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(54) **SYSTEM AND METHOD FOR EVALUATING AND ANALYZING CONTENT**

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(57) **ABSTRACT**

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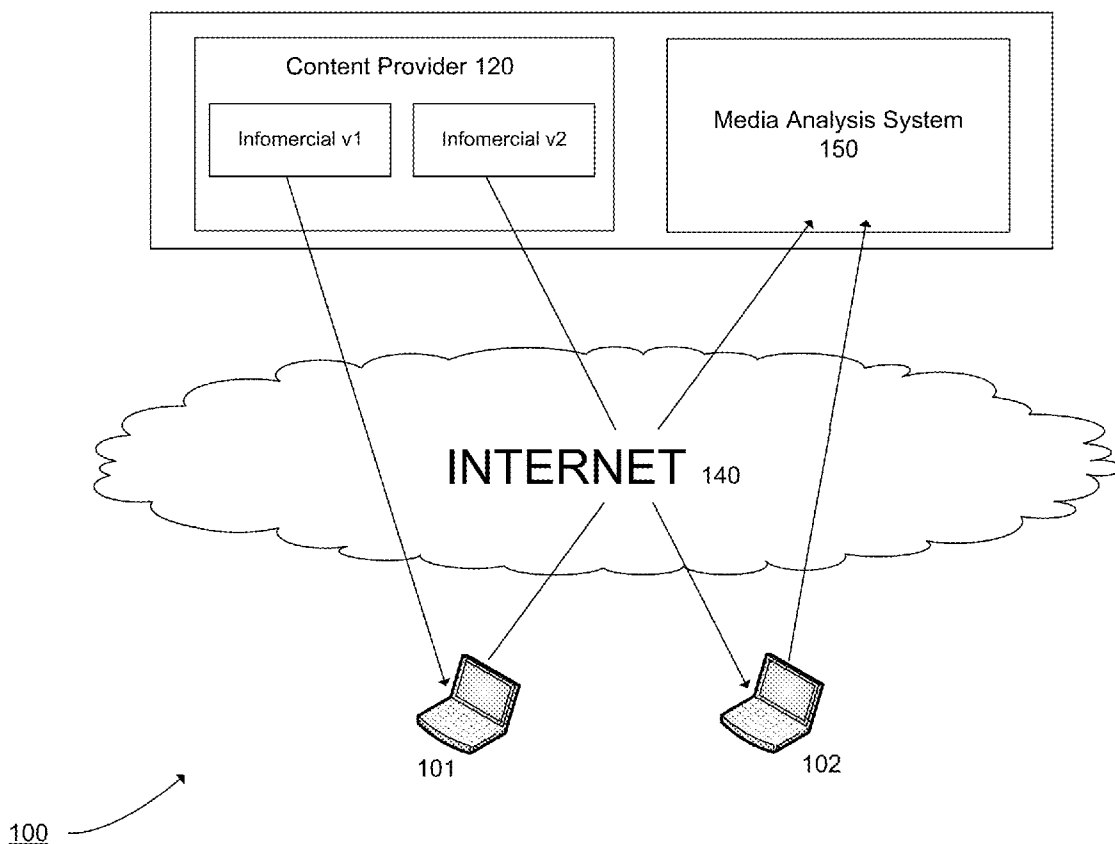
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A system for evaluating content includes a plurality of client computer systems, each one of the client computer systems configured to perform the steps of playing content on a media player; capturing, while the content is playing, a plurality of ratings from a user, each one of the ratings corresponding to a different play time; and sending the plurality of ratings and the corresponding play times to a media analyzer. The system further includes the media analyzer configured to perform the steps of, from a plurality of users, receiving a plurality of ratings and corresponding play times; grouping the ratings and corresponding play times according to content being rated; and analyzing the grouped ratings. Preferably, the media analyzer can store ratings from different content being played and evaluated simultaneously.

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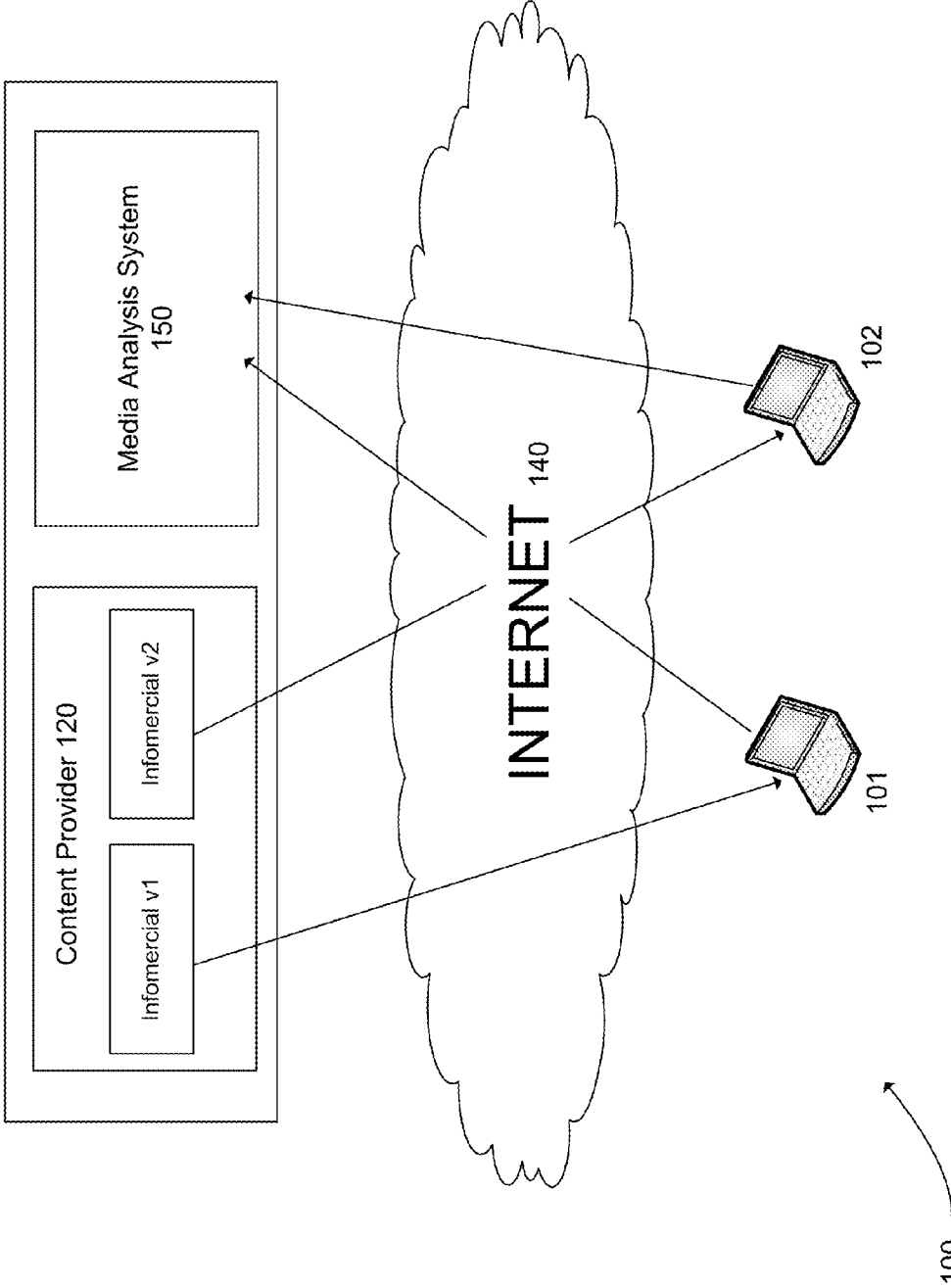


FIG. 1

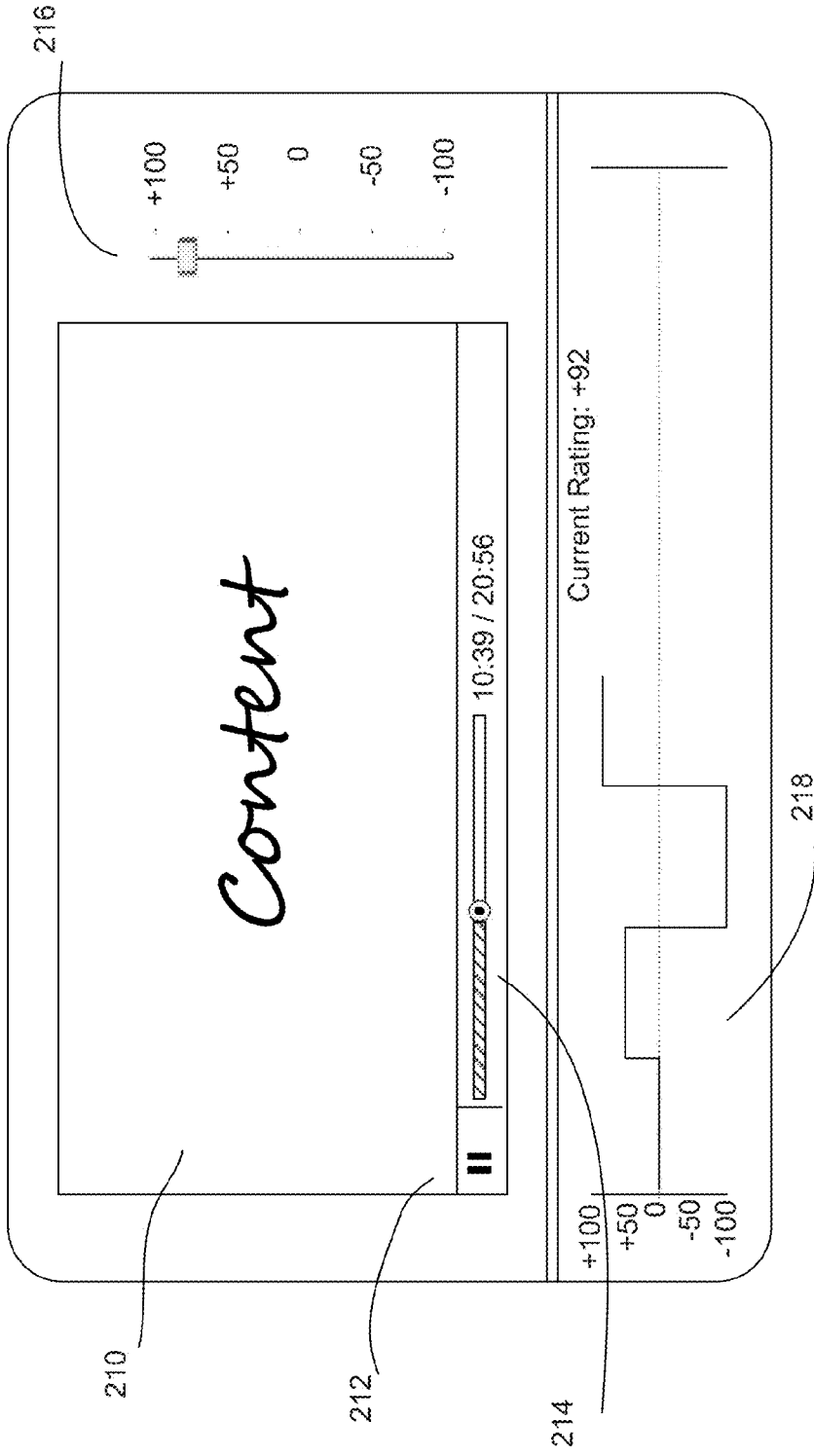


FIG. 2

200

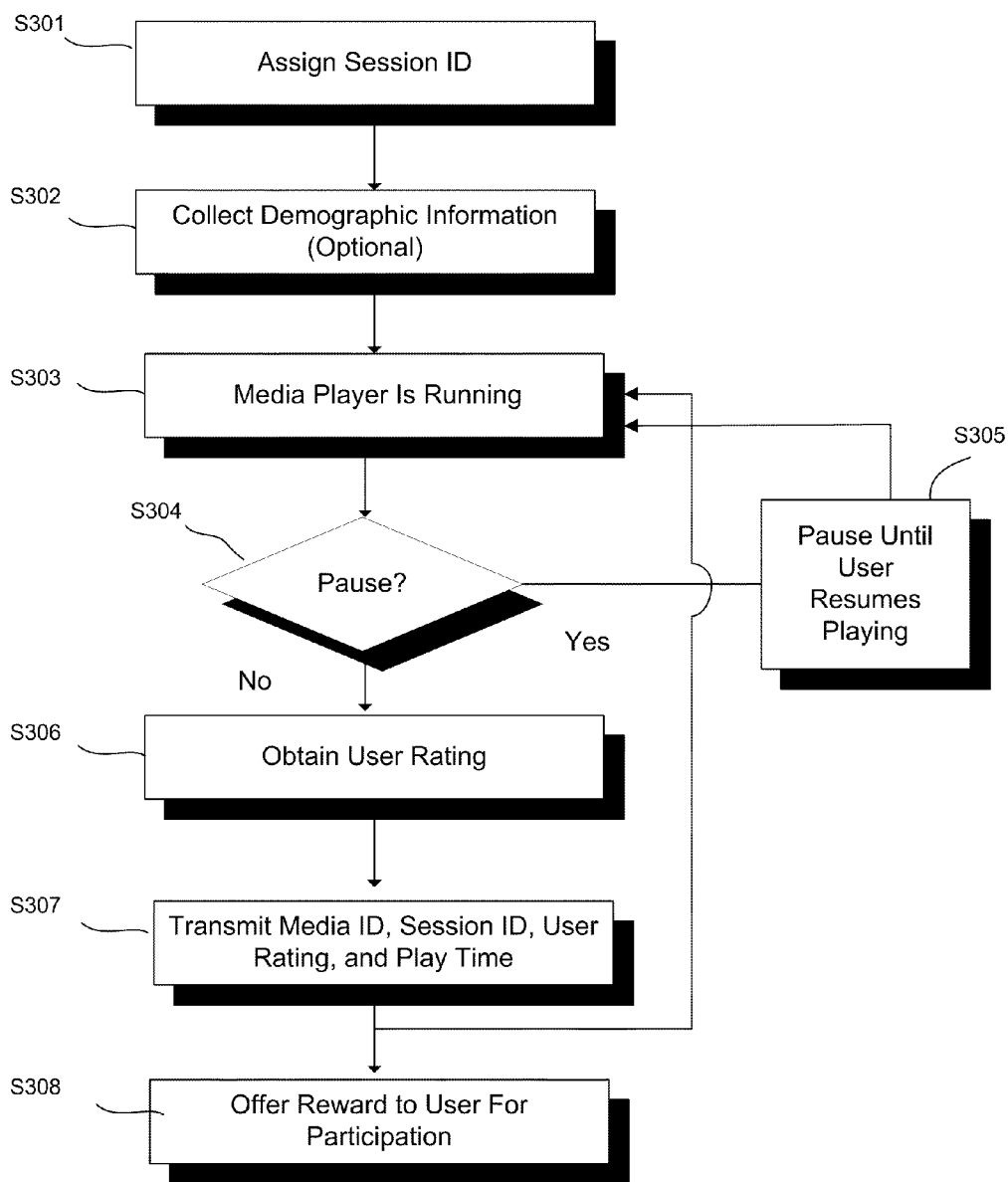


FIG. 3

Rating Table 420

Media Id	Session ID	Rating	Play Time	Timestamp
138	ABC	54	32 sec.	10:38:04 am
138	ABC	90	46 sec.	10:39:02 am
139	XYZ	100	242 sec.	10:39:03 am
156	ABC	75	46 sec.	10:39:04 am

FIG. 4(a)

Questions Table 440

Question Number	Media ID	Play Time	Question	Session ID	Answer
Q1	138	120	Was the sales pitch convincing?	ABC	I thought it was interesting. I really related to the energy level of the salesman!
Q2	138	360	Would you buy this product?	ABC	Yes, I would buy this product. It seems like a product I could really use.
Q3	139	330	Was this an interesting presentation?	XYZ	It was interesting, but personally I think there could have been more details given.

FIG. 4(b)

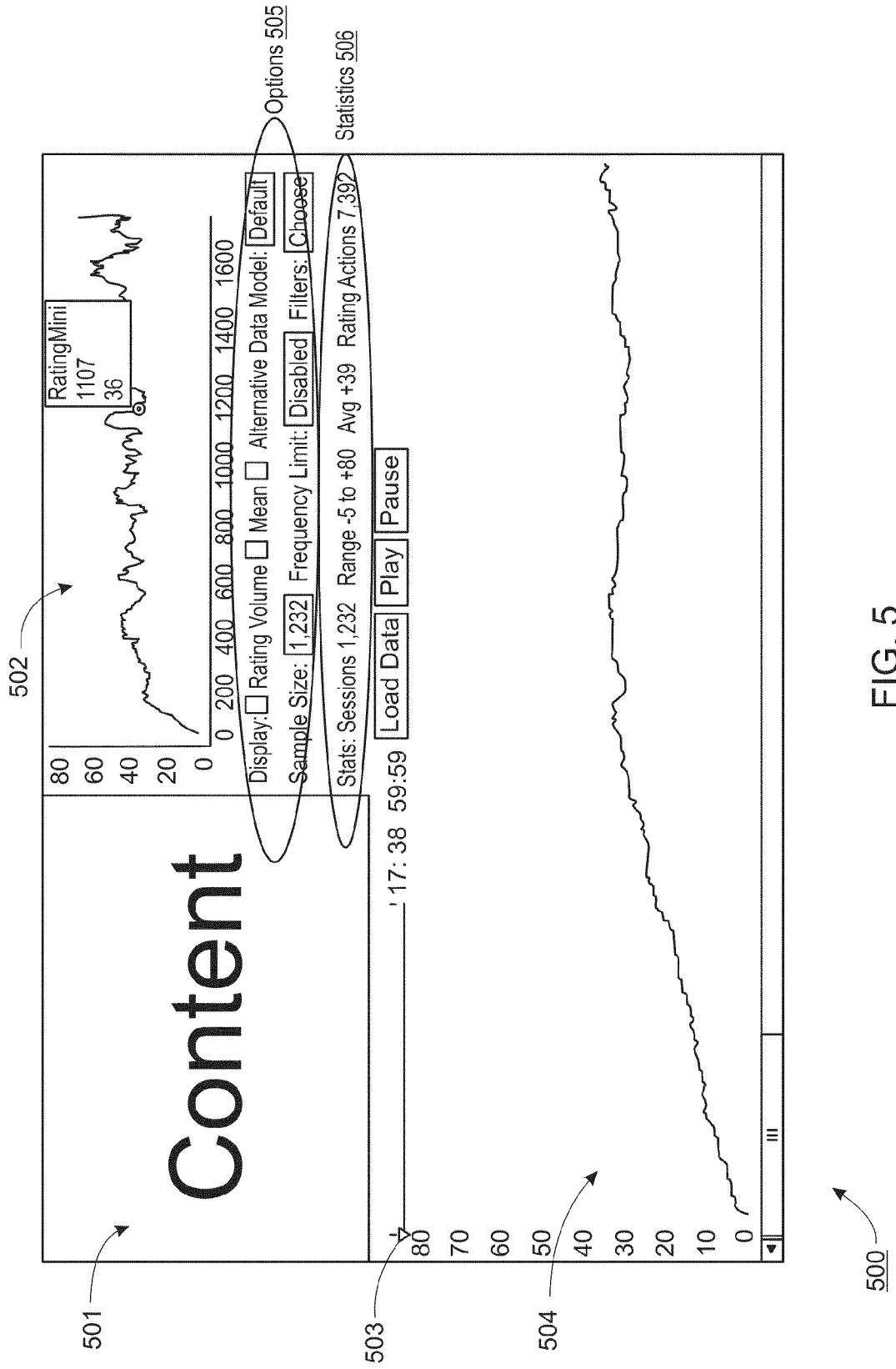


FIG. 5

## SYSTEM AND METHOD FOR EVALUATING AND ANALYZING CONTENT

### FIELD OF THE INVENTION

**[0001]** The present invention relates to a system and method for evaluating and analyzing content.

### BACKGROUND

**[0002]** An ongoing problem for content developers has been to assess the value of their work to an audience.

**[0003]** For television, a common way to measure audience interest is to install a device (commonly referred to as a "People Meter") on television sets of sample households to determine the shows that they watch. Based on the results of the sample, it is possible to determine with a certain degree of confidence the approximate audience size for various shows. Although useful for certain purposes, this approach has many limitations. In particular, the device does not provide information as to which parts of a show were liked or not, and it is limited to evaluating television audiences.

**[0004]** Various other methods of evaluating audience interest have been developed. An early attempt is disclosed in U.S. Pat. No. 3,328,803 to Papadopoulos et al. In this patent, selected members of an audience are assembled in a room and supplied with hard-wired devices for measuring their response to a presentation. Unfortunately, this approach is difficult to perform on a large scale.

**[0005]** To obtain more robust information, some content developers have used focus groups to assess an audience's reaction. In general, a focus group includes an audience situated in a room with a moderator who asks questions. To evaluate content, such as the content of an advertisement, the audience typically views the content and then is asked questions. The moderator can work on a scripted basis or an unscripted basis. In either case, focus groups tend to be small and provide only limited information due to their size and difficulty in assembling a representative mix of participants.

### SUMMARY OF THE INVENTION

**[0006]** A system for evaluating content includes a plurality of client computer systems, each one of the client computer systems configured to perform the steps of playing content on a media player; capturing, while the content is playing, a plurality of ratings from a user, each one of the ratings corresponding to a different play time; and sending the plurality of ratings and the corresponding play times to a media analyzer. The system further includes the media analyzer configured to perform the steps of, from a plurality of users, receiving a plurality of ratings and corresponding play times; grouping the ratings and corresponding play times according to content being rated; and analyzing the grouped ratings. Preferably, the media analyzer can store ratings from different content being played and evaluated simultaneously.

**[0007]** Preferably, the ratings are entered by the user using one of a vertical slider, a mouse, a keyboard, a touch screen, and a joystick. Preferably, the screen display area also includes an area for graphically showing the ratings entered by the user.

**[0008]** Preferably, demographic information is collected from the user and a unique session identifier is assigned to identify the evaluation. Preferably, a unique media identifier is used to identify the content. Preferably, the content is one of

video, audio, and text. Preferably, the content is streamed to the user in real time or near real time.

**[0009]** Preferably, the system can be configured to prompt the user for at least one question which is asked to the user at a predetermined play time.

**[0010]** These and other aspects, features and advantages of the present invention will become apparent from the following detailed description of preferred embodiments, which is to be read in connection with the accompanying drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0011]** FIG. 1 shows an exemplary content evaluation system, according to a preferred embodiment of the present system;

**[0012]** FIG. 2 shows an exemplary content evaluation tool useable by a person evaluating content;

**[0013]** FIG. 3 shows a flow chart of an exemplary method for evaluating content, according to a preferred embodiment of the present invention;

**[0014]** FIG. 4(a) shows an exemplary table for storing rating information;

**[0015]** FIG. 4(b) shows an exemplary table for storing user questions; and

**[0016]** FIG. 5 shows a media analysis tool used by a content developer to analyze user evaluations.

### DETAILED DESCRIPTION

**[0017]** FIG. 1 shows a content evaluation system **100**. The content evaluation system **100** includes a content provider **120**, a media analysis system **150**, and a plurality of client computer systems **101**, **102**. As depicted in FIG. 1, the client computer systems **101**, **102** are connected via the Internet **140** to both the content provider **120** and the media analysis system **150**. As will be described in greater detail, each of the client computer systems **101**, **102** uses a content evaluation tool for rating content provided by the content provider **120**. According to a preferred embodiment of the present invention, the computer systems **101**, **102** each have installed the Adobe Flash Player by Adobe Systems Inc., of San Jose, Calif. However, it is to be appreciated that the present invention is not limited to implementation with Adobe Flash technology.

**[0018]** For illustrative purposes, as shown in FIG. 1, the client computer systems **101**, **102** are provided with separate versions of an "infomercial" by the content provider **120**. In this example, the client computer system **101** is provided with a first version of the infomercial and the client computer system **102** is provided with a second version of the infomercial. As the users utilize the content evaluation tool to rate the respective content, the ratings and corresponding play times are sent to the media analysis system **150** for analysis. Such analysis might include, for example, a comparison of ratings of a portion of the infomercial as originally broadcast with a portion of the infomercial with changes made. The results of this analysis, if properly conducted and having a sufficient sample size, could help the content developer decide whether to make the changes. While FIG. 1 depicts only two client computer systems **101**, **102**, it is to be appreciated that the content analysis system **100** would usually include many more client computer systems, so that the results would reflect a more meaningful sample.

**[0019]** FIG. 2 illustrates an exemplary content evaluation tool **200** useable to collect content evaluations, according to a

preferred embodiment of the present invention. As shown, the content evaluation tool **200** includes a media player **210** having a pause button **212** and a progress bar **214**. The media player **210** can include the Adobe Flash Player or similar streaming media player. As the media player plays content provided by the content provider **120**, the progress bar **214** moves to indicate the elapsed play time. As shown, next to the progress bar **214** is the play time and the total media length. **[0020]** Additionally, the content evaluation tool **200** includes a vertical slider **216** for entering a user rating and a rating graph **218** for visually illustrating the entered ratings for the provided content. Preferably, the vertical slider **216** is originally set to a neutral position (e.g., 0) when the player starts and reverts to this neutral position if no rating has been entered for a predetermined length of time (e.g., 20 seconds). As shown, the vertical slider **216** allows for entry of ratings from  $-100$  to  $+100$ . However, it is to be appreciated that another rating scale could be employed, such as, for example a rating scale from 0 to 10. Furthermore, it is to be understood that although in this example a vertical slider **216** is used for data entry, other suitable widgets may instead be used, for example, a horizontal slider, radio buttons, a text entry box, etc.

**[0021]** FIG. 3 shows a flow chart of a method for evaluating content, according to a preferred embodiment of the present invention. This method depicts the flow of control for a particular client computer system **101**, **102**.

**[0022]** Initially, in step **S301**, a unique session identifier is assigned.

**[0023]** In step **S302**, demographic information is, optionally, collected from the user. For example, the user may be prompted for such information as age, gender, ethnic group, income level, etc.

**[0024]** In step **S303**, the user starts the media player **210** (or, alternatively, the media player **210** automatically starts). At any time, the user can, in step **S304**, click the pause button **212**, to pause the media player. If the pause button **212** is clicked, then control passes to step **S305** where the media player **210** pauses until the user resumes playing by again clicking the pause button **212**.

**[0025]** While the media player **210** is playing, the user can rate the content at any time by moving the vertical slider **216** to the desired rating. For example, the user might have not have enjoyed the introduction and rated it as a  $-50$  but liked the testimonials and rated them  $+92$ . Preferably, whenever the user fails to enter a rating for more than a predetermined length, e.g., 20 seconds, the vertical slider **216** moves to the  $0$  (neutral) position. The user ratings are displayed graphically in the rating graph **218**, as shown.

**[0026]** Each time the user moves the vertical slider **216** to the desired rating, in step **S306**, the user rating and corresponding play time is obtained. For example, if after 32 seconds, the user enters  $+90$  using the vertical slider, the rating of  $+90$  and the corresponding play time  $32$  seconds would be obtained.

**[0027]** In step **S307**, a media identifier that identifies the particular content, the session identifier, the user rating, and the play time are transmitted from the client computer system **101**, **102** to the media analysis system **150**. FIG. 4(a) shows an exemplary rating table **420** situated at the media analysis system **150** for storing this information.

**[0028]** In step **S308**, a reward can be provided to the user for participating in the evaluation. As an example, the reward could include a coupon.

**[0029]** An optional step in the above (not shown) involves providing specific questions to the user to be posed at predetermined play times. FIG. 4(b) shows an exemplary questions table **440** suitable for storing questions. In this table, for example, the question "Was the sales pitch convincing?" would be posed to the user playing content having media ID **138** at a play time of 120 seconds. In this example, a user with a session identifier "ABC" responded (in freeform text) "I thought it was interesting. I really related to the energy level of the salesman!" Such questions can be very useful in glean- ing the reasons a user reacted as he or she did.

**[0030]** FIG. 5 shows an exemplary media analysis tool **500** used by a content developer to analyze user evaluations. As illustrated, the media analysis tool **500** includes a media player **501**, a small graph **502**, a media control bar **503**, a high resolution graph **504**, options **505**, and statistics **506**. The data presented on this screen can include an aggregate of all ratings collected from participants for a particular piece of content.

**[0031]** The media player **501** includes a media player for playing back selected content that was evaluated.

**[0032]** The small graph **502** shows ratings for an entire piece of content from start to finish. As depicted, the numerical value on the Y-axis represents the rating and the numerical value on the X-axis represents the play time (in seconds). As the media plays back, a marker follows along the graph. Hovering over the marker causes the actual play back point play time and rating to be displayed. In this example, the play time is 1107 seconds and the average rating is 36.

**[0033]** The media control bar **503** allows a user to skip to certain parts in the media. It also provides the current play time and the length of time of the media.

**[0034]** The high resolution graph **504** shows the ratings on a much larger scale so more detail can be seen for each data point. The user can use the scroll at the bottom to browse the graph. While the media is playing a marker (as in the small graph **502**) will move so that one can see what part of the graph correspond to the media that is playing at that point in time. The high resolution graph **504** also has the hover box feature described above with respect to the small graph **502** to show a play time and rating at the chosen point.

**[0035]** An important aspect of the present invention is that various options of the media analysis tool **500** are configurable.

**[0036]** Options **505**

**[0037]** Display Options: This allows a user to display additional lines graphed on both the small graph **502** and the high resolution graph **504**.

**[0038]** Rating Volume: Shows the number of rating actions as a line chart so the operator can see how large the sample is for each point in time. This is important since not all users will rate the entire length of the media.

**[0039]** Alternative Data Models: Allows the operator to select other data models to calculate the results in alternative ways that might provide more ideal results.

**[0040]** Model Options:

**[0041]** Sample Size: Shows number of persons evaluating the content.

**[0042]** The sample size can adjusted by the user.

**[0043]** Filters: Allows user to select demographic filters.

**[0044]** Additionally, the user is presented with various useful statistics to further the analysis.



[0045] Statistics 506

[0046] Sessions: This is the number of different rating sessions that took place (which is, generally, the number of different people who rated it, though it is possible a person could go through the process more than once creating more than one session).

[0047] Range: This is the lowest average for any given point in the media to the highest average for any point in the media.

[0048] Average: This is the average rating given (i.e., the sum of all the ratings divided by the number of ratings).

[0049] Rating Actions: This is the number of different ratings recorded (a rating is recorded every time a user selected a different point on the scale during the process).

[0050] While this invention has been described in conjunction with the various exemplary embodiments outlined above, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, the exemplary embodiments of the invention, as set forth above, are intended to be illustrative, not limiting. Various changes may be made without departing from the spirit and scope of the invention.

What is claimed is:

- 1. A method of evaluating content, comprising: playing the content on a media player; capturing, while the content is playing, a plurality of ratings from a user, each one of the ratings corresponding to a different play time; and sending the plurality of ratings and the corresponding play times to a content analyzer.
- 2. The method of claim 1, wherein the ratings are based on a numerical scale.
- 3. The method of claim 1, wherein the ratings are entered by the user using one of a vertical slider, a mouse, a keyboard, a touch screen, and a joystick.
- 4. The method of claim 1, further including the step of graphically displaying the plurality of ratings to the user.
- 5. The method of claim 1, further including the step of collecting demographic information from the user.
- 6. The method of claim 1, further including the step of assigning a unique session identifier to identify the evaluation.
- 7. The method of claim 1, further including the step of assigning a unique media identifier to identify the content.
- 8. The method of claim 1, wherein the content is one of video, audio, and text.
- 9. The method of claim 1, further including the steps of prompting the user for at least one question and recording the user's answer to the question.
- 10. The method of claim 8, wherein the prompting occurs at a predetermined play time.
- 11. The method of claim 1, wherein the content is streamed from a network server.

12. The method of claim 1, wherein the method of evaluating content is performed on a client computer.

13. The method of claim 12, where the client computer is one of a laptop, a desktop, a tablet computer, and a smart phone.

14. The method of claim 1, wherein the method of evaluating content is performed at a kiosk.

15. A method of analyzing content, comprising: from a plurality of users, receiving a plurality of ratings and corresponding play times; grouping the ratings and corresponding play times according to content being rated; and analyzing the grouped ratings and corresponding play times.

16. The method of analyzing content of claim 15, wherein the analyzing step includes graphically displaying the grouped ratings and corresponding play times.

17. The method of analyzing content of claim 15, wherein the analyzing step includes comparing the grouped ratings and corresponding play times for different content.

18. The method of analyzing content of claim 17, wherein the different content are versions of similar content.

19. The method of analyzing content of claim 17, wherein the analyzing includes one or more of:

- for a selected play time,
  - graphically displaying a rating volume;
  - displaying a sample size;
  - displaying a number of sessions;
  - displaying a range;
  - displaying a rating average; and
  - displaying a number of rating actions.

20. A system for evaluating content, including: a plurality of client computer systems, each one of the computer systems configured to perform the steps of playing content on a media player; capturing, while the content is playing, a plurality of ratings from a user, each one of the ratings corresponding to a different play time; and sending the plurality of ratings and the corresponding play times to a content analyzer;

and

a server configured to perform the steps of from a plurality of users, receiving the plurality of ratings and corresponding play times; grouping the ratings and corresponding play times according to content being rated; and analyzing the grouped ratings and corresponding play times;

wherein the plurality of ratings and corresponding play times received by the server include ratings and corresponding play times associated with several different content.

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