

Technical Disclosure Commons

Defensive Publications Series

November 16, 2015

CONTENT CONTROL MANAGEMENT

Adam Glazier

Michael Jon Sundermeyer

Follow this and additional works at: http://www.tdcommons.org/dpubs_series

Recommended Citation

Glazier, Adam and Sundermeyer, Michael Jon, "CONTENT CONTROL MANAGEMENT", Technical Disclosure Commons, (November 16, 2015)

http://www.tdcommons.org/dpubs_series/81



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

CONTENT CONTROL MANAGEMENT

ABSTRACT

A content control system can be used to control media content that is being played at one or more client devices. The system receives an instruction from a first user's client device to play media content. The system provides complete control of the playing media content at the first user's client device. The system provides limited control of the playing media content at the second user's client device.

PROBLEM STATEMENT

Client devices are used for streaming, playing, and sharing media content, e.g., videos, movies, audio, or music. Client devices include mobile devices, cell phones, tablets, wearable devices, etc. However, user experience of consuming media content on the small sized display screens is not optimized. Therefore, media content from client devices is cast on client devices having bigger display screens, such as laptops, televisions, monitors, etc. Further, to enhance the sharing of media content, client devices multicast media content such that the media content can be simultaneously available at multiple client devices.

Various technologies can be used for casting content from one device to another, for example, wireless fidelity and wireless fidelity direct. Client devices can control the media content that is cast from one client device onto another client device. For example, in a home environment, every member of a family can cast content from their respective devices to a television unit or to each other's client devices. Thus, the cast content can be accessed and

controlled by every family member using their respective devices. An advanced system for controlling content that is being played at one or more client devices, is described herein.

DETAILED DESCRIPTION

The systems and techniques described in this disclosure relate to a content control system that controls media content being played at one or more client devices. The system can be implemented for use in an Internet, an intranet, or another client and server environment. The system can be implemented locally on a client device or implemented across a client device and server environment. The client device can be any electronic device such as a mobile device, a smartphone, a tablet, or a handheld electronic device, etc.

Fig. 1 illustrates an example method 100 to control media content played at one or more client devices simultaneously. The method 100 can be implemented by the content control system.

The system receives an instruction from a first user's client device to play media content (110). Media content may include video, movie, audio, music, etc. In an embodiment, the system may provide a list of available media content to the first user. The system receives a selection of the media content based on the first user's choice.

The system provides complete control to the playing media content at the first user's client device (120). The complete control may be provided at the first user device based on the stored control information for the first user. Client devices may have existing accounts with the content control system. The accounts may store control information associated with the corresponding users of the devices. The system fetches control information for the first user from

the first user's account and accordingly provides complete control to the playing media content. The control information defines the level of access and control provided to the first user. The level of access may be full access, limited access, only view access, etc. Various types of control includes permission for casting content, manipulating content metadata/artwork, transport control, and special actions like vote up/down.

The control information may vary for various users. For example, administrator, parent, child, guest, etc., may have varying level of access to the content control system. Each user may be required to create their user account while logging-in to the content control system for the first time. Each user account is associated with corresponding control information that defines the level of access and control that the user can be provided. In an example, the system provides complete visibility of the media content at the first user's client device based on first user's control information. The first user may be the administrator or the owner of a client device associated with the content control system.

The system may also cause the media content to be played at a second user's client device. The system may select one or more client devices in proximity with the first user's client device to share the media content being played at the first user's client device. For example, second user's client device may be in the same room or same home as the first user. In an example, the second client device may be shared with user's friends or guests at home. Alternatively, or additionally, the system may allow the first user to choose client devices with whom the user wishes to share the media content. The second user's client device may be selected by the first user to share the media content.

Further, the system provides limited access to the playing media content at a second user's client device (130). The limited access may be provided based on the control information associated with the second user's client device. In an example, the system may allow the second user's client device to control the volume of the playing media content. However, the system may not allow the second user to vote up/down the playing media content. Also, the media content playing at the second user's client device may be modified. For example, the media content may be blurred, darkened, blacked out, or hidden from the second user at the second user's client device. Alternatively, or additionally, the second user may gain complete control of the media content, if at any time the first user's client device disconnects itself with the system or based on some other condition associated with the system.

Fig. 2 illustrates example Graphical user Interface (GUI) illustrating the content control system. Fig. 2a and Fig. 2b illustrate first user's client device 210 and second user's client device 260 respectively. Although Fig. 2 illustrates two client devices 210 and 260, however, the content control system can be used for more than two client devices.

The system receives an instruction to play a movie from the first user's client device 210. The system plays the movie in the display area 215 of the first user's client device 210. The system provides user interface control buttons 220, 225, 230 and 235 to the first user. Thus, the first user can utilize the user interface buttons for controlling voting up/down, volume up/down, play/pause of the movie being played. The system provides complete visibility of the movie to the first user as shown in Fig. 2a.

The system plays the movie at the display area 265 of the second user's client device 260. However, the system provides limited control via user interface buttons 270 and 275 to the

second user. The second user may be able to stop or pause the movie being played, however, the second user cannot vote up/down or volume up/down the movie. The second user is provided with limited visibility of the movie as shown in Fig. 2b.

Fig. 3 is a block diagram of an exemplary environment that shows components of a system for implementing the techniques described in this disclosure. The environment includes client devices 310, servers 330, and network 340. Network 340 connects client devices 310 to servers 330. Client device 310 is an electronic device. Client device 310 may be capable of requesting and receiving data/communications over network 340. Example client devices 310 are personal computers (e.g., laptops), mobile communication devices, (e.g. smartphones, tablet computing devices), set-top boxes, game-consoles, embedded systems. Client device 310 may execute an application, such as a web browser 312 or 314 or a native application 316. Web applications 313 and 315 may be displayed via a web browser 312 or 314. Server 330 may be a web server capable of sending, receiving and storing web pages 332. Web page(s) 332 may be stored on or accessible via server 330. Web page(s) 332 may be associated with web application 313 or 315 and accessed using a web browser, e.g., 312. When accessed, webpage(s) 332 may be transmitted and displayed on a client device, e.g., 310. Resources 318 and 318' are resources available to the client device 310 and/or applications thereon, or server(s) 330 and/or web page(s) accessible therefrom, respectively. Resources 318' may be, for example, memory or storage resources; a text, image, video, audio, JavaScript, CSS, or other file or object; or other relevant resources. Network 340 may be any network or combination of networks that can carry data communication.

The subject matter described in this disclosure can be implemented in software and/or hardware (for example, computers, circuits, or processors). The subject matter can be implemented on a single device or across multiple devices (for example, a client device and a server device). Devices implementing the subject matter can be connected through a wired and/or wireless network. Such devices can receive inputs from a user (for example, from a mouse, keyboard, or touchscreen) and produce an output to a user (for example, through a display). Specific examples disclosed are provided for illustrative purposes and do not limit the scope of the disclosure.

DRAWINGS

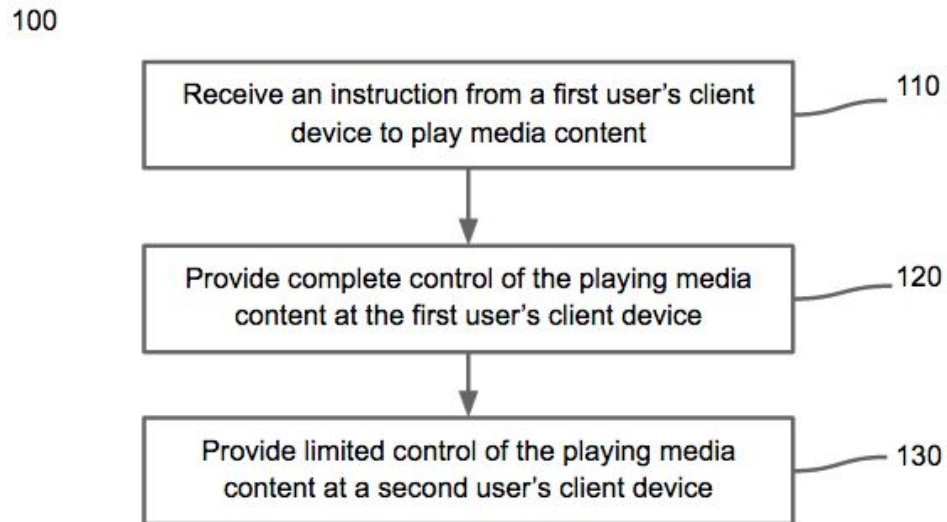


Fig. 1

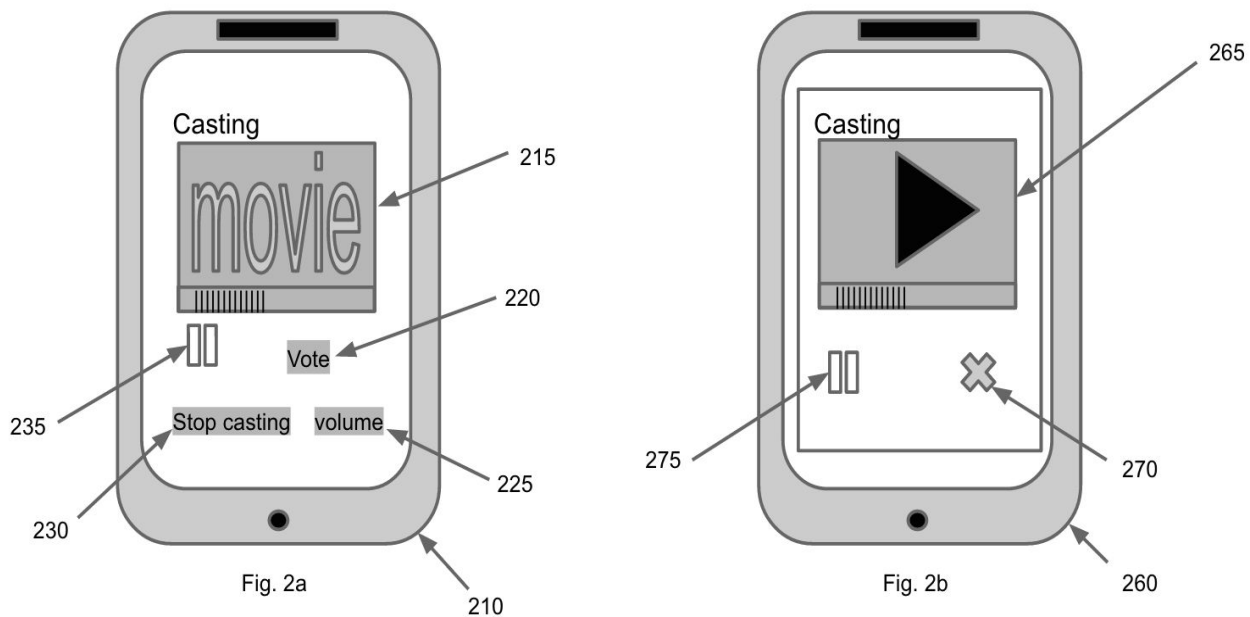


Fig. 2

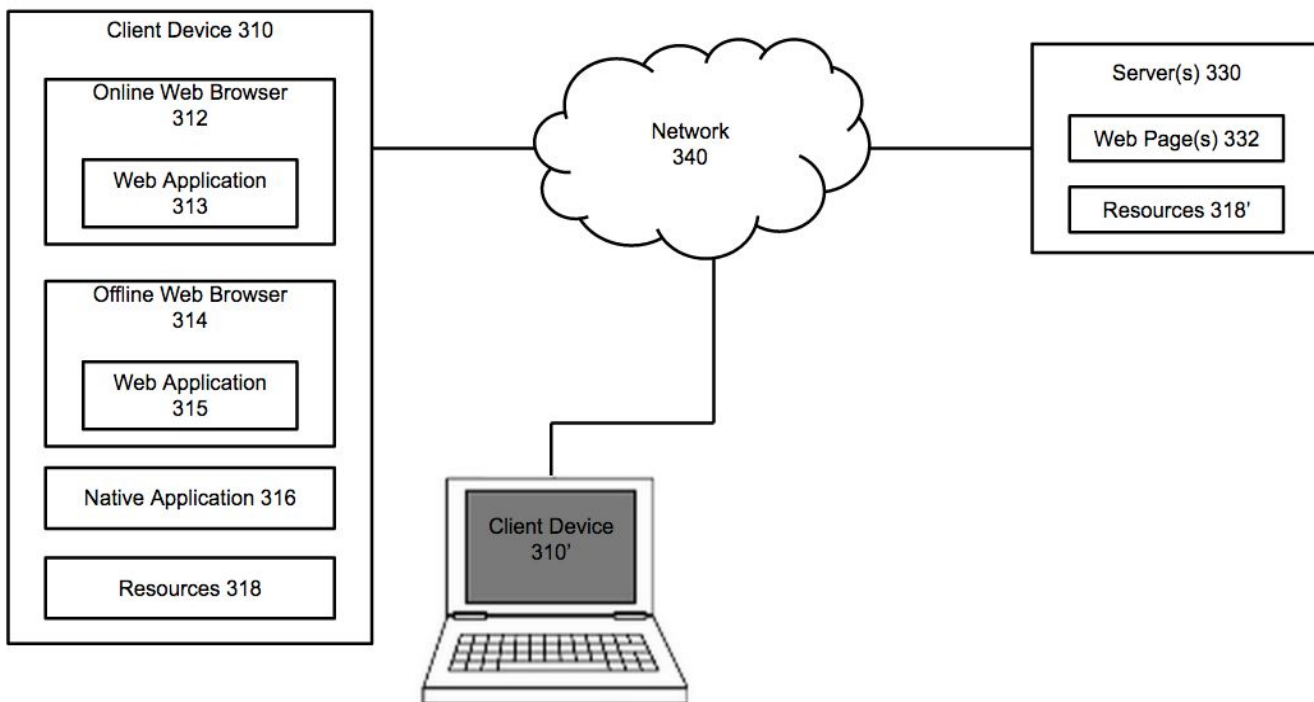


Fig. 3