delivered by the advertisement delivering unit, among the users identified by the first user identification information linked with the matching second user terminal identification information.

[Claim 5]

An advertisement method comprising:

a step of, by an advertisement delivering unit, delivering an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different second user identification information for each of the user terminals;

a step of, by a user identifying unit, identifying first user identification information matching the second user identification information, by comparing the first user identification information with the second user identification information in a purchasing behavior storage unit storing the first user identification information and purchasing behavior information about a user identified by the first user identification information, the first user identification information and the purchasing behavior

information being associated with each other; and

a step of, by an effect measuring unit, calculating reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among users identified by the matching first user identification information, on a basis of purchase history information regarding the predetermined product or service, the purchase history information being included in the purchasing behavior information associated with the matching first user identification information.

[Claim 6]

The advertisement method according to claim 5, wherein the effect measuring unit calculates the reaction-to-advertisement information regarding a user who has purchased the predetermined product or service within a predetermined period from a delivery date of the advertisement delivered by the advertisement delivering unit, among the users identified by the matching first user identification information.

[Claim 7]

An advertisement method comprising:

a step of, by an advertisement delivering unit, delivering an advertisement related to a predetermined product or service to a plurality of user terminals, by designating different first user terminal identification

information for each of the user terminals;

a step of, by a user identifying unit, identifying first user identification information linked with second user terminal identification information matching the first user terminal identification information, by comparing the first user terminal identification information with the second user terminal identification information in a replacement information storage unit storing the first user identification information and the second user terminal identification information linked with the first user identification information, the first user identification information and the second user terminal identification information being associated with each other, the first user identification information being stored in a purchasing behavior storage unit storing the first user identification information and purchasing behavior information about a user identified by the first user identification information, the first user identification information and the purchasing behavior information being associated with each other; and

a step of, by an effect measuring unit, calculating reaction-to-advertisement information indicating how many users have purchased the predetermined product or service among users identified by the first user identification information linked with the matching second user terminal

identification information, on a basis of purchase history information regarding the predetermined product or service, the purchase history information being included in the purchasing behavior information associated with the first user identification information linked with the matching second user terminal identification information.

[Claim 8]

The advertisement method according to claim 7, wherein the effect measuring unit calculates the reaction-to-advertisement information regarding a user who has purchased the predetermined product or service within a predetermined period from a delivery date of the advertisement delivered by the advertisement delivering unit, among the users identified by the first user identification information linked with the matching second user terminal identification information.

[Claim 9]

An advertisement program for causing a computer to implement the method according to any one of claims 5 to 8.