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BBiTV-P1

SYSTEM AND METHOD FOR MANAGING, CONVERTING AND DISPLAYING ADVERTISING CONTENT ON A VIDEO-ON-DEMAND PLATFORM, AND PARTICULARLY CONSUMER-GENERATED CONTENT FOR CLASSIFIED ADS

SPECIFICATION

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TECHNICAL FIELD

[0001] This invention generally relates to the provision of interactive television services through cable TV infrastructure, and more particularly, to a system and method for managing, converting and displaying advertising content on a video-on-demand platform, and particularly consumer-generated content for classified ads.

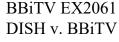
BACKGROUND OF INVENTION

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[0002] Cable television (CATV) systems are used to deliver television services to a vast majority of TV-viewing homes in the U.S. and other technologically advanced countries. The typical CATV system has a head end equipped with video servers to transmit CATV program signals through distribution lines to local nodes and from there to TV subscriber homes. Within the subscriber homes, the CATV program signals are routed to one or more customer-premises TVs which are coupled to CATV-supplied set top boxes or which are equipped with cable channel tuners.







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[0003] Current CATV set-top boxes provide channel switching access between subscribers and the CATV head end. The more advanced digital set-top boxes are individually addressable from the CATV head end and allow subscribers to communicate selection inputs on a back channel to the head end, thereby enabling subscribers to access interactive television services and other types of premium CATV services, such as video-on-demand (VOD). VOD service allows a viewer to use the remote control to cursor through an on-screen menu and select from a variety of pre-recorded video programs or segments for individual viewing at any time. Advanced remote controls include button controls with VCR-like functions that enable the viewer to start, stop, pause, rewind, or replay a selected video program or segment. In the future, the functionality offered in CATV set-top boxes is expected to expand further to offer Internet browsing capabilities, e-mail, e-commerce transactions, advanced communications functions such as voice calls over Internet (VoIP) and videoconferencing, and other forms of multimedia delivery.

[0004] With the increasing interactive functionality and customer reach of CATV systems, advertisers and content providers will increasingly view the cable TV delivery platform as the platform of choice for delivering advertising, content, and transaction services to home TV viewers. Cable TV delivery infrastructures are therefore being designed to seamlessly and conveniently deliver a wide range of types of advertising, content, and transaction services to home TV viewers. A particular CATV platform delivery system of high interest is the delivery of advertising and promotional video content on the VOD platform. For example, the advanced N-Band (TM) system of Navic Systems, Inc., d/b/a Navic Networks, of Needham, MA, provides an application development platform wherein third party application developers can develop new viewer menu interfaces and advertising/promotions delivery applications for deployment on VOD channels of CATV operators in cable service areas throughout the U.S. A detailed description of the Navic N-Band system, as an example of an advanced VOD application development platform, is provided in U.S. Patent Application 2002/066,106, filed on May 30, 2002, which is incorporated herein by reference.



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[0005] The advanced digital set-top box also provides the ability to collect data such as a log of the channels watched by or video-on-demand selections made by the viewer over time. The set top box can thus be designed to report this information to the cable head end. At the head end location, this viewer data can be aggregated over many users and coupled with other information, such as viewer demographics, and provided in reportage back to advertisers and program sponsors so that they can design and target new ads and programs for the indicated viewer preferences, thereby resulting in increased viewership, higher viewer impressions per ad or program, and ultimately increased revenues for advertisers in relation to advertising costs.

[0006] However, current VOD delivery and feedback to advertisers are only provided in aggregate, and VOD ads and programs are generally produced for mass audiences. It would be particularly desirable to use a VOD delivery platform to deliver ads, promotions, programs, or informational content targeted to or requested by individual viewers. Such one-on-one content delivery has a much higher likelihood of satisfying individual viewer interest, and also motivating the individual viewer to engage in transactions involving the subject matter advertised or promoted (referred to herein as "Drill-Down Ads"). Conversely, it would be highly desirable to enable the individual user to upload advertising or informational content to a CATV system which other viewers may find of interest to engage in transactions involving the subject matter advertised or promoted (referred to herein as "Classified Ads").

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SUMMARY OF THE INVENTION

[0007] It is therefore a primary objective of the present invention is to provide a system for controlling, managing and administering the distribution of pre-recorded video ads, promotions, programs, or informational content targeted to or requested by individual viewers. A related objective is to create a User Interface system that executes within the digital set-top box supplied by the cable television operator and enables the individual viewer to drill-down in the selection of



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specific ad, program, or informational content from a mass-market presentation or "page" to a "local page" and down to an "individual page" selected by the viewer (referred to herein as "Drill-Down Ads").

[0008] It is another primary objective of the present invention to enable the individual user to upload advertising or informational content to a CATV system. A related objective is to convert the uploaded user-content to VOD content that can be searched and viewed by other viewers who may find it of interest to engage in transactions involving the individual user-content (referred to herein as "Classified Ads").

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- [0009] In accordance with the first objective of the present invention, a video-on-demand (VOD) content delivery system comprises:
- (a) a VOD Application Server located at a Cable Head End which manages a database of templates for generating templatized VOD content requested in accordance with a viewer request signal transmitted from the TV equipment of a viewer through the CATV system to the Cable Head End;
- (b) a Video Server for storing video content segments encoded as video feeds to be used as video content in the templatized VOD content, and for supplying a requested video content segment to the VOD Application Server to be framed within a selected template and delivered as templatized VOD content through the CATV system to the TV equipment of the viewer;
- (c) an Application Data Center for creating templates for presentation of selected advertising types, wherein a template includes a link to a given video content segment which is to be framed within the template as templatized VOD content, and for downloading the templates for storage in the database managed by the VOD Application Server;
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- (d) a Video Content Encoder for encoding video content segments as video feeds and supplying the encoded video content segments to the Video Server,
- wherein said VOD Application Server, in response to a viewer request for VOD content indicated by the viewer request signal, retrieves the advertising template from its database



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corresponding to the requested VOD content, and the linked video content segment from the Video Server, in order to generate the corresponding templatized VOD content of the linked video content segment framed in the template and deliver the templatized VOD content to be displayed on the TV equipment of the viewer.

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[0010] In a preferred embodiment of the VOD content delivery system, the viewer's TV equipment includes a digital set top box which presents a User Interface on the viewer's TV display. The User Interface can display as a first page a menu of topical areas for viewer selection using the remote control for the viewer's set top box. Upon selection of a topical area, the digital set-top box sends a viewer request signal to the VOD Application Server for a generalized video ad which includes links or buttons to drill-down further to related subtopical areas. Upon selection of a subtopical area, the digital set-top box sends a subsequent viewer request signal to the VOD Application Server for a subtopical video ad which may include links or buttons to drill-down further to specific information options. In this manner, the VOD content delivery system allows the viewer to navigate to specific information content of high interest to the viewer using the drill-down ads as a navigation tool. User profiling and aggregate data reporting and tracking systems can be used to gather viewing data for feedback to advertisers.

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[0011] In accordance with the second objective of the invention, a TV classified ad system for managing, converting and displaying individual consumer-generated advertising content on a video-on-demand (VOD) content delivery system comprises:

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- (a) a web-based Content Management System for enabling an individual user to upload content via a web browser for a consumer-generated video ad, said uploaded content including meta data for classifying the video ad by topical and subtopical areas;
- (b) a Content Screening System for screening the content input by the individual user to the Content Management System by performing an automatic search for objectionable text and/or images in the content and rejecting the content if objectionable text and/or images are found;
 - (c) a Content Feed System for performing automatic transfer of consumer-generated



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