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(54) Title: DELIVERY AND TRACKING OF EPISODIC MULTIMEDIA CAMPAIGNS

(57) Abstract: A method for delivering and tracking an episodic multimedia campaign to a plurality of users on a network. A plurality of campaign segments belonging to the episodic multimedia campaign is downloaded from a remote server to a client on the network, so that downloaded campaign segments are resident on the client and available for playing by a user on the client. The downloaded campaign segments are tracked, and tracking data pertaining to the downloaded campaign segments is stored to a database. The next campaign segment for the client may then be determined based on the tracking data, and delivered from the server to the client.
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DELIVERY AND TRACKING OF EPISODIC MULTIMEDIA CAMPAIGNS

Field of the Invention

This invention generally relates to the tracking and delivery of episodic campaigns from a remote server to a client on a network, and more particularly, to tracking campaign segments delivered to the client, and determining the next campaign segment to be delivered.

Background of the Invention

Referring to Fig. 1, delivery of episodic multimedia content on a network 2 is typically accomplished by a server 1 broadcasting to all pertinent clients 3-5 a segment of the episode, with the intent that each user on a client will view the multimedia before the next segment is delivered. The next episode is generally selected in a sequential manner and broadcast by the server 1 at a later time to all of the clients, as shown in Fig. 1. Eventually, all of the episodes are delivered in this manner, without regard towards whether an individual has viewed previous segments of the episode, or what an individual’s reaction is to the previously downloaded segments.

Summary of the Invention

In accordance with one aspect of the invention, a method for delivering and tracking an episodic multimedia campaign to a plurality of users on a network is presented. A plurality of campaign segments belonging to the episodic multimedia campaign are downloaded from a remote server to a client on the network, so that downloaded campaign segments are resident on the client and available for playing by a user on the client. The downloaded campaign segments are tracked. Tracking data pertaining to the downloaded campaign segments are stored to a database.

In related embodiments of the invention, the campaign segments may include advertising or entertainment. The step of tracking can be performed, at least in part, by the remote server. The database may reside on the remote server.
The tracking data can include a history of the downloaded campaign segments, and viewing data pertaining to the downloaded campaign segments. Viewing data may include a history of those downloaded campaign segments indicating that segments have been viewed, partially viewed, or not viewed at all. Viewing data may also include parameters characterizing viewed downloaded campaign segments, and responses from the user to downloaded campaign segments, such as requesting similar campaign segments. Viewing data may be tracked by the client, with the client sending the viewing data to the remote server.

Based on the tracking data, the next campaign segment for delivery to the client can be determined. The next campaign segment is then delivered from the server to the client. The next campaign segment may be delivered to the client in a deterministic sequential order as defined by the episodic multimedia campaign, and may be delivered to the client after a previously delivered campaign segment has been viewed. The step of determining the next campaign segment may be performed at least in part by the server.

**Brief Description of the Drawings**

The foregoing features of the invention will be more readily understood by reference to the following detailed description, taken with reference to the accompanying drawings, in which:

- Figure 1 shows a standard prior art system of broadcasting a segment of episodic multimedia from a server to clients on a network;
- Figure 2 shows a flowchart for the delivery and tracking of an episodic multimedia campaign according to one embodiment of the invention; and
- Figure 3 shows a system for delivering and tracking an episodic multimedia campaign according to one embodiment of the invention.
Description of Preferred Embodiments

Definitions: As used in this description and the accompanying claims, the following terms shall have the meanings indicated, unless the context otherwise requires:

(i) The term “platform” as used herein refers to any device, including but not limited to a personal digital assistant (PDA) (handheld device), a computer system, wireless device, or workstation that is capable of interfacing with the network.

(ii) The term “client” as used herein refers to any platform having enabling technology (i.e., software code and/or hardware components), in a client/server architecture on a network that optionally persistently and automatically requests and or receives files or services. The World Wide Web (or ‘web’) is an example of a network and will be used representatively herein and in any appended claims. The client typically contains a user interface. The client may include but is not limited to hardware, software, operating system applications, databases, and TCP/IP protocols.

(iii) The term “server” as used herein refers to any PDA, computer, workstation or other device in a client/server architecture that is shared by multiple users and provides files or services to a community of “peer” users in a network all receiving and sharing copies of the same files or services. A server may provide World Wide Web services on the Internet. A server may include, but is not limited to the hardware, software, databases, applications, operating system, Web server software, TCP/IP protocols and the Web site content (Web pages). A server may be a remote PDA, computer system, or workstation serving a community of “peer” users in a network, or it may also be a PDA, computer system, workstation, or other device that is also a “host” to any “client” in the community of peer users in a network. Individual users may receive copies of files or services transmitted to the client by multiple, distributed servers in the network.

(iv) The term “background process” as used herein refers to a process running on a multitasking computer. A multitasking computer is capable of executing several tasks, or programs, at the same time. In some multitasking systems, one of the processes is called the foreground process, and the others are called background processes. The foreground process is the one that accepts input from the keyboard, mouse, or other input device. Background
processes cannot accept interactive input from a user, but they can, for example, access data stored on a disk and write data to the video. In addition, many communication programs are described to run in the background.

The present invention provides for delivering and tracking an episodic multimedia campaign from a remote server to a plurality of users on a network. By tracking the delivered multimedia files, data can be acquired that is utilized to determine which segments of the campaign, if any, should be delivered to the client(s) next.

In preferred embodiments, a server downloads a campaign segment to a client(s) on a network, as shown in step 202 of Fig. 2. The campaign segment may be part of, for example, an advertising campaign, or a campaign related to entertainment. Once the campaign segment is downloaded at the client(s), the downloaded campaign segment is tracked 204. Such tracking may be performed, at least in part, by the remote server.

Tracked data may include a history of downloaded campaign segments. Additionally, viewing data pertaining to the downloaded campaign segments may be tracked, such as whether or not the user on the client has viewed all, part, or none of the delivered campaign segment(s). Viewing data may advantageously include parameters characterizing viewed campaign segments such as that the user views only advertisements related to hockey in a sport related advertisement campaign. In accordance with various embodiments of the invention, tracking of viewing data is performed as a background process by software installed on the client platform, the client forwarding the data to the server via the network.

Tracking data is stored to a database 206. The database 206 maybe located at the remote server. In various embodiments, the database is capable of handling large amounts of data due to the potentially large number of users that can be being tracked, for example, on the Internet.

By examining the tracked data, the next campaign segment to be delivered to each user is determined 208. The next segment may be the next segment scheduled in the campaign, and is preferably delivered after the previously viewed campaign segment has
been viewed. Additionally, segments of a campaign may be skipped, or a different campaign initiated, based on the tracked data. Hence the path of a campaign may vary among users depending on what has been viewed previously as well as what the user’s reaction has been to the episodes. Once the next campaign segment is determined, the segment is delivered from the server to the client via the network 210.

Figure 3 shows an embodiment of the subject invention. Server 301 initially delivers segment A of a multimedia campaign to clients 303, 304, and 305 via a network. Server 301 hacks and stores this information on a database 306. Additionally, each client 303, 304, and 305, has software installed that tracks the received multimedia segments, and sends tracking data back to the server 301. For purposes of this description, assume the user on client 303 has viewed segment A after a certain amount of time has elapsed. Tracked data relating to this viewer are forwarded to the server 301, whereupon the server sends the next segment, B, to the client 303. On the other hand, the user on another client 304 has not had a chance to view segment A, or perhaps has indicated, passively or actively, using the installed client soft-ware, that the user is not interested in the campaign. The server 301 receives this tracked data and does not send the next segment to this client 304. Client 305 viewed segment A as soon as it was received. This information was forwarded to the server 301, which then provided segment B to the client 305. In a similar manner, segments C and D are delivered to the client 305. As can be seen, each individual user is tracked and receives episodic content in an efficient and user-friendly manner. In this manner, the system embodying the invention functions as an intelligent media agent.

Various embodiments of the invention may be implemented as a computer program product for use with a computer system. Such implementation may include a series of computer instructions fixed either on a tangible medium, such as a computer readable media (e.g., a diskette, CD-ROM, ROM, or fixed disk), or fixed in a computer data signal embodied in a carrier wave that is transmittable to a computer system via a modem or other interface device, such as a communications adapter connected to a network over a medium. The
medium may be either a tangible medium (e.g., optical or analog communications lines) or a medium implemented with wireless techniques (e.g. microwave, infrared or other transmission techniques). The series of computer instructions embodies all or part of the functionality previously described herein with respect to the system. Those skilled in the art should appreciate that such computer instructions can be written in a number of programming languages for use with many computer architectures or operating systems. Furthermore, such instructions may be stored in any memory device, such as semiconductor, magnetic, optical or other memory devices, and may be transmitted via any communications technology, such as optical, infrared, microwave, or other transmission technologies. It is expected that such a computer program product may be distributed as a removable medium with accompanying printed or electronic documentation (e.g., shrink wrapped software), preloaded with a computer system (e.g., on system ROM or fixed disk), or distributed from a server or electronic bulletin board over the network (e.g., the Internet or World Wide Web).

The present invention may be embodied in other specific forms without departing from the true scope of the invention. The described embodiments are to be considered in all respects only as illustrative and not restrictive.
What is claimed is:

1. A method for delivering and tracking an episodic multimedia campaign to a plurality of users on a network, the method comprising:
   downloading a plurality of campaign segments belonging to the episodic multimedia campaign from a remote server to a client on the network, so that downloaded campaign segments are resident on the client and available for playing by a user on the client; and tracking the downloaded campaign segments.

2. A method according to claim 1, wherein the campaign segments include advertising.

3. A method according to claim 1, wherein the campaign segments include entertainment.

4. A method according to claim 1, wherein the step of tracking is performed, at least in part, by the remote server.

5. A method according to claim 1, wherein the database resides on the remote server.

6. A method according to claim 1, wherein the tracking data includes a history of the downloaded campaign segments.

7. A method according to claim 1, wherein the tracking data includes viewing data pertaining to the downloaded campaign segments.

8. A method according to claim 7, wherein the viewing data include a history of those downloaded campaign segments that have been viewed.

9. A method according to claim 7, wherein the viewing data include a history of those downloaded campaign segments that have not been viewed.

10. A method according to claim 7, the viewing data include a history of those downloaded campaign segments that have been partially viewed.

11. A method according to claim 7, wherein the viewing data include parameters characterizing viewed downloaded campaign segments.
12. A method according to claim 7, wherein the viewing data include responses from the user to downloaded campaign segments.

13. A method according to claim 12, wherein the user requests similar campaign segments.

14. A method according to claim 7, wherein the step of tracking viewing data is performed by the client, the client sending the viewing data to the remote server.

15. A method according to claim 1, further comprising:
   determining a next campaign segment for delivery to the client based on the tracking data; and
   delivering the next campaign segment from the server to the client.

16. A method according to claim 15, wherein the next campaign segment is delivered to the client in a deterministic sequential order as defined by the episodic multimedia campaign.

17. A method according to claim 15, wherein campaign segments are delivered to the client after a previously delivered campaign segment has been viewed.

18. A method according to claim 15, wherein the step of determining the next campaign segment is performed at least in part by the server.
202  Downloading Campaign Segment(s) to a Client(s)

204  Tracking Downloaded Campaign Segment(s)

206  Storing Tracked Data to a Database

208  Determining Next Campaign Segment for Delivery to Client(s) (Based on Tracked Data)

210  Delivering the Next Campaign Segment to Client(s)

Figure 2