

[DESCRIPTION]

[TITLE OF INVENTION]

CONTENT VIEWING SYSTEM AND CONTENT VIEWING CONTROL METHOD

[Technical Field]

5 [0001]

The present invention relates to a content viewing system and a content viewing control method.

[Background Art]

[0002]

10 A technique which is a content viewing system in which contact action points are granted to a viewer in accordance with the viewing of advertising content, a points file records a cumulative value of contact action points earned by the viewer, and a paid program can be viewed for free or a program can be viewed for 30 minutes without advertisements through exchange of the contact action points is known (for example,
15 refer to Patent Literature 1).

[Citation List]

[Patent Literature]

[0003]

[Patent Literature 1]

20 Japanese Unexamined Patent Application, First Publication No. 2003-158721

[Summary of Invention]

[Technical Problem]

[0004]

As described in Patent Literature 1, in the content viewing system in which a
25 program can be viewed as a reward granted when an advertisement has been viewed,

first, it is assumed that a viewer views the advertisement. From this point of view, in such a content viewing system, it is desirable to provide a mechanism for increasing an incentive for the viewer to actively view the advertisement.

[0005]

5 The present invention was made in view of the above circumstances, and an object of the present invention is to increase an incentive for a viewer to actively view an advertisement in a content viewing system in which a program can be viewed as a reward granted when the advertisement has been viewed.

[0006]

10 An aspect of the present invention for achieving the above object is a content viewing system including: a viewing points granting unit configured to grant viewing points to a viewer by associating the viewer with the viewing points in accordance with the viewing of advertising content by the viewer; a viewing point unit price calculation unit configured to calculate a viewing point unit price which is a price per unit points
15 quantity of viewing points on the basis of an advertising cost corresponding to advertising content and the number of viewings of the advertising content; and a main content provision unit configured to enable main content to be viewed using a viewable time calculated on the basis of a unit viewable time per unit point quantity according to the viewing point unit price and a quantity of spent points from the viewing points
20 possessed by the viewer to view the main content.

[0007]

 Also, an aspect of the present invention is a content viewing control method in a content viewing system including: at least a viewing point granting step of granting, by a viewing point granting unit, a viewing point to a viewer by associating the viewer with
25 the viewing point in accordance with the viewing of advertising content of the viewer; a

viewing point unit price calculation step of calculating, by a viewing point unit price calculation unit, a viewing point unit price which is a price per unit point quantity of viewing points on the basis of an advertising cost corresponding to advertising content and the number of viewings of the advertising content; and a main content provision step of enabling, by a main content provision unit, main content to be viewed using a viewable time calculated on the basis of a unit viewable time per unit point quantity according to the viewing point unit price and a quantity of spent points from the viewing points possessed by the viewer to view the main content.

[Advantageous Effects of Invention]

10 [0008]

As described above, according to the present invention, it is possible to obtain the effects in which an incentive in which a viewer is actively made attempt to view an advertisement can be increased in a content viewing system in which a program can be viewed as a reward granted when the advertisement has been viewed.

15 [Brief Description of Drawings]

[0009]

Fig. 1 is a diagram illustrating an example of a content viewing system in an embodiment.

Fig. 2 is a diagram illustrating an example of a constitution of a program token management server in the embodiment.

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Fig. 3 is a diagram illustrating an example of a constitution of a brand token management server in the embodiment.

Fig. 4 is a flowchart for describing an example of a procedure performed in association with the matching of advertising content and a program in the content viewing system in the embodiment.

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Fig. 5 is a flowchart for describing an example of a procedure for managing brand tokens in the content viewing system in the embodiment.

Fig. 6 is a flowchart for describing an example of a procedure relating to management of tokens (share tokens or brand tokens) according to a propagation of advertising content between viewers in the content viewing system in the embodiment.

Fig. 7 is a flowchart for describing an example of a procedure performed in association with the viewing of program content in the content viewing system in the embodiment.

Fig. 8 is a flowchart for describing an example of a procedure in association with the changing of a current brand token unit price in the content viewing system in the embodiment.

Fig. 9 is a flowchart for describing an example of a procedure performed by the program token management server in the embodiment in association with the calculation of advertisement expenses.

[Description of Embodiments]

[0010]

Fig. 1 is a diagram illustrating an example of a constitution of a content viewing system (an example of an advertisement management system) in an embodiment. In the embodiment, viewing is not limited to watching of content using a video and an audio by a viewer and also includes, for example, watching content using a video which is not accompanied by an audio, content using an audio which is not accompanied by a video, and the like.

In the advertisement system in Fig. 1, advertisers 30 and 30 each request advertisements from an advertising company 10. The advertising company 10 receives a request from the advertiser 30 and provides an advertisement to each viewer in a viewer

group 40.

[0011]

The advertising company 10 registers advertising content ADC corresponding to each of the advertisers 30 in an advertising provision server 200. A viewer can view
5 advertising content registered in the advertising provision server 200 using a viewer terminal 500 possessed by the viewer by making the viewer terminal 500 access the advertising provision server 200.

Hereinafter, “advertising content” may be simply referred to as an “advertisement” in some cases. Furthermore, in the embodiment, when “advertising
10 content” or an “advertisement” has been referred to, unless otherwise specified, an advertisement provided using the advertising provision server 200 is shown.

[0012]

Also, a broadcasting station 20 (an example of a main content provider) registers program content PRC (an example of main content) in a program provision server 100
15 (an example of a main content provision unit). A viewer can view program content registered in the program provision server 100 using the viewer terminal 500 possessed by the viewer by making the viewer terminal 500 access the program provision server 100.

Hereinafter, “program content” may be simply referred to as a “program” in
20 some cases. Furthermore, in the embodiment, when “program content” or a “program” has been referred to, unless otherwise specified, a program provided using the program provision server 100 is shown.

[0013]

The viewing of advertising content and program content using the viewer
25 terminal 500 may be realized when the viewer terminal 500 accesses websites of the

program provision server 100 or the advertising provision server 200 through a web browser function installed in the viewer terminal 500. Furthermore, such a web browser function of the viewer terminal 500 may use a general-purpose web browser application or may be a dedicated application specialized in accordance with the viewing of advertising content and program content provided by the program provision server 100 or the advertising provision server 200.

[0014]

In the embodiment, a program provided by the program provision server 100 can be viewed by a viewer by viewing the advertising content provided from the advertising provision server 200 using the viewer terminal 500. That is to say, when viewing a program provided by the program provision server 100, the viewer needs to pay brand tokens (BTs) possessed by the viewer as compensation.

A brand token is points granted to a viewer as a reward granted when the viewer views an advertisement. Each time a viewer views an advertisement, granted brand tokens are accumulated. A unit price (a brand token unit price) is determined for a brand token and a time of a program in which viewing corresponding to one brand token is allowed changes in accordance with the brand token unit price.

[0015]

The advertising company 10 includes a bidding system 11. The bidding system 11 is constituted to include, for example, a computer. The bidding system 11 matches the advertising content ADC in which the advertiser 30 which is a request source is registered in the advertising provision server 200 as a providing source and a program registered in the program provision server 100 in response to an advertisement request from the advertiser 30.

The advertiser 30 performs bidding regarding the advertisement expenses in the

program which has matched the advertising content of the company of the advertiser 30 on the bidding system 11.

[0016]

The bidding system 11 determines as follows on the basis of an amount of
5 advertisement expenses (a bid amount) bid by the advertiser 30 and prediction results concerning viewing of how much the match program will be viewed (viewing prediction). A viewing prediction system 12 performs the viewing prediction. The viewing prediction system 12 is constituted to include a computer and performs the viewing prediction using, for example, a learning function.

10 Also, the bidding system 11 calculates a unit price of a brand token (a brand token unit price).

Furthermore, the bidding system 11 calculates the number of reference program tokens indicating a reference value as a price of the matched program. A program token (PT) corresponds to a point indicating a price of a program. When the total number of
15 program tokens corresponding to one program is high, the corresponding program is likely to be viewed by a larger number of viewers and is regarded as a high-priced program.

[0017]

The bidding system 11 notifies a brand token management server 400 of the
20 calculated brand token unit price. Furthermore, the bidding system 11 notifies a program token management server 300 of the calculated number of reference program tokens.

[0018]

The program token management server 300 manages the number of actually-
25 viewed program tokens based on the number of viewings obtained when a viewer

actually views a program (the number of actual viewings) for each advertisement which has matched the program. The number of actually-viewed program tokens varies by increasing or decreasing in accordance with the number of actual viewings.

[0019]

5 The broadcasting station 20 receives, as a compensation, advertisement revenue which is paid for the viewing of an advertisement which has matched a program provided by the broadcasting station 20 and which has been provided in association with the program on the basis of a total amount of actually-viewed program tokens corresponding to each advertisement which has matched the program. That is to say, the program
10 token management server 300 calculates an amount of advertisement revenue on the basis of the actually-viewed program tokens corresponding to each advertising content which has matched the program of the broadcasting station 20.

The program token management server 300 or an exchange (not shown) pays the calculated amount of advertisement revenue to the broadcasting station 20.

15 [0020]

An example of a constitution of the program token management server 300 will be described with reference to Fig. 2. The program token management server 300 in Fig. 2 includes a communication unit 301, a control unit 302, and a storage unit 303.

The communication unit 301 performs communication over a network.

20 [0021]

The control unit 302 performs various controls in the program token management server 300. A function as the control unit 302 is realized using a program executed through a central processing unit (CPU) included in the program token management server 300. The control unit 302 in Fig. 2 includes a program token
25 management unit 321 and an advertisement expense-related processing unit 322.

The program token management unit 321 manages program tokens (an example of price points). The program token management unit 321 performs management so that brand tokens collected from a viewer in accordance with the number of viewings of main content which has been viewed by the viewer using viewing points granted to the viewer are converted into program tokens corresponding to the advertising content and the program tokens obtained through the conversion are accumulated.

The advertisement expense-related processing unit 322 performs processing associated with advertisement expenses on the basis of the cumulative value of the actually-viewed program tokens managed by the program token management unit 321. As processing associated with such advertisement expenses, for example, amounts of money of expense items such as an advertising cost to be paid by the advertiser 30 corresponding to one program content and an advertisement revenue to be paid to the broadcasting station 20 corresponding to one program content are calculated.

[0022]

The storage unit 303 stores various types of information corresponding to the program token management server 300. The storage unit 303 includes a program token unit price storage unit 331, a reference program token number storage unit 332, and an actually-viewed program token storage unit 333.

The program token unit price storage unit 331 stores the set program token unit price.

The reference program token number storage unit 332 stores the number of reference program tokens.

The actually-viewed program token storage unit 333 stores the accumulated program tokens in accordance with the actual viewing of the viewer of the program content.

[0023]

An example of a constitution of the brand token management server 400 will be described with reference to Fig. 3. The brand token management server 400 in Fig. 3 includes a communication unit 401, a control unit 402, and a storage unit 403.

5 The communication unit 401 performs communication over a network.

[0024]

The control unit 402 performs various controls in the brand token management server 400. A function as the control unit 402 is realized using a program executed through a CPU included in the brand token management server 400. The brand token
10 management server 400 includes a brand token management unit 421 (an example of a viewing point granting unit and a viewing point unit price calculation unit).

The brand token management unit 421 performs management associated with a brand token.

As management associated with a brand token, the brand token management
15 unit 421 grants a brand token (an example of viewing points) to a viewer in association with the viewing by the viewer of advertising content.

Also, the brand token management unit 421 calculates a brand token unit price on the basis of an advertising cost corresponding to advertising content (for example, a bid amount) and the number of viewings of the advertising content. To be specific, the
20 brand token management unit 421 calculates an initial brand token unit price value on the basis of a bid amount offered by the advertiser 30 as an advertising cost corresponding to advertising content and a predicted value of the number of viewings and calculates a current brand token unit price on the basis of the initial brand token unit price value and an amount of change in the number of actual viewings with respect to the predicted value
25 of the number of viewings.

[0025]

The storage unit 403 stores various types of information corresponding to the brand token management server 400. The storage unit 403 includes a brand token unit price storage unit 431 and a viewer-possessed brand token storage unit 432.

5 The brand token unit price storage unit 431 stores a brand token unit price calculated for each advertising content.

The viewer-possessed brand token storage unit 432 stores viewer-possessed brand token information indicating a brand token possessed by a viewer.

[0026]

10 An example of a procedure associated with the matching of the advertising content and the program performed in the advertisement viewing system in the embodiment will be described with reference to a flowchart of Fig. 4 using a specific example.

Step S101: An advertiser 30 accepts advertisement requests from a plurality of
15 advertisers 30. To be specific, the advertiser 30 may accept advertisement requests from a plurality of advertisers 30 having viewers corresponding to, for example, certain conditions such as an annual income of 10 million yen or more, an age of 35 years or older, and a male determined as common advertisement targets.

The processing as Step S101 according to the acceptance of the advertisement
20 requests from the advertisers may be performed through the bidding system 11 of the advertiser 30 communicating with a terminal of the advertiser 30 which is a request source.

[0027]

Step S102: In the advertiser 30, the viewing prediction system 12 extracts a
25 program (a target program) in which the above-described advertisement target conditions

are satisfied from the program provision server 100. The program extracted in this way is a program which matches each of the advertising contents of the plurality of advertisers 30 who provide this advertisement request.

[0028]

5 Step S103: The viewing prediction system 12 predicts the number of viewings when the program extracted in Step S102 will be broadcast. The number of viewings (the predicted number of viewings) predicted in this way may be based on, for example, a value obtained by multiplying the number of unique viewers by the number of viewings.

[0029]

10 Step S104: The bidding system 11 calculates the number of reference program tokens using the predicted number of viewings obtained in Step S103. The number of reference program tokens is a reference value as a valuation indicating the price of the program extracted in Step S102. The number of reference program tokens can be calculated on the basis of the predicted number of viewers obtained in Step S103 and the
15 number of advertisements which can be associated with the target program (the number advertisement slots). As an example, when the predicted number of viewings is 5 million and the number advertisement slots of the target program is 4, the number of reference program tokens may be calculated as 20 million points (=5 million×4).

 Step S105: The bidding system 11 registers the number of reference program
20 tokens calculated in Step S104 in the program token management server 300. For this reason, the bidding system 11 transmits information indicating the target program and the calculated number of program tokens to the program token management server 300.

The program token management server 300 causes the reference program token number storage unit 332 to store the received information.

25 [0030]

Step S106: Also, the bidding system 11 calculates a reference amount of advertisement expenses of the target program. The reference amount of advertisement expenses is a reference amount for the advertising cost which is necessary when the advertiser 30 provides an advertisement corresponding to the target program.

5 The reference amount of advertisement expenses may be calculated on the basis of, for example, the number of reference program tokens calculated in Step S104 and the program token unit price which is a valuation set to correspond to one point of the program token. As a specific example, when the number of reference program tokens is 20 million points and the program token unit price is 1 yen, the reference amount of
10 advertisement expenses is calculated as 20 million yen ($=20 \text{ million} \times 1$).

The processing of Step S106 may be performed using the program token management server 300.

[0031]

Step S107: The advertising company 10 asks the plurality of advertisers 30 who
15 have accepted the request in Step S101 to bid for the advertisement of their own advertisements in the target program. For example, the advertiser 30 makes his/her terminal access the bidding system 11 and provides a notification regarding a bid amount (an example of an advertising cost). When the bidding is performed, for example, conditions such as setting the reference amount of advertisement expenses calculated in
20 Step S106 as a lower limit of the bid amount may be set. The bidding system 11 receives the bid amount which is a notification from the terminal of each of the advertisers 30.

As will be understood from the following description, the bidding in the embodiment does not mean that a high-ranked advertiser 30 having a high bid amount
25 can take charge by providing advertising content of his/her company to a viewer.

Depending on the bid in the embodiment, an adjustment in which a degree of preferential treatment differs in accordance with the bid amount is performed so that the advertising content associated with the target program is easily seen by a viewer.

[0032]

5 Step S108: The brand token management unit 421 of the brand token management server 400 calculates an initial value of a brand token unit price (an initial brand token unit price value) for each advertising content provided in associated with the target program by the advertiser 30 who has performed bidding.

 The initial brand token unit price value may be calculated on the basis of the bid
10 amounts bid by the advertisers 30 corresponding to the advertising contents and the number of reference program tokens. As an example, the bid amounts of two advertisers 30 (referred to an “advertiser A” and an “advertiser B”) of the advertisers 30 who have performed bidding may be 30 million yen and 20 million yen. In this case, an initial brand token unit price value of advertising content of the advertiser A is 1.5 (=30
15 million yen/20 million points) and an initial brand token unit price value of an advertising content of the advertiser B is 1.0 (=20 million yen/20 million points).

[0033]

 Step S109: The brand token management unit 421 causes the brand token unit price storage unit 431 to store the initial brand token unit price value for each advertising
20 content calculated in Step S108.

[0034]

 An example of a procedure associated with the management of brand tokens possessed by a viewer in the content viewing system in the embodiment will be described with reference to the flowchart of Fig. 5.

25 Step S201: When viewing a target program, a viewer needs to view advertising

content (target advertising content) which has matched the target program. Thus, a viewer views the target advertising content using the viewer terminal 500 possessed by the viewer. When the target advertising content is viewed, for example, a list of the advertising contents which have matched the target program is presented. For example, the viewer selects advertising content that he/she wants to view from the list of the advertising contents displayed in the viewer terminal 500 and declares the viewing. The viewer terminal 500 transmits an advertisement viewing request used for providing a request for the viewing of the selected advertising content to the advertising provision server 200 in response to the operation performed in this way.

10 [0035]

Step S202: The advertising provision server 200 which has received the advertisement viewing request transmits advertising content designated using the advertisement viewing request to the viewer terminal 500 which is a transmission source of the advertisement viewing request. The viewer terminal 500 outputs the transmitted advertising content. Thus, the viewer can view the advertising content.

[0036]

Step S203: The number of brand token points granted in accordance with the viewing of the advertising content this time is added to the cumulative number of brand token points possessed by the viewer who has viewed the advertising content in accordance with the viewing of one advertising content in Step S202.

For example, the advertising provision server 200 transmits an advertisement viewing notification including a viewer identifier which identifies a viewer who has viewed the advertising content and information indicating the advertising content which is a viewing target to the brand token management server 400 in response of the viewing of the advertising content.

The brand token management unit 421 of the brand token management server 400 searches for viewer-possessed brand token information stored in the viewer-possessed brand token storage unit 432 in association with the viewer identifier indicated by the received advertisement viewing notification. The found viewer-possessed brand token information indicates a cumulative value of brand token points currently possessed by the viewer. The brand token management unit 421 updates the cumulative value of the brand token points by adding a predetermined number of points (here, the case of one point is granted as an example) according to the viewing of the advertising content this time.

Here, as the brand token, a different initial brand token unit price value is set for each advertising content as described above. Moreover, the brand token unit price varies when the corresponding advertising content is viewed and the number of viewings increases. That is to say, the brand unit price of the brand token differs for each advertising content viewed in response. For this reason, viewer-possessed brand token information of one viewer includes information indicating the details of a cumulative value of brand token points for each advertising content viewed in response.

[0037]

Also, in the embodiment, a viewer can recommend target advertising content to other viewers through, for example, a social networking service (SNS) or the like.

When the other viewers have viewed the recommended target advertising content, this means that the target advertising content has been propagated among the viewers. The propagation of the target advertising content among the viewers in this way has an advantage for the advertiser 30 that the advertising content of a company of the viewer can be viewed by a larger number of viewers. Furthermore, the propagation of the target advertising content among the viewers has an advantage that it leads to an increase

in the number of viewers who want to view the corresponding target program content. That is to say, it is desirable that the target advertising content is actively propagated among the viewers.

Thus, in the embodiment, a reward is granted to a viewer who is a propagation
5 source of the target advertising content so that an incentive is provided to the propagation of the advertising content among the viewers. To be specific, for example, a predetermined number of points as a share token (ST) is granted to a viewer who is a propagation source to correspond to the number of units of a viewer who is a propagation destination. The share token granted to the viewer who is a propagation source in this
10 way can be converted into a brand token through a predetermined conversion ratio and added to a cumulative value of brand tokens of the viewer who is a propagation source.
[0038]

A procedure associated with the management of a token (a share token and a brand token) according to the propagation of advertising content between viewers in the
15 content viewing system in the embodiment will be described with reference to the flowchart of Fig. 6. Although the share token may be managed using, for example, a server corresponding to the share token, a case in which the brand token management server 400 manages the share token together with the brand token will be exemplified in the embodiment.

20 [0039]

Step S301: First, advertising content is propagated from a certain one viewer A to another viewer B. The propagation of the advertising content mentioned herein means that the viewer B views the advertising content via the viewer A. As a specific mode of such propagation of the advertising content, for example, a case in which the
25 viewer A makes a post in which the advertising content is introduced along with the link

of the advertising content and the viewer B views the advertising content from the link of the advertising content in the posting of the viewer A can be exemplified.

[0040]

Step S302: In response of the propagation of the advertising content as described
5 above, the brand token management server 400 is notified (a propagation notification) that the viewer A has propagated the advertising content. The propagation notification is performed, for example, as follows. When the viewer B accesses the advertising content from the link posted on the SNS of the viewer A through his/her viewer terminal 500, information including a viewer identifier indicating the viewer A who is a
10 propagation source as information indicating the viewer who is a propagation source (propagation source viewer information) is transmitted from the viewer terminal 500 to the advertising provision server 200. The advertising provision server 200 transfers the received propagation source viewer information to the brand token management server 400.

15 The brand token management server 400 grants a share token of a predetermined number of points to the viewer A indicated by the viewer identifier included in the received propagation source viewer information in response to the reception of the transferred propagation source viewer information. The number of points of the share token to be granted may be uniformly determined, may be determined in accordance with
20 the price of the advertising content (the brand token unit price), or may be determined in accordance with the actual results of the propagation of the advertising content of the viewer A so far.

The brand token management server 400 adds the granted share token to the cumulative value of the share tokens of the viewer A. The cumulative value of the share
25 tokens for each viewer may be stored in, for example, the viewer-possessed brand token

storage unit 432.

[0041]

Step S303: A share token can be converted into a brand token on the basis of a predetermined conversion ratio to correspond to one viewer.

5 The conversion of the share token into the brand token may be performed at any timing in accordance with an instruction of the viewer. Alternatively, the conversion of the share token into the brand token may be performed at a predetermined timing.

Alternatively, the conversion of the share token into the brand token may be performed immediately when the share token is granted in response to the advertisement

10 propagation.

Also, the share token which remains accumulated without converted into a brand token may be used, for example, for exchange for a predetermined privilege other than viewing a program.

Furthermore, the brand token may be granted without granting the share token in
15 response to the propagation of the advertising content.

[0042]

Although the viewer A posts the link of the advertising content in the above description of Fig. 6, the viewer A may post the link of the program content. In this case, if the viewer B accesses the program content through the link of the program
20 content posted by the viewer A, it is guided that it is necessary to view the corresponding advertising content prior to viewing the program content. The viewer B views the advertising content in response to the guidance. When the advertising content has been viewed in accordance with the guidance, this means that the advertising content has been propagated.

25 [0043]

As can be understood from the above description, viewers can view program contents by spending brand tokens.

An example of a procedure performed in association with the viewing of program content in the content viewing system in the embodiment will be described with reference to the flowchart of Fig. 7.

[0044]

Step S401: When viewing program content which is a viewing target, a viewer selects the program content by operating his/her viewer terminal 500 and performs an operation of providing a request for the viewing of the selected program content. In response to this operation, the viewer terminal 500 transmits a program viewing request used for providing a request for the viewing of the selected program content to the program provision server 100.

[0045]

Step S402: The viewer terminal 500 which has transmitted the program viewing request displays a viewing time designation screen on which a viewer can designate a viewing time.

On the viewing time designation screen, for example, a longest time (a longest viewable time) during which the designated program content can be viewed using the brand tokens currently possessed by the viewer is shown. For this reason, the viewer terminal 500 acquires, from the brand token management server 400, information regarding the number of brand token points of the brand tokens possessed by the corresponding viewer corresponding to advertising content which has matched the program content in which a request for viewing thereof has been provided.

Furthermore, the viewer terminal 500 acquires, from the brand token management server 400, the brand token unit price of the corresponding brand token for each advertising

content corresponding to the program content in which a request for viewing thereof has been provided.

In the embodiment, a time at which viewing is allowed (a unit viewable time) is associated with the brand token unit price.

5 As an example, a unit viewable time in a case in which a broadcast time of program content which is a viewing target is 60 minutes, the number advertisement slots of the program content which is a viewing target is 4, the brand token unit price of the advertising content of the advertiser A of the corresponding advertising contents is 1.5 (yen), the brand token unit price of the advertising content of the advertiser B is 1.0
10 (yen), and the bid amount of the advertiser A is the maximum amount at the time of bidding will be described.

In this case, a viewable time according to the brand token unit price of the advertising content of the advertiser A is derived as a reference as follows. That is to say, a unit viewable time according to the brand token unit price of 1.5 corresponding to
15 the advertising content of the advertiser A is 15 minutes ($=60 \text{ minutes}/4$). Furthermore, a unit viewable time according to the brand token unit price of 1.5 corresponding to the advertising content of the advertiser B is 10 minutes ($=15 \text{ minutes}/1.5$) using, as a reference, the viewable time according to the brand token unit price of the advertising content of the advertiser A.

20 The longest viewable time of the designated program content can be obtained on the basis of the number of brand token points for each corresponding advertising content possessed by the viewer and the unit viewable time according to the brand token unit price for each advertising content. The viewer terminal 500 displays the longest viewable time obtained as described above. When the calculated longest viewable time
25 exceeds the broadcast time of the program content, the viewer terminal 500 may display

the broadcast time of the program content as the longest viewable time.

The viewer performs an operation of designating a viewing time at which he/she views the program content within the range up to the longest displayed viewable time.

The viewer terminal 500 transmits a viewing start request including the designated

5 viewing time to the program provision server 100.

[0046]

Step S403: The program provision server 100 broadcasts the designated program content to the viewer terminal 500 which is a request source in response to the viewing

start request. Thus, the viewer can view the program at the viewing time designated by

10 himself/herself. The program provision server 100 ends the broadcasting at a timing at which the program content to be broadcast reaches the designated viewing time.

[0047]

Step S404: In response to the end of the broadcasting of the program content, the viewer terminal 500 transmits, to the brand token management server 400, a

15 notification of the number of brand token points which will be spent in accordance with the viewing time of the program content this time (the number of spent brand tokens) (a

notification of the number of spent brand tokens). The notification of the number of spent brand tokens includes a viewer identifier indicating the corresponding viewer and

information indicating the details of the number of brand token points for each

20 advertising content to be spent.

The brand token management server 400 subtracts points according to the number of spent brand tokens indicated by the notification of the number of spent brand tokens from the cumulative points of the brand tokens possessed by the viewer indicated by the viewer identifier indicated in the received notification of the number of spent

25 brand tokens.

[0048]

Step S405: Also, the program provision server 100 transmits viewing result information indicating the viewing result of the program content this time to the program token management server 300. The program token management server 300 performs the following processing on the basis of the received viewing result information. That is to say, the program token management unit 321 of the program token management server 300 adds the number of points of the actually-viewed program token for the program content which is a viewing target indicated by the viewing result information in accordance with the viewing this time.

10 The actually-viewed program tokens corresponding to one program content managed by the program token management server 300 are divided and accumulated for each matched advertising content.

In this case, the program token management unit 321 divides each advertising content which has matched the program content which is a viewing target and adds the cumulative value of the actually-viewed program tokens. For this reason, the viewing result information includes information indicating the viewed advertising content so that the viewer is allowed to view the target program content.

Also, the number of points to be added to the cumulative value of the actually-viewed program tokens in accordance with the viewing of the target program content may be determined to be uniform in accordance with one viewing regardless of the viewing time or may be determined to be different in accordance with the viewing time.

[0049]

As described above, the brand tokens possessed by the viewer are collected as a compensation for the viewing of the program content in accordance with the viewing of the program content by the viewer. On the other hand, the actually-viewed program

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tokens corresponding to the viewed program content are added in accordance with the viewing of the program content. That is to say, in the content viewing system in the embodiment, it can be said that the brand tokens possessed by the viewers are managed so that the brand tokens are converted into the actually-viewed program tokens at a
5 predetermined conversion ratio in accordance with the viewing of the program content by the viewer.

The actually-viewed program tokens increase each time the corresponding program content is viewed. Such program tokens show a price according to the popularity of the program content. Furthermore, the actually-viewed program tokens
10 corresponding to one program content is managed separately for each advertising content which has matched the program content. Therefore, depending on the actually-viewed program tokens, a price corresponding to a content unit according to a combination of the program content and the advertising content is shown. In the embodiment, the brand token unit price corresponding to each advertising content currently (the current brand
15 token unit price) is changed on the basis of such actually-viewed program tokens.

[0050]

An example of a procedure associated with the changing of the current brand token unit price in the content viewing system in the embodiment will be described with reference to the flowchart of Fig. 8. The procedure in Fig. 8 relates to the changing of
20 the brand token unit price corresponding to one of the advertising contents which has matched one program content.

Step S501: In the brand token management server 400, the brand token management unit 421 acquires the number of reference program tokens corresponding to the current brand token unit price to be changed and the number of actually-viewed
25 program tokens from the program token management server 300. At this time, the

brand token management unit 421 transmits, to the program token management server 300, a request for the number of actually-viewed program tokens including information indicating a combination of the program content and the advertising content corresponding to the brand token unit price to be changed. In the program token management server 300, the program token management unit 321 transmits, to the brand token management server 400, the number of reference program tokens stored in accordance with the combination of the program content and the advertising content indicated using the received request for the number of actually-viewed program tokens and the number of actually-viewed program tokens. The brand token management unit 421 acquires the transmitted number of reference program tokens and number of actually-viewed program tokens.

[0051]

Step S502: The brand token management unit 421 calculates the current brand token unit price using the acquired number of reference program tokens and number of actually-viewed program tokens. As an example, the brand token management unit 421 can calculate the current brand token unit price by multiplying a value obtained by dividing the number of actually-viewed program tokens by the number of reference program tokens by the initial brand token unit price value. In this case, the current brand token unit price which is a value smaller than the initial brand token unit price value is calculated under the conditions in which the number of actually-viewed program tokens is smaller than the number of reference program tokens. It may not be desirable to utilize such a brand token unit price which is a value smaller than the initial brand token unit price value in the content viewing system in some cases. In such a case, the initial brand token unit price value may be obtained as the current brand token unit price under the conditions in which the number of actually-viewed program tokens is smaller

than the number of reference program tokens.

[0052]

In response to the changing in the current brand token unit price in this way, a time at which viewing is allowed of program content per point of the brand token

5 possessed by a viewer may be changed. For example, the time at which viewing is allowed of one-point program content of the brand token may be increased in accordance with a rate of increase of the current brand token unit price with respect to the initial brand token unit price value.

[0053]

10 In the embodiment, the advertisement expenses can be increased or decreased when the number of actual viewings increases with respect to the predicted number of viewings using a bid amount when the advertiser makes a bid as a reference.

With regard to the above advertisement expenses, a determination concerning whether to apply the increase or the decrease is performed depending on the operation of
15 the content viewing system.

For example, the increase in the number of actual viewings of the advertising content means that it can be conceivable that this is because many viewers desired to view the program content which has matched the advertising content, that is, the program content receives a high support from viewers. Furthermore, it can be said that the
20 advertisement effects increase in response to the increase in the number of viewings due to the satisfactory content of the program content. Based on this way of thinking, when the advertisement expenses are also increased in accordance with the increase in the number of viewings, it is possible to make a mechanism configured to increase the advertisement revenue which can be obtained by the broadcasting station 20 as a reward.

25 Alternatively, it can be conceivable that the fact that the number of actual

viewings is larger than the predicted number of viewings is because the advertising content which has matched the program content receives a high support from viewing. In this case, in return for providing high-priced advertising content to the advertiser 30, with the purpose of discounting advertisement expenses, a mechanism in which the advertisement expenses are reduced in accordance with the increase in the number of viewings can be made.

[0054]

An example of a procedure performed by the program token management server 300 in association with the calculation of the advertisement expenses will be described below with reference to the flowchart of Fig. 9. Fig. 9 illustrates the procedure for calculating the advertisement expenses corresponding to the broadcasting of one program content in a certain period. Furthermore, Fig. 9 illustrates the procedure corresponding to a case in which the advertisement expenses are reduced from the bid amount when the number of actual viewings increases with respect to the predicted number of viewings.

[0055]

Step S601: In the program token management server 300, the advertisement expense-related processing unit 322 acquires the number of reference program tokens and the number of actually-viewed program tokens for each matched advertising content to correspond to the program content for which advertisement expenses are calculated.

Step S602: Also, the advertisement expense-related processing unit 322 acquires the initial brand token unit price value for each matched advertising content and the current brand token unit price to correspond to the program content for which advertisement expenses are calculated.

[0056]

Step S603: The advertisement expense-related processing unit 322 calculates the

advertisement expenses. The advertisement expenses are calculated to correspond to each of the advertisers 30 who provide the matched advertising content to the program content for which advertisement expenses are calculated.

The advertisement expense-related processing unit 322 calculates the number of
5 advertiser unit reference program tokens to correspond to each of the advertisers 30.

The number of reference program tokens acquired in Step S401 corresponds to the entire program content. Thus, the advertisement expense-related processing unit 322 obtains the number of advertiser unit reference program tokens, for example, by distributing the number of reference program tokens on the basis of the ratio of the bid
10 amount for each of the advertisers 30.

Subsequently, the advertisement expense-related processing unit 322 calculates a rate of change in the number of actually-viewed program tokens with respect to the number of advertiser unit reference program tokens for each of the advertisers 30 (a rate of change in number of program tokens).

15 Also, the advertisement expense-related processing unit 322 calculates a rate of change in the current brand token unit price with respect to the initial brand token unit price value of the corresponding advertising content for each of the advertisers 30 (a rate of change in brand token unit price).

The advertisement expense-related processing unit 322 calculates the
20 advertisement expenses for the advertiser 30 using the rate of change in number of program tokens and the rate of change in brand token unit price.

When the rate of change in number of program tokens and the rate of change in brand token unit price are positive values (when the rate of change in number of program tokens and the rate of change in brand token unit price are each larger than an advertiser
25 correspondence reference program token and the initial brand token unit price value), the

advertisement expense-related processing unit 322 performs a calculation so that the advertisement expenses are reduced from the bid amount when the rates of change increase. A specific calculation expression for such a calculation is not particularly limited.

5 [0057]

In this way, in the embodiment, the advertisement expenses vary in accordance with the number of actually-viewed program tokens. Furthermore, when the advertisement expenses are calculated, the advertisement expenses will be made different in accordance with the number of viewings of the advertising content using the rate of
10 change in number of program tokens corresponding to each advertising content and the rate of change in brand token unit price for each advertiser 30 who has provided the same one program content to an advertisement.

Each of the advertisers 30 is charged with advertisement expenses calculated in Step S603. On the other hand, the broadcasting station 20 is paid with, for example, an
15 amount of money obtained by subtracting various expenses such as an amount of money collected by the advertising company 10 as a commission from a total amount of advertisement expenses calculated for each of the advertisers 30.

[0058]

For example, a constitution of a distributed type ledger in a blockchain system
20 may be applied for the program token management server 300, the brand token management server 400, and the like in the embodiment. That is to say, in the program token management server 300, the brand token management server 400, and the like, an information processing device as a plurality of nodes connected through peer-to-peer may be configured to share and manage information to be stored in the storage unit 303
25 (Fig. 2) and the storage unit 403 (Fig. 3).

Alternatively, the program token management server 300, the brand token management server 400, and the like may be configured of one or more of centralized servers.

[0059]

5 As described above, an aspect of the embodiment is a content viewing system which includes: a brand token granting unit (for example, the brand token management unit 421) configured to grant a brand token in association with a viewer in accordance with the viewing of advertising content by a viewer; a brand token unit price calculation unit (for example, the brand token management unit 421) configured to calculate a brand
10 token unit price which is a price per unit point quantity of the brand token on the basis of an advertising cost corresponding to the advertising content and the number of viewings of the advertising content; and a main content provision unit (for example, the program provision server 100) configured to cause main content to be viewed for a viewable time calculated on the basis of a unit viewable time per unit point quantity according to the
15 brand token unit price and a quantity of spent points spent when program content is viewed from brand tokens possessed by the viewer.

According to such a constitution, the viewer can increase the brand tokens possessed by him/her by repeatedly viewing the advertising content. The viewer can view the program content by spending the brand tokens possessed by him/her.

20 A time during which the program content can be viewed changes in accordance with a unit price (a brand token unit price) set for the brand tokens. If the brand token unit price increases, for example, the time during which the program content can be viewed increases in accordance with the same number of brand token points, which is advantageous for the viewer. The brand token unit price is set to vary in accordance
25 with the number of viewings of the advertising content.

In this case, the viewer actively views the advertising content so that the brand token unit price increases and the time during which the program content can be viewed increases. Furthermore, the propagation of the advertising content to other viewings is also actively performed. That is to say, depending on the embodiment, the incentive for the viewer to actively view the advertising content is improved.

[0060]

Although the main content in the above embodiment is, for example, moving image content as a program provided by the broadcasting station 20, the main content is not limited to such moving image content. For example, the main content may be of a still image, of an audio which is not accompanied by an image played back in synchronization, or content obtained by digitizing a paper medium such as a magazine or newspaper.

[0061]

A program configured to realize functions of various systems, devices, and the like in the above content viewing system may be recorded on a computer-readable recording medium and the program recorded on the recording medium may be read into a computer system and executed to perform processing as various system, devices, and the like in the above content viewing system. Here, “reading and executing the program recorded on the recording medium into the computer system” includes installing the program in the computer system. The term “computer system” as mentioned herein includes hardware such as an OS and peripheral devices. Furthermore, the “computer system” may include a plurality of computer devices connected over a network including a communication circuit such as the Internet, a WAN, a LAN, and a dedicated circuit. In addition, the “computer-readable recording medium” refers to a portable medium such as a flexible disk, a magneto-optical disk, a ROM, or a CD-ROM, or a storage device

such as a hard disk built into a computer system. In this way, the recording medium in which the program is stored may be a non-transitory recording medium such as a CD-ROM. Moreover, the recording medium also includes an internal or external recording medium in which accessing from a distribution server is possible to distribute the program. A code of the program stored in the recording medium of the distribution server may be different from a code of the program in a format in which the program can be executed by a terminal device. That is to say, the format of the program stored in the distribution server can be adopted as long as it is downloaded from the distribution server and can be installed in a form in which the program can be executed by the terminal device. The program may be split into a plurality of parts, downloaded at different timings, and then combined using the terminal device or the distribution server in which the split programs are distributed may be different. Furthermore, a “computer-readable recording medium” also includes a medium configured to hold a program for a certain period of time such as a volatile memory (RAM) inside a computer system which serves as a server or a client when the program is transmitted over a network. In addition, the above program may be for realizing a part of the above functions. Moreover, the program may be a so-called difference file (difference program) which can realize the above functions in combination with a program already recorded in the computer system.

[Reference Signs List]

20 [0062]

10 Advertising company

11 Bidding system

12 Viewing prediction system

20 Broadcasting station

25 30 Advertiser

	40 Viewer group
	100 Program provision server
	200 Advertising provision server
	300 Program token management server
5	301 Communication unit
	302 Control unit
	303 Storage unit
	321 Program token management unit
	322 Advertisement expense-related processing unit
10	331 Program token unit price storage unit
	332 Reference program token number storage unit
	333 Actually-viewed program token storage unit
	400 Program token management server
	401 Communication unit
15	402 Control unit
	403 Storage unit
	421 Brand token management unit
	431 Brand token unit price storage unit
	432 Viewer-possessed brand token storage unit
20	

[CLAIMS]

1. A content viewing system, comprising:

5 a viewing point granting unit configured to grant a viewing point to a viewer by associating the viewer with the viewing point in accordance with the viewing of advertising content of the viewer;

a viewing point unit price calculation unit configured to calculate a viewing point unit price which is a price per unit point quantity of viewing points on the basis of an advertising cost corresponding to advertising content and the number of viewings of the advertising content; and

10 a main content provision unit configured to enable main content to be viewed using a viewable time calculated on the basis of a unit viewable time per unit point quantity according to the viewing point unit price and a quantity of spent points from the viewing points possessed by the viewer to view the main content.

15

2. The content viewing system according to claim 1, wherein the viewing point unit price calculation unit calculates an initial value of a viewing point unit price on the basis of a bid amount presented by an advertiser as an advertising cost corresponding to the advertising content and a predicted value of the number of viewings, and

20 calculates a viewing point unit price on the basis of the initial value and an amount of change of the number of actual viewings with respect to the predicted value of the number of viewings.

3. A content viewing control method in a content viewing system, comprising:

25 at least a viewing point granting step of granting, by a viewing point granting

unit, a viewing point to a viewer by associating the viewer with the viewing point in accordance with the viewing of advertising content of the viewer;

5 a viewing point unit price calculation step of calculating, by a viewing point unit price calculation unit, a viewing point unit price which is a price per unit point quantity of viewing points on the basis of an advertising cost corresponding to advertising content and the number of viewings of the advertising content; and

10 a main content provision step of enabling, by a main content provision unit, main content to be viewed using a viewable time calculated on the basis of a unit viewable time per unit point quantity according to the viewing point unit price and a quantity of spent points from the viewing points possessed by the viewer to view the main content.