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- (71) **Applicant: AEREO, INC.** [US/US]; 37-18 Northern Boulevard, Suite 512, Long Island City, New York 11101 (US).
- (72) **Inventors: CHERRY, William Griffin;** 165 Walworth Street, Roslindale, Massachusetts 02131 (US). **KANOJIA, Chaitanya;** 141 Prince Street, West Newton, Massachusetts 02465 (US).
- (74) **Agent: HOUSTON, J. Grant;** Houston & Associates, LLP, 420 Bedford Street, Suite 155, Lexington, Massachusetts 02420 (US).
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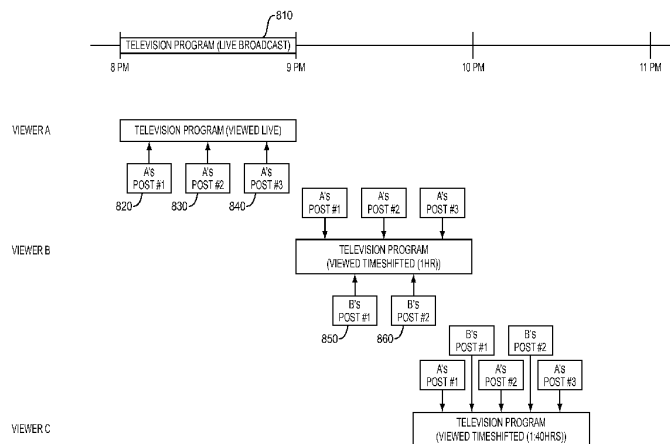


FIG. 8

(57) **Abstract:** A Graphical User Interface (GUI) for displaying broadcast television on a mobile device. The GUI is intended for use with a cloud-based digital video recorder and includes a programming guide, allowing users to watch live television or record programs for later viewing. The invention also includes a system for displaying comments about television programs in a social networking environment. The comments are entered and distributed relative to a particular point in a television program rather than in real time, allowing users to comment on a television program even when they are not watching the program at the same time.

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USER INTERFACE FOR TELEVISION PROGRAMMING AND SOCIAL MEDIA FEEDS FOR TIME SHIFTED VIEWING

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RELATED APPLICATIONS

[0002] This application claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 61/607,208, filed on March 6, 2012, which is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

[0003] Over the air television, which is also referred to as terrestrial television or broadcast television, is a distribution mode for television programming via radio waves through the atmosphere. Some examples of well-known major television networks in the United States that broadcast over the air content are ABC, CBS, FOX, NBC, and PBS. Through a series of affiliate stations, these networks are able to blanket the country with broadcasted content. The result is that each one of these television networks is able to reach over 95% of all the households in the United States.

[0004] Many websites are available that also present television programs. Broadcast television networks make some of their programming available online for people to access via the Internet. Typically, television networks will upload content to their website or some other third party website, such as HULU, that is typically permitted to show the content a day or two after the show has aired. Other websites, such as Netflix, are subscription based, and historically offer television programs and movies that have already been released on DVD.

[0005] Digital Video Recorder (DVR) technology is used to record and playback television programming. The DVR records video in digital format to a hard drive and allows users to access the recorded video for later viewing. DVR technology has several advantages. It allows a user to record a television program and watch it at his or her convenience, rather than when the program is broadcast. It also allows users to fast forward

and rewind to particular points in the program and to pause the program, for example, if something else requires their attention. Examples of video sources recordable by DVRs include cable, satellite and broadcast television. Broadcast television is broadcast in digital format that can be directly recorded by the DVR without any required decryption or decoding, as can be required with satellite and cable television.

[0006] Traditionally it was required that the broadcast signal first be received by a television antenna and then transmitted to a DVR physically linked to the television. However, recently a cloud-based DVR has been developed that allow users to receive live or pre-recorded broadcast television on any internet-enabled video display device.

[0007] A wide variety of options for viewing video content accessed via the internet now exist. In addition to internet-enabled televisions, personal computers, and laptop computers, many now watch video on their smartphones and other mobile computing devices such as tablet or slate computers. Video content is usually accessed through the Internet using subscriber data networks, cellular phone networks, and public and private wireless data networks. Moreover, many users are highly mobile. It is common for a person to travel to various locations with their personal computers, mobile phone, and/or other electronic computing devices and be able to access the Internet or a cellular phone network wherever they are located.

[0008] Many of these internet-enabled video display devices are also used for other internet-based functions, such as accessing social networking websites. A social networking site is a web-based online community that allows a user to link with other users within their social network and interact with them via means such as shared content, e-mail and instant messaging, and group-directed messages.

[0009] Social networking sites often contain a social networking feed. Examples of well-known social networking sites that contain social networking feeds are Facebook, Google+, and LinkedIn. The social networking feed allows the user to see a list of real time updates about other linked users - often users within their network. For example, items posted in the feed may include comments entered by other users or messages about actions taken by other users. The social networking feed allows the user to quickly see a broad overview of the events within their network in a single location.

[0010] Given typical television daily viewing levels and the fact that many social interactions are taking place over the internet, technology has recently been developed to

allow social television watching by connecting viewers over the internet. For example, Netflix at one time offered a feature called “Party Watch” when run on the Xbox gaming console. This allows users in distinct locations to watch a television program and at the same time and carry on a conversation using headsets. SplashCast enables users to integrate the social networking component of websites such as Facebook and MySpace with video viewing sites such as HULU.

SUMMARY OF THE INVENTION

[0011] Over the air content provided by broadcast television networks is available through cable television subscriptions or by capturing the over the air broadcasts. This captured content has traditionally only available for display on a television. Various websites enable the viewing of television programs on internet-enabled video display devices such as internet enabled televisions, personal computers, or mobile computing devices, but these television programs are pre-recorded and often limited in selection. Furthermore, options for watching television in a social networking environment over the internet are limited. Some options only allow users to communicate via voice and all pertain to watching pre-recorded programs that must be watched synchronously.

[0012] The present invention concerns a Graphical User Interface (GUI) for displaying live and previously recorded broadcast television of a cloud-based video delivery system on a video display device capable of displaying the GUI with a selectable portion in addition to a video portion. Users are able to select broadcast television programs from a programming guide for immediate viewing or for recording and viewing at a later point.

[0013] According to another aspect, the present invention also integrates an internet-based social networking environment with internet-based television viewing. Because the GUI combines web-based viewing with DVR technology, multiple linked users may watch the same television program, but at different times, if desired. The system enables comments entered by one user while viewing a television program to be displayed to a second user when the second user reaches the same point in the same program. In this way, users can post comments that are directly related to the content of the program.

[0014] The invention described herein can give the following advantages over prior systems: it can allow users to select broadcast television accessed via the internet for immediate viewing or recording on a video display device and, within an internet-based

social networking environment, it can enable user comments to be displayed synchronously with a particular television program rather than in real time.

[0015] In general according to one aspect, the invention features a graphical user interface provided by a cloud based video delivery system comprising a video portion in which pre-recorded or live broadcast television programs are displayed and at least one sidebar adjacent to the video portion, including a programming guide sidebar displaying television programming.

[0016] In embodiments, the television programming is listed by broadcast time and broadcast network and is selectable for recording or for immediate viewing in the video portion. The programming guide sidebar can be searched by broadcast time. A series of screens is displayed in the video portion when television programs are not displayed, including a screen displaying a selectable list of television series and television programs selected by a user for recording. Pop-up windows are superimposed on the screen listing television programs selectable for recording or viewing.

[0017] Preferably, a social networking feed is displayed as a sidebar, for example, for displaying comments and actions of linked users within a social networking environment. The feed can further display notifications regarding scheduled recordings of television programs, upcoming television programs, and amount of digital video recorder space available.

[0018] In general according to another aspect, the invention features a method for controlling video using a graphical user interface provided by a cloud based video delivery system. The method comprises displaying pre-recorded or live broadcast television programs in a video portion of the graphical user interface and displaying at least one sidebar adjacent to the video portion, including a programming guide sidebar displaying television programming.

[0019] In general according to another aspect, the invention features a system for distributing synchronized social networking comments for television programs. The system comprises a series of devices asynchronously displaying the television programs on a series of screens, the devices receiving comments entered by users at time points in the running of each of the television programs, the devices displaying previously-entered comments on the screens based on time points in running of the same television programs

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