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FISH & RICHARDSON P.C.

Frederick P. Fish
1855-1930

W.K. Richardson
1859-1951

Street Address
601 Lexington Avenue,
52nd Floor
New York, New York
10022

Mail Address
P.O. Box 1022
Minneapolis, Minnesota
55440-1022

Telephone
212 765-5070

Facsimile
877 769-7945

Web Site
www.fr.com

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Presented for filing is a new continuation in part patent application of:

Applicant: DAVID STROBER

Title: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Assignee: Touchstream Technologies, Inc.

Enclosed are the following papers, including those required to receive a filing date under 37 C.F.R. § 1.53(b):

	Pages
Specification	17
Claims	7
Abstract	1
Declaration	[To be Filed at a Later Date]
Drawing(s)	4

Enclosures:

— Application Data Sheet, 5 pages.
— Information disclosure statement, 1 page.
PTO-1449, 4 pages.

Applicant claims small entity status. See 37 CFR 1.27.

Basic Filing Fee			$95
Search Fee			$310
Examination Fee			$125
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Independent Claims 4	over 3	**1 x $125**	$125
Fee for Multiple Dependent claims			$0
Application size fee for each 50 pages over 100 No (10 +4)*.75) - 100)/50 = No0 x			$0
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The filing fee in the amount of $805 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply all charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 30160-0005001.

If this application is found to be incomplete, or if a telephone conference would otherwise be helpful, please call the undersigned at (212) 765-5070.

Please direct all correspondence to the following:

26211
PTO Customer Number

Respectfully submitted,

/Samuel Borodach/

Samuel Borodach
Reg. No. 38,388
Enclosures
SXB/ptr
30700085.doc

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

RELATED APPLICATION(S)

[0001] The present application is a continuation-in-part of U.S. Application No. 13/157,821, filed on June 10, 2011, which in turn claims the benefit of priority of U.S. Provisional Patent Application No. 61/477,998, filed on April 21, 2011. The contents of the earlier applications are incorporated herein by reference.

BACKGROUND

[0002] Techniques are known to facilitate operating a display device remotely from a personal computing device, such as a mobile phone, in order to view a video file or other content on the display device. For example, U.S. Patent Application No. 13/157,821 describes a system in which a server system acts as a single interface that can be used to control any one of multiple media players (*i.e.*, computer software applications for playing video or other content) that may be needed to play different video or other files on a display device such as a television screen. As an example, the display device may receive from the server system a message, based on input from a mobile phone, that instructs the display device to access a content provider, load a specific media player, load specific content (e.g., a video) to be played on the display device, and play the content on the display device using the media player.

[0003] Recently, various types of display devices have become popular and their use has become widespread. For example, some applications can be run on a gaming console, a tablet computer, a television set, or a set-top box, where the display device serves as a platform for audio-visual media such as books, movies, music, games or web content. However, some of these display devices have somewhat limited processing power and, therefore, may not be sufficiently powerful to run a swappable media player such as described in the foregoing patent application. Thus, using the techniques described in the foregoing patent application to control the display of content on such display devices presents a challenge.

SUMMARY

[0004] The present disclosure describes techniques to facilitate controlling the content that is displayed on various display devices, using a personal computing device such as a mobile phone. The techniques make use of a display host that acts, in part, as a swappable media player so that a wide range of video or other content can be played on the display device regardless of the particular media player that may be needed to play the video or other file.

[0005] In one aspect, for example, a machine-implemented method of presenting content on a display device includes receiving, in a display host, a communication from a display device. The display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content. The method includes opening a first session using a first instance of the swappable media player, and requesting assignment of a unique identifier for the first session from a switchboard server system. A unique identifier for the first session is received from the switchboard server system. The method includes displaying the unique identifier in the first session, and causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device.

[0006] The foregoing method can be used, for example, to establish a link between a particular instance of the swappable media player and a particular display device. The unique identifier displayed on the virtual client residing on the display device then can be entered into a computing device (e.g., a mobile phone) that is to be used to select and control the playing of content on the display device.

[0007] According to another aspect, the method includes receiving in the display host a message indicating that particular content is to be played in a first session using a specified media player. The specified media player can be retrieved and loaded, and the particular content can be played in the first session using the specified media player. The

method can include causing a presentation of the content to be mirrored onto the virtual client residing on the display device. In some implementations, the method includes receiving in the display host a second message indicating that particular second content is to be played in the first session using a specified second media player. The specified second media player can be retrieved and loaded, and the particular second content can be played in the first session using the specified second media player. The method can include causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

[0008] Systems for presenting content are described as well. For example, in some implementations, a system for presenting content includes a display device storing a virtual client. The system includes a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content. The system also includes a switchboard server system. The display host is operable to perform operations including receiving from the switchboard server system a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player, retrieving and loading the specified media player from a content provider using the first instance of the swappable media player, playing the particular content in a first session using the specified media player, and causing a presentation of the content to be mirrored onto the virtual client residing on the display device. In some implementations, the message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player includes a unique identifier for the first session. Also, in some implementations, the display host is further operable to incorporate a watermark into the content before the content is mirrored onto the virtual client, wherein the watermark includes the unique identifier.

[0009] Various implementations include one or more of the following advantages. For example, the techniques described here can be used even if the display device has somewhat limited processing power and would not be sufficiently powerful to run the

swappable media player. Furthermore, the techniques can facilitate centralized processing of the swappable media player for multiple display devices (e.g., television sets located in multiple guest rooms in a hotel).

[0010] Other aspects, features and advantages will be apparent from the following detailed description, the accompanying drawings, and the claims.

BRIEF DECSRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a block diagram illustrating an example of a system according to the invention.

[0012] FIG. 2 illustrates a method for establishing a session for playing content on a user-selected display device using a swappable media player.

[0013] FIG. 3 illustrates an example for playing user-selected content on a user-selected display device.

[0014] FIG. 4 illustrates another example for playing user-selected content on a user-selected display device.

DETAILED DESCRIPTION

[0015] As shown in FIG. 1, a system 10 synchronizes a connection between a control device 20 and a display device 23 to facilitate the playing of content on the display device 23. For example, a user of the first device 20 can select content and control the content displayed on the display device 23. For purposes of illustration, in the following discussion, it is assumed that first device 20 is a personal computing device such as a mobile phone that includes a display, an internal microprocessor or other processing circuitry, a keypad, keyboard, touchscreen, mouse, trackball, or other device to receive user selections and other input, and a transceiver to establish communications to the Internet 21. More generally, however, the first device 20 can be any type of handheld or other Internet-enabled personal computing device, including personal computers, e-books, kiosks, tablets, smart phones and media players. In some cases, input from the user can be received in forms other than tactile input (e.g., acoustic or speech). Examples of the display device 23 include a gaming console, tablet computer, set-top

box, television set, personal computer or laptop computer with a display screen. In some implementations, the display device 23 may have limited processing power. Although FIG. 1 shows only a single display device 23 coupled to the display host 22, there may be multiple display devices coupled to the display host 23 at the same time. Furthermore, the display devices may be of different types.

[0016] In the illustrated example, the mobile phone 20 is operable to display an application or web site that contains information and links to content providers 30 on a computer network such as the Internet 21. A display host 22, which may be implemented, for example, as a server system or other computing device (e.g., a personal home computer), is coupled to the Internet and is operable to link back to a switchboard server system 24 from which the display host 22 receives messages regarding the playing of specified content.

[0017] The display host 22 is operable to execute multiple sessions of a browser each of which operates as a swappable media player. Each session operates as a virtual display device that includes a unique instance 27 of the swappable media player and is assigned a unique synchronization code ("sync code"), which serves as an identifier for the session. Each session is associated with a specified display device such as the display device 23. The display device 23 may be connected to the display host, for example, through a wireless connection, a wired connection (e.g., a co-axial cable), or through the Internet 21 or other network.

[0018] The various instances 27 of the swappable media player run on the display host 22 are independent of one another. Thus, each instance 27 of the swappable media player can play content (e.g., a video) during a particular session that differs from the content being played by other instances 27. Furthermore, the different instances 27 of the swappable media player running on the display host 22 may use different media players (i.e., software applications to play the content) from one another depending on the particular content being played by each instance. In addition, as discussed in greater

detail below, each particular instance 27 of the swappable media player can retrieve the appropriate media player needed to play the specified content.

[0019] In the illustrated example, the display device 23 includes a thin, virtual client 25 that can display content (e.g., a video) being played by a specific instance 27 of the swappable media player on the display host 22. The virtual client 25 relies on the display host 22 to perform the data processing required for displaying the selected content. The display device 23 may be a dedicated thin client terminal or a computing device with thin client software that sends user input to the display host 22 and receives screen output in return. Although the virtual client 25 processes the user interface, it need not process data.

[0020] As explained in greater detail below, the virtual client 25 can have a unique identifier associated with it. In some cases, the unique identifier may be assigned when the software program is downloaded to the display device 23. When the display device 23 connects to the display host 22, the unique identifier associated with the virtual client 25 on the display device 23 is paired with a unique assigned sync code, which, in turn, is associated with a particular instance 27 of the swappable media player so that the appropriate session is paired with the correct virtual client and display device (e.g., virtual client 25 on display device 23).

[0021] The following paragraphs describe how a connection can be established between the mobile phone 20 and the display device 23 so that the mobile phone can be used to control the display and playing of content on the display device 23. As indicated by FIG. 2, when the display device 23 initially connects to the display host 22, the display device 23 sends the unique identifier associated with the virtual client 25 to the display host 22 (see 100 in FIG. 2). In the event there is no such unique identifier provided by the display device 23, the display host 22 automatically can assign a unique identifier to the display device 23. The display host 22 opens a session using a particular instance 27 of the swappable media player (see 102 in FIG. 2). The session is associated uniquely with the identifier for the virtual client 25/display device 23. The display host 22, which

stores (e.g., in a database) the one-to-one correspondence between the session and the display device 23, also requests a sync code from the switchboard server system 24 (see 104 in FIG. 2). The switchboard server system 24 assigns a unique sync code to be used by the display host 23 for the session (see 106 in FIG. 2), and stores the correspondence between the sync code and the display host session in a database for future reference. The switchboard server system 24 includes a sync code generator 29 to generate the sync codes and can use, for example, the display host's browser cookie as an identifier for the display host 23. The switchboard server system 24 then sends the assigned sync code to the display host 22 (see 108 in FIG. 2). Upon receiving the sync code assigned to the particular session, the display host 22 stores (e.g., in a database) the association between the sync code and the particular session, and displays an image of the sync code in the corresponding instance 27 of the swappable media player (see 110 in FIG. 2). The image displayed in the instance 27 is mirrored onto the virtual client 25 on the display device 23 using, for example, a virtual network connection (VMC) or other virtualization technology (see 112 in FIG. 2). The sync code may be displayed, for example, as text or as a QR code.

[0022] Once the sync code appears on the display device 23, the user of the mobile phone 20 can enter the sync code into the mobile phone, for example, manually (e.g., using a keyboard) or by scanning the displayed sync code into the mobile phone (see 114 in FIG. 2). The code can be scanned, for example, using optical scanning or RFID techniques. The mobile phone 20 then sends a message containing the sync code to the switchboard server system 24 (see 116 in FIG. 2), which associates the received sync code with the matching sync code already stored in its database (see 118 in FIG. 2). The switchboard server system 24 includes a look-up table 36 that, based on the sync code, stores the correspondence between the mobile phone 20 and the session of the swappable media player on the display host 22. Thus, once the sync code is entered into, or captured by, the mobile phone 20, it is sent from the mobile phone 20 to the switchboard server system 24, which stores the information in the look-up table 36 so as to establish a connection, through the switchboard server system 24, between the mobile phone 20 and the particular session of the swappable media player on the display device 23. As there is

a one-to-one correspondence between the sync code, the particular session on the display host 22 and the display device 23, the mobile phone 20 effectively can be paired with, and thus connected to, the virtual client 25 operating on the display device 23 by way of the switchboard server system 24 and the unique session of the swappable media player running on the display host 22.

[0023] Next, the switchboard server system 24 sends a message to the display host 22 indicating that the swappable media player on the display host 22 and the mobile device 20 are connected (see 120 in FIG. 2). The particular instance 27 of the swappable media player can display an indication (e.g., a message or other indicator) that it is connected to the mobile device 20 (see 122 in FIG. 2). This indication is mirrored onto the display device 23 (see 124 in FIG. 2), allowing the user of the mobile phone 20 to confirm that the phone can be used to control the playing of content on the display device 23, as explained below.

[0024] The following paragraphs describe how a user of the mobile phone 20 can select content and cause the content to be displayed on the display device 23. When a user makes a selection using the mobile phone 20 for particular content to be displayed on the display device 23, a message is sent through the Internet 21 to the switchboard server system 24. The message may, for example, identify particular content to be played and a media player needed to play the content, and also may contain the sync code. A corresponding message then is passed along to the display host 22, which acts on a transmission code contained within the signal and performs specified actions based on the transmission code. For example, in some scenarios, the message from the switchboard server system 24 instructs the particular instance 27 of the swappable media player on the display host 22 to access a content provider 30 through the Internet 21, load a specific media player, load the media player-specific content and play the content. The particular instance 27 of the swappable media player on the display host 22 plays the specified content using the session of the swappable media player associated with the display device 23. The contents of the session are mirrored automatically onto the display device 23 via the virtual client 25, thereby allowing the user of the mobile phone 20 to view the

content on the display device 23. The mobile phone 20 also can be used to issue playback commands (e.g., play, pause, fast-forward, rewind, stop, etc.) to control the session.

[0025] Although in some examples the content is a video to be played on the display 23, the system 10 can be used for other types of content as well. Thus, depending on the implementation, the content may include one or more of the following: video, audio, interactive video game, streaming media, multimedia, images, slides (e.g., a PowerPoint presentation) or other types of dynamic content.

[0026] FIG. 3 illustrates further details of the flow of information and signals according to some implementations. The mobile phone 20 is operable to display an application or web site that contains information and links to content providers 30 on the Internet 21. The user operates the mobile phone 20 so as to start the application or access the web site (block 200). In some implementations, a logo appears on the mobile phone's display. By selecting the logo, the user causes a menu to expand and present various options. The options can include, for example: (i) add new content to a playlist, (ii) play a listed item on a secondary device, (iii) play a listed item on the mobile phone 20. If the user selects to add new content to the playlist, the user is presented with a screen that allows him to enter user-defined search parameters or to select predefined search parameters to request video data. The search parameters are sent from the mobile phone 20 as part of a request for video data that satisfy the search parameters (block 202). The request is transmitted via the Internet 21 to the appropriate content provider web site. In response, the content provider 30 provides metadata (e.g., titles, links to the videos) for one or more video files that satisfy the search parameters. The metadata can be provided to the mobile phone 20, for example, in the form of an XML data file 204. Upon receiving the data file, the mobile phone 20 displays a list of one or more videos based on the information received from the content provider 30 (block 206).

[0027] If desired, the user can take one of several actions, including selecting one of the videos from the displayed list to be played or initiating a command with respect to a

video that already has been loaded to the display host 22 (blocks 208). The mobile phone 20 then formats and transmits a message to the switchboard server system 24 (block 210). The message from the mobile phone 20 contains a transmission code that includes data regarding the user information (e.g., user identification or account number), the location and name of the media player for the selected video, a playback command (e.g., play, pause, rewind, fast-forward, etc.), and the video file to be acted upon. The message also includes the sync code previously acquired from the display device 23.

[0028] The message from the mobile phone 20 is transmitted over the Internet or other network 21 and is received by the switchboard server system 24 (block 212). Based on information in the message from the mobile phone 20, the switchboard server system 24 can verify that the user has an account (block 214), and the contents of the message, as well as the date and time of receipt of the message, can be added to a personal computing device database 32 (block 216) which forms part of a switchboard 28 (see FIG. 1). In general, all messages from a particular user's personal computing device 20 can be stored in the database 32 corresponding to an account for the particular user. Thus, the database 32 stores a record of all messages received from a user's personal computing device 20, as well as the user's identification, an indication of the host display 22, an identification of the media player that is required for the selected video, and an identification of the selected video. The switchboard server system 24 also can perform a target verification (block 218), which can include checking whether a connection to the display host 22 already is established for the mobile phone 20. Signals sent from the mobile device 20 to its associated database 32 are copied to a database 34 associated with the session of the swappable media player on the display host 22 based on the sync code.

[0029] In the illustrated implementation, the playback control command in the message from the mobile phone 20 contains a JavaScript reference to control the media player needed to play the selected video. Various types of video players may use different JavaScript commands to control their respective playback. Therefore, in the illustrated implementation, a universal adapter 26 is provided to interpret and convert a standard or universal command (e.g., play, pause, etc.) into the specific command recognized by the

media player. Each time a signal is received from the mobile device 20, the API adapter 26 checks and identifies the specific media player that is being requested. Based on this information, the system loads the appropriate set of protocols or application programming interfaces (APIs) from its library and converts the incoming commands from the mobile device 20 into the correct JavaScript (or other programming) code used by the target device 22 to control the specific media player (block 220). The switchboard server system 24 then copies the converted version of the message to the database 34 associated with the display host 22, as indicated above in connection with block 222.

[0030] The universal adapter 26 can be implemented, for example, as a look-up table. For example, for a universal command "New Video," the universal adapter 26 provides the corresponding command for each of several specific media players (e.g., "yt_loadVideo" for YouTube). Similarly, for a universal command "Pause," the universal adapter 26 provides the corresponding command for each of several specific media players (e.g., "pauseVideo" for Ted.com). Other universal commands and the corresponding command(s) for one of more media players (i.e., software applications to play the content) also can be stored by the universal adapter 26.

[0031] The display host 22 periodically checks the entries in the database 34 to determine if there are any new messages for it (block 224). For example, in some implementations, the display host 22 polls the associated database 34 at some predetermined time interval (e.g., every half second). In some implementations, instead of the display host 22 periodically checking whether there are any messages for it in the database 34, the server system 24 can push the messages to the display host 22. In any event, the system is arranged so that the display host 22 receives the messages intended for it.

[0032] When the display host 22 receives a message from the switchboard server system 24 (block 226), the display host executes the message (block 228). In some cases, the media player required to play the video indicated in the message is not presently loaded in the display host 22. For example, the received command may be to "play" a particular video. If the media player needed to play the video is not already loaded in the display

host 22, the display host 22 requests and obtains a copy of the appropriate media player 40 as well as a copy of the video file 42 from a content provider 30, loads the media player and then plays the video in the particular session of the swappable media player indicated by the sync code (block 230). Likewise, if the appropriate media player already is loaded in the display device, but the particular video is not, then the display host 22 requests and obtains a copy of the video file 42 from the content provider 30 and proceeds to play the video in the particular session based on the sync code.

[0033] As the session of the swappable media player on the display host 22 plays the video, each frame is captured and transmitted to the display device 23 using for example, appropriate virtualization technology (e.g., a virtual network connection). Thus, the video playing in the particular session associated with the display device 23 is mirrored onto the virtual client 25 running on the display device 23 in substantially real time, thereby allowing the user to view the video on the display device 23.

[0034] Once the video is playing on the display device 22, the user of the mobile phone 20 can control the playing of the video by entering appropriate commands (e.g., pause, fast forward, rewind, stop, play, etc.) through the mobile phone. Each command is incorporated into a message that is transmitted to the switchboard server system 24, which copies the message into database entries associated with the particular display host 22 (i.e., after performing any conversion of the command by the API adapter 26). Once the message is retrieved by or sent to the display host 22, the display host proceeds to execute the command.

[0035] The user of the mobile phone 20 may subsequently select other content to be played on the display device 23. If a different media player is needed to play this other content, the particular instance 27 of the swappable media player that is associated with the sync code retrieves the appropriate media player from a content provider 30. Thus, the same session of the swappable media player on the display host 22 can be used to play the other content regardless of whether the same or a different media player is needed.

[0036] In some implementations it may be desirable to provide a form of digital rights security with respect to the content that is being provided to the display device 23. For example, as shown in FIG. 4, before providing the requested content to the display device 23, a watermarking module 50 in the display host 22 can provide a watermark that incorporates, for example, a time stamp, the sync code, and the unique identifier associated with the virtual client 25 and the display device 23. The watermark can be inserted, for example, into the content (e.g., the video) using known techniques in a manner that is detectable by software, but that is not discernable by the human eye. In some cases, the video signal that is transmitted to the virtual client 25 can be encrypted by the display host 22 and then decrypted on the client side.

[0037] As mentioned above, the system and methods described above also can be used with various types of content other than video. In that case, different types of user-initiated commands may be available to control playing or display of the content. For example, for interactive video games, the user-initiated commands may include control commands appropriate for the particular game.

[0038] Although in many scenarios there will be a one-to-one correspondence between a computing device 20 that controls the content on a display device 23, the techniques described here also can be incorporated into co-viewing situations, for example, where multiple computing devices (e.g., mobile phones) interact with a single display device 23, a single computing device 20 controls communications with multiple displays 23, or multiple computing devices 20 control communications with multiple displays 23.

[0039] For example, a single computing device 20 may be used to control multiple display devices 23 so that the same content is displayed on each of the display devices at the same time (e.g., multiple televisions sets in a bar). In that case, a different sync code may be associated with each of the display devices 23, with each display device 23 associated with a different session of the swappable media player on the display host 22. Each message from the computing device 20 may include a series of sync codes so that

all of the display devices are controlled using the same message from the computing device 20. In other implementations, each message from the computing device 20 may include a group identifier, which is associated at the switchboard server system 24 with multiple sync codes, each of which corresponds to a different session of the swappable media player on the display host 22.

[0040] The techniques described in this document can be applied in a wide range of contexts. For example, a hotel can have a central server that operates as the display host 22 and each television in the guest rooms can serve as a virtual client 25. The techniques also can be applied beyond a single location. For example, a cable operator can host the display host 22 and a set-top box in each subscriber's home can serve as a virtual client 25. In addition, a personal home computer can serve as the host display 22, with one or more display devices 23 connected to it.

[0041] Implementations of the subject matter and the operations described in this specification can include digital electronic circuitry, or in computer software, firmware, or hardware, including the structures disclosed in this specification and their structural equivalents, or in combinations of one or more of them. Implementations of the subject matter described in this specification can include one or more computer programs, i.e., one or more modules of computer program instructions, encoded on computer storage medium for execution by, or to control the operation of, data processing apparatus. Alternatively or in addition, the program instructions can be encoded on an artificially-generated propagated signal, e.g., a machine-generated electrical, optical, or electromagnetic signal that is generated to encode information for transmission to suitable receiver apparatus for execution by a data processing apparatus. A computer storage medium can be, or can be included in, a computer-readable storage device, a computer-readable storage substrate, a random or serial access memory array or device, or a combination of one or more of them. Moreover, while a computer storage medium is not a propagated signal, a computer storage medium can be a source or destination of computer program instructions encoded in an artificially-generated propagated signal.

The computer storage medium can also be, or be included in, one or more separate physical components or media (e.g., multiple CDs, disks, or other storage devices).

[0042] The operations described in this specification can include operations performed by a data processing apparatus on data stored on one or more computer-readable storage devices or received from other sources. The term "data processing apparatus" encompasses all kinds of apparatus, devices, and machines for processing data, including by way of example a programmable processor, a computer, a system on a chip, or multiple ones, or combinations, of the foregoing. The apparatus and execution environment can realize various different computing model infrastructures, such as web services, distributed computing and grid computing infrastructures.

[0043] A computer program (also known as a program, software, software application, script, or code) can be written in any form of programming language, including compiled or interpreted languages, declarative or procedural languages, and it can be deployed in any form, including as a stand-alone program or as a module, component, subroutine, object, or other unit suitable for use in a computing environment. A computer program may, but need not, correspond to a file in a file system. A program can be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program in question, or in multiple coordinated files (e.g., files that store one or more modules, sub-programs, or portions of code). A computer program can be deployed to be executed on one computer or on multiple computers that are located at one site or distributed across multiple sites and interconnected by a communication network.

[0044] Processors suitable for the execution of a computer program include, by way of example, both general and special purpose microprocessors, and any one or more processors of any kind of digital computer. Generally, a processor will receive instructions and data from a read-only memory or a random access memory or both. Elements of a computer include a processor for performing actions in accordance with instructions and one or more memory devices for storing instructions and data.

[0045] Generally, a computer will also include, or be operatively coupled to receive data from or transfer data to, or both, one or more mass storage devices for storing data, e.g., magnetic, magneto-optical disks, or optical disks. However, a computer need not have such devices. Moreover, a computer can be embedded in another device, e.g., a mobile telephone, a personal digital assistant (PDA), a mobile, audio or video player, a game console, a Global Positioning System (GPS) receiver, or a portable storage device (e.g., a universal serial bus (USB) flash drive), to name just a few. Devices suitable for storing computer program instructions and data include all forms of non-volatile memory, media and memory devices, including by way of example semiconductor memory devices, e.g., EPROM, EEPROM, and flash memory devices; magnetic disks, e.g., internal hard disks or removable disks; magneto-optical disks; and CD-ROM and DVD-ROM disks. The processor and the memory can be supplemented by, or incorporated in, special purpose logic circuitry.

[0046] Although this specification contains many specific implementation details, these should not be construed as limitations on the scope of any inventions or of what may be claimed, but rather as descriptions of features specific to particular implementations of particular inventions. Certain features that are described in this specification in the context of separate implementations can also be implemented in combination in a single implementation. Conversely, various features that are described in the context of a single implementation can also be implemented in multiple implementations separately or in any suitable subcombination. Moreover, although features may be described above as acting in certain combinations and even initially claimed as such, one or more features from a claimed combination can in some cases be excised from the combination, and the claimed combination may be directed to a subcombination or variation of a subcombination.

[0047] Similarly, while operations are depicted in the drawings in a particular order, this should not be understood as requiring that such operations be performed in the particular order shown or in sequential order, or that all illustrated operations be performed, to

achieve desirable results. In certain circumstances, multitasking and parallel processing may be advantageous. Moreover, the separation of various system components in the implementations described herein and the attachments hereto should not be understood as requiring such separation in all implementations, and it should be understood that the described program components and systems can generally be integrated together in a single software product or packaged into multiple software products.

[0048] Thus, although particular implementations have been described, other implementations are within the scope of the claims.

What is claimed is:

1. A machine-implemented method of presenting content on a display device, the method comprising:

receiving, in a display host, a communication from a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from a switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session; and

causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device.

2. The method of claim 1 wherein the unique identifier comprises a QR code.

3. The method of claim 1 further including:

receiving in the display host a message indicating that particular content is to be played in the first session using a specified media player;

retrieving and loading the specified media player;

playing the particular content in the first session using the specified media player; and

causing a presentation of the content to be mirrored onto the virtual client residing on the display device.

4. The method of claim 3 further including:

receiving in the display host a second message indicating that particular second content is to be played in the first session using a specified second media player;

retrieving and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

5. The method of claim 1 wherein the content comprises video.

6. The method of claim 1 wherein the content comprises streaming media.

7. The method of claim 1 wherein the content comprises visual content.

8. The method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier.

9. The method of claim 1 further including:

receiving, in the display host, a communication from a second display device;

opening a second session using a second instance of the swappable media player;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session; and

causing the second unique identifier to be mirrored onto a virtual client residing on the second display device.

10. The method of claim 9 further including:

receiving in the display host a second message indicating that particular second content is to be played in the second session using a specified second media player;

retrieving and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

11. The method of claim 10 wherein the first and second sessions at least partially overlap in time with one another.

12. The method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

13. A system for presenting content comprising:

a display device storing a virtual client;

a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; and

a switchboard server system,

wherein the display host is operable to perform operations including:

receiving a communication from the display device;

opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from the switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session; and

causing the image of the unique identifier to be mirrored onto the virtual client residing on the display device.

14. The system of claim 13 wherein the display host is further operable to perform operations including:

receiving a message from the switchboard server system indicating that particular content is to be played in the first session using a specified media player;

retrieving the second media player from a content provider and loading the second media player;

playing the particular content in the first session using the specified media player; and

causing a presentation of the content to be mirrored onto the virtual client residing on the display device.

15. The system of claim 14 wherein the display host is further operable to perform operations including:

receiving a second message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player;

retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

16. The system of claim 14 wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

receiving a communication from the second display device;

opening a second session using a second instance of the swappable media player;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session;

causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device.

receiving a second message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player;

retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

17. A machine-implemented method of presenting content on a display device, the method comprising:

receiving in a display host a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player, wherein the display host is operable to execute multiple instances of the swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

retrieving and loading the specified media player using the first instance of the swappable media player;

playing the particular content in a first session using the specified media player; and

causing a presentation of the content to be mirrored onto a virtual client residing on a display device associated with the first session.

18. The method of claim 17 including:

receiving in the display host a second message indicating that a specified second media player is to be used to play particular second content using the first instance of a swappable media player;

retrieving and loading the second media player using the first instance of the swappable media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

19. The method of claim 17 wherein the message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player includes a unique identifier for the first session.

20. The method of claim 19 wherein causing a presentation of the content to be mirrored onto the virtual client includes incorporating a watermark into the content before it is mirrored onto the virtual client, wherein the watermark includes the unique identifier.

21. The method of claim 20 wherein the watermark also includes another identifier that is uniquely associated with the virtual client.

22. A system for presenting content comprising:

a display device storing a virtual client;

a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; and

a switchboard server system,

wherein the display host is operable to perform operations including:

receiving from the switchboard server system a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player;

retrieving and loading the specified media player from a content provider using the first instance of the swappable media player;

playing the particular content in a first session using the specified media player; and

causing a presentation of the content to be mirrored onto the virtual client residing on the display device.

23. The system of claim 22 wherein the message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player includes a unique identifier for the first session.

24. The system of claim 23 the display host is further operable to incorporate a watermark into the content before the content is mirrored onto the virtual client, wherein the watermark includes the unique identifier.

25. The system of claim 24 wherein the watermark also includes another identifier that is uniquely associated with the virtual client.

ABSTRACT OF THE DISCLOSURE

A system for presenting content includes a display device storing a virtual client. A display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content. The system also includes a switchboard server system. The display host is operable to perform operations including receiving from the switchboard server system a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player, retrieving and loading the specified media player from a content provider using the first instance of the swappable media player, playing the particular content in a first session using the specified media player, and causing a presentation of the content to be mirrored onto the virtual client residing on the display device.

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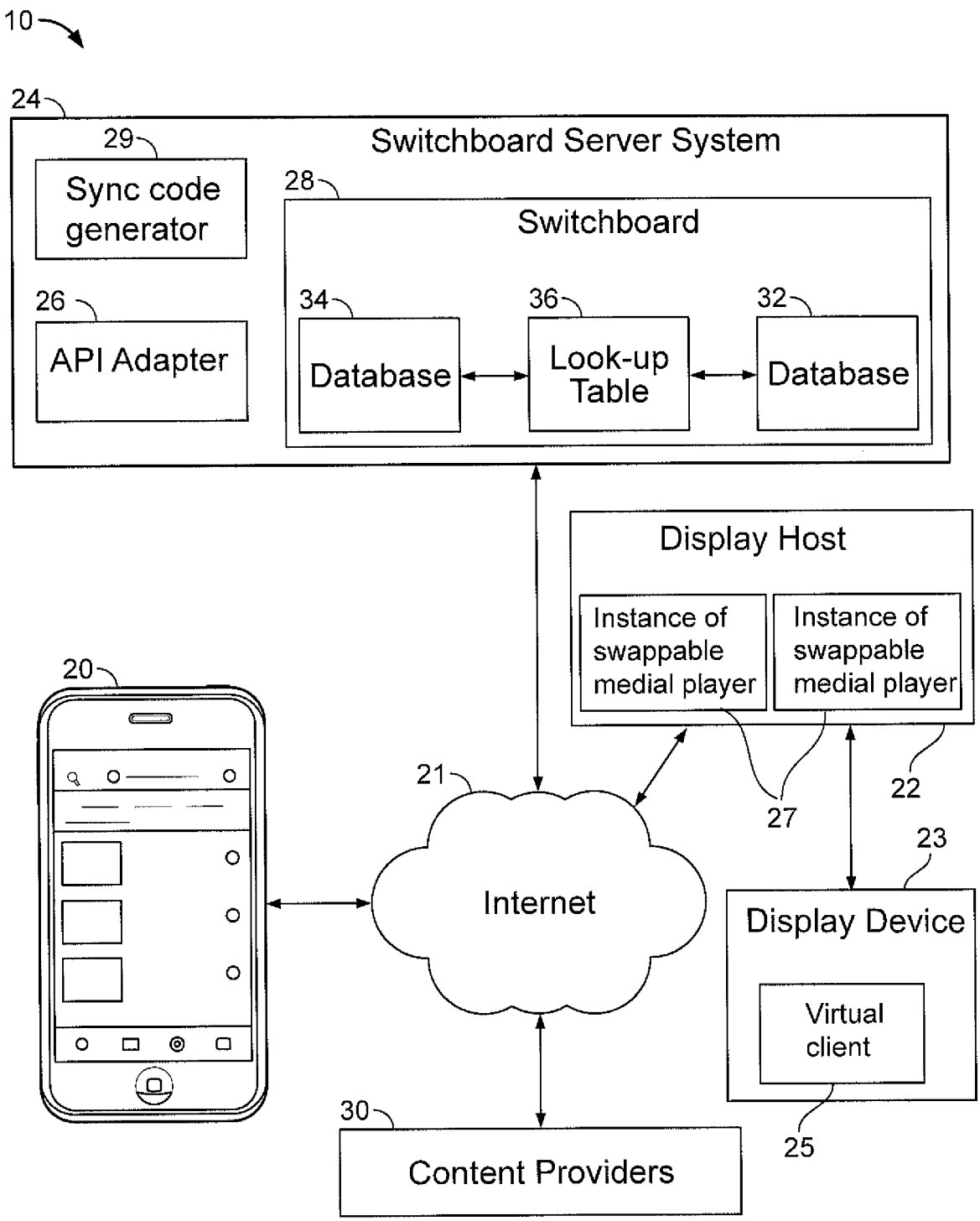

10
24
Switchboard Server System
29
Sync code generator
28
Switchboard
26
API Adapter
34
Database
36
Look-up Table
32
Database
Display Host
Instance of swappable medial player
Instance of swappable medial player
20
21
27
22
23
Internet
Display Device
Virtual client
25
30
Content Providers

FIG. 1

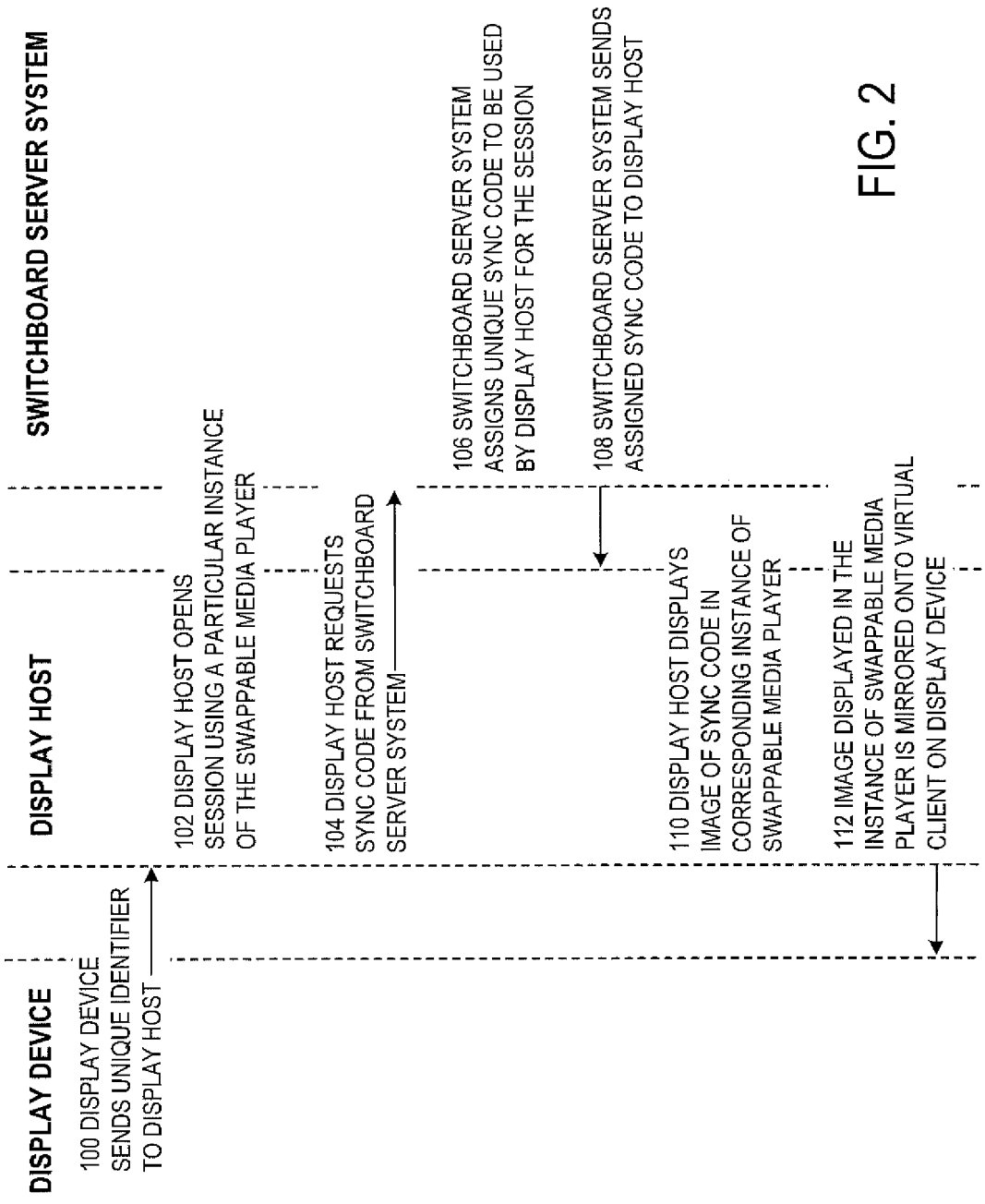

DISPLAY DEVICE
DISPLAY HOST
SWITCHBOARD SERVER SYSTEM
100 DISPLAY DEVICE SENDS UNIQUE IDENTIFIER TO DISPLAY HOST
102 DISPLAY HOST OPENS SESSION USING A PARTICULAR INSTANCE OF THE SWAPPABLE MEDIA PLAYER
104 DISPLAY HOST REQUESTS SYNC CODE FROM SWITCHBOARD SERVER SYSTEM
106 SWITCHBOARD SERVER SYSTEM ASSIGNS UNIQUE SYNC CODE TO BE USED BY DISPLAY HOST FOR THE SESSION
108 SWITCHBOARD SERVER SYSTEM SENDS ASSIGNED SYNC CODE TO DISPLAY HOST
110 DISPLAY HOST DISPLAYS IMAGE OF SYNC CODE IN CORRESPONDING INSTANCE OF SWAPPABLE MEDIA PLAYER
112 IMAGE DISPLAYED IN THE INSTANCE OF SWAPPABLE MEDIA PLAYER IS MIRRORED ONTO VIRTUAL CLIENT ON DISPLAY DEVICE

FIG. 2

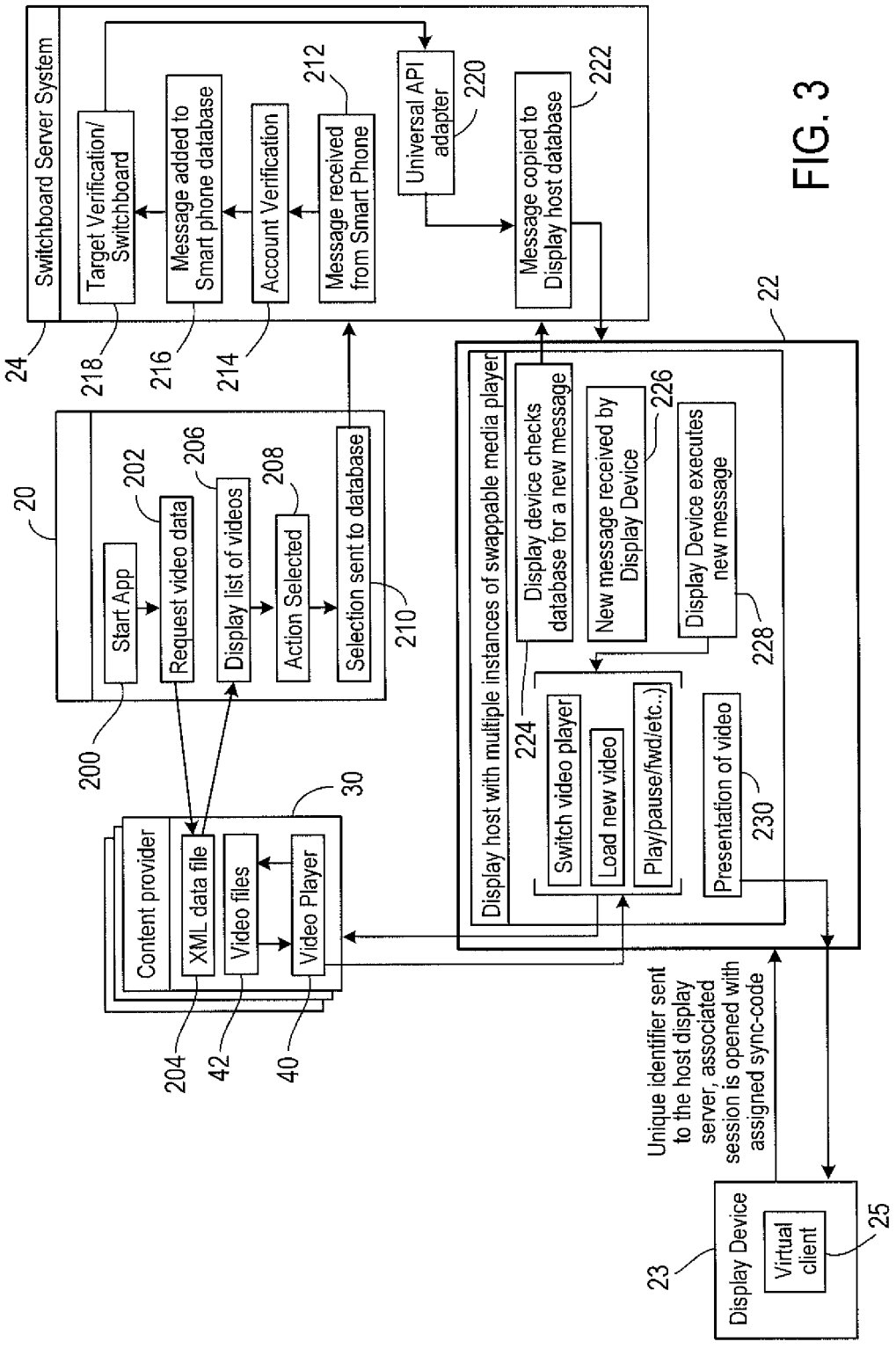

Switchboard Server System
Target Verification/ Switchboard
Message added to Smart phone database
Account Verification
Message received from Smart Phone
Universal API adapter
Message copied to Display host database
24
218
216
214
212
220
222
20
Start App
Request video data
Display list of videos
Action Selected
Selection sent to database
202
206
208
210
200
Content provider
XML data file
Video files
Video Player
30
204
42
40
22
Display host with multiple instances of swappable media player
Display device checks database for a new message
New message received by Display Device
Display Device executes new message
224
226
228
Switch video player
Load new video
Play/pause/fwd/etc..)
Presentation of video
230
Unique identifier sent to the host display server, associated session is opened with assigned sync-code
Display Device
Virtual client
23
25

FIG. 3

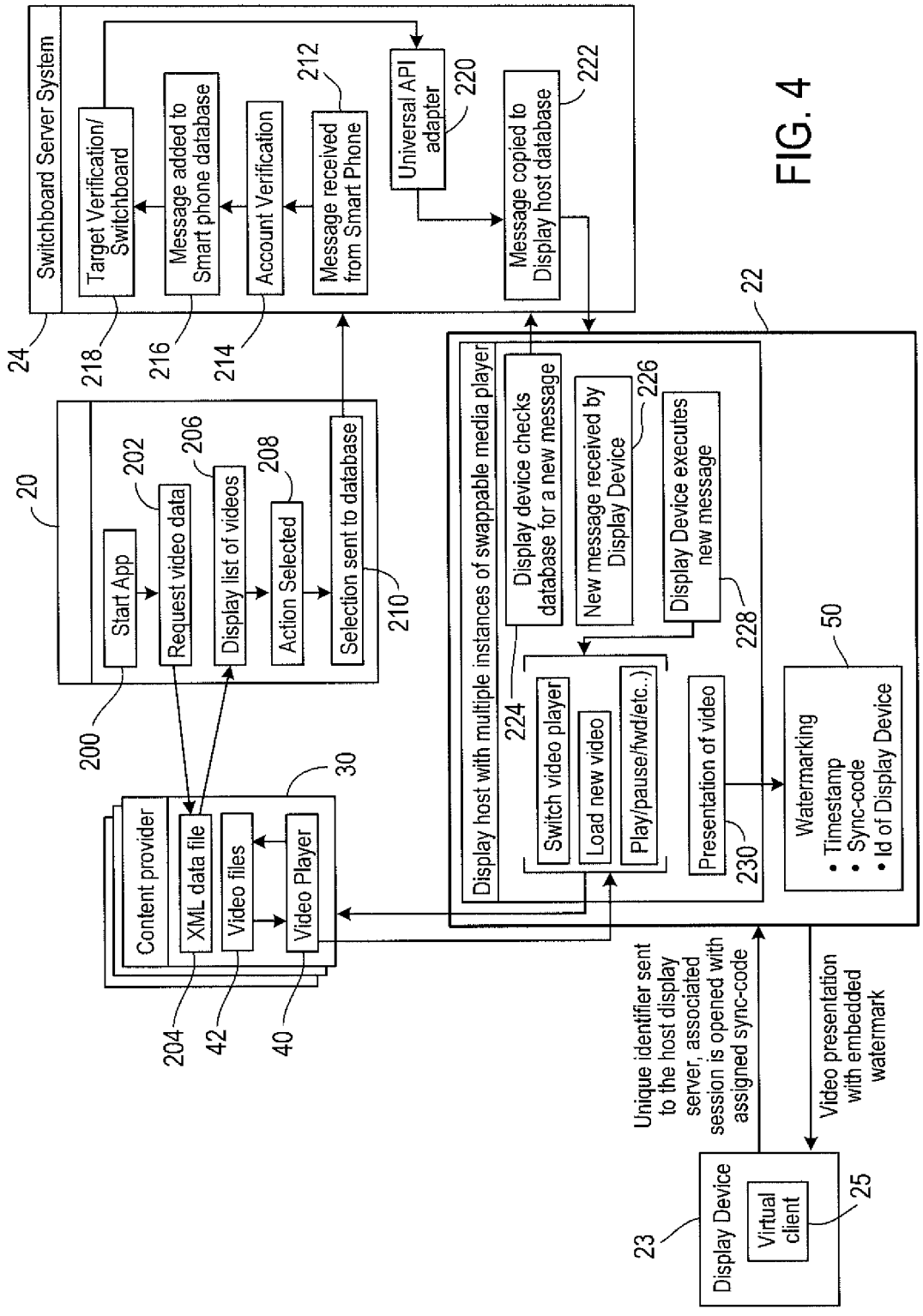

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Display host with multiple instances of swappable media player
Display device checks database for a new message
New message received by Display Device
Display Device executes new message
224
226
228
Switch video player
Load new video
Play/pause/fwd/etc..)
Presentation of video
230
Watermarking
• Timestamp
• Sync-code
• Id of Display Device
50
Unique identifier sent to the host display server, associated session is opened with assigned sync-code
Video presentation with embedded watermark
Display Device
Virtual client
23
25

FIG. 4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : David Strober
Filed : June 25, 2012
Art Unit :
Examiner :

Title : VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the references listed on the enclosed PTO-1449 form.

Under 35 USC §120, this application relies on the earlier filing date of application serial number 13/157,821, filed on June 10, 2011. All of the cited references were submitted to and/or cited by the Office in the prior application and, therefore, copies are not provided in this application.

This statement is being filed with the application. Please apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: June 25, 2012

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

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Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 30160-0005001	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	Applicant David Strober	
	Filing Date June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	7058356	06/06/2006	Slotznick			
	2	7835505	11/16/2010	Toyama et al.			
	3	7849485	12/07/2010	Paik et al.			
	4	2006/0083194	04/20/2006	Dhrimaj et al.			
	5	2006/0203758	09/14/2006	King Tee et al.			
	6	2007/0202923	08/30/2007	Jung et al.			
	7	2008/0155600	06/26/2008	Klappert et al.			
	8	2009/0228919	09/10/2009	Zott et al.			
	9	2010/0137028	06/03/2010	Farris et al.			
	10	2010/0205628	08/12/2010	Davis et al.			
	11	2011/0030020	02/03/2011	Halttunen			
	12	2002/0075332 A1	06/2002	Geilfuss et al.			
	13	2002/0120666 A1	08/2002	Landsman et al.			
	14	2002/0129102 A1	09/2002	Landsman et al.			
	15	2002/0133518 A1	09/2002	Landsman et al.			
	16	2002/0198778 a1	12/2002	Landsman et al.			
	17	2003/0004804 a1	01/2003	Landsman et al.			
	18	2003/0005000 a1	01/2003	Landsman et al.			
	19	2003/0018885 a1	01/2003	Landsman et al			
	20	2003/0023488 a1	01/2003	Landsman et al			
	21	2003/0028565 a1	02/2003	Landsman et al			
	22	2003/0193520	10/2003	Oetzel, Kenneth G.			
	23	2004/0088728 a1	05/2004	Shimizu, Seiya			
	24	2005/0144305	06/2005	Fegan et al.			

Examiner Signature	Date Considered
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	Filing Date June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	25	2006/0098624 a1	05/2006	Morgan et al.			
	26	2006/0101098 a1	05/2006	Morgan et al.			
	27	2007/0094408 a1	04/2007	Gundla et al.			
	28	2008/0008439 a1	01/2008	Liu et al.			
	29	2008/0028037 a1	01/2008	Moyer et al.			
	30	7,330,875 b1	02/2008	Parasnis et al.			
	31	2008/0126943 a1	05/2008	Parasnis et al.			
	32	7,424,718 b2	09/2008	Dutton, Faron			
	33	2008/0267369 a1	10/2008	Parlamas et al.			
	34	2008/0270881 a1	10/2008	Meyer et al.			
	35	7,440,972 b2	10/2008	Oetzel, Kenneth G.			
	36	7,769827 b2	08/2010	Girouard et al.			
	37	2010/0265939 a1	10/2010	Parlamas et al.			
	38	2010/0281042 a1	11/2010	Windes et al.			
	39	2011/0060998 a1	03/2011	Schwartz et al.			
	40	2011/0090898	04/2011	Patel et al.			
	41	2011/0107227 a1	05/2011	Rempell et al.			
	42	2011/0138354 a1	06/2011	Hertenstein et al.			
	43	2011/0214148 a1	09/2011	Gossweiler et al.			
	44	2011/0231265 a1	09/2011	Brown et al.			
	45	2011/0231566 a1	09/2011	Gelter et al.			
	46	2011/0296465	12/1/2011	Krishnan et al.			

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(37 CFR §1.98(b))	Filing Date June 25, 2012	Group Art Unit

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	47	CN101534449	09/16/2009	China				
	48	CN101577650	11/11/2009	China				
	49	CN101778198	07/14/2010	China				
	50	CN101815073	08/25/2010	China				
	51							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	52	Hachman, M., "Snapstick's Media Streaming App/Box: Hands On," www.pcmag.com/article2/0,2817,2375455,00.asp, 2 pages, (January 8, 2011).
	53	Dolcourt, J., CES: Snapstick takes on Apple TV, Google TV," http://news.cnet.com/8301-17938_105-20025100-1.html, 3 pages, (December 9, 2010).
	54	Shaivitz, M., "The Web to Your TV, With a Flick of a Wrist? Slapstick Says Yes," http://techcocktail.com/the-web-to-our-tv-with-a-flick-of-a-wrist-slapstick-says-yes-2010-12, 2 pages, (December 10, 2010).
	55	Snapstick – Home, "Snapstick," http://www.snapstick.com/, 2 pages, printed on 3/2/2011.
	56	Paul, I., Hands On: YouTube Leanback, PCWORLD, http://www.pcworld.com/article/200769/hands_on_youtube_leanback.html, 3 pages, (July 9, 2010).
	57	Using AirPlay, Article HT4437, http://support.apple.com/kb/HT4437, 3 pages, (April 18, 2011).
	58	Cheng, J., "Stream AirPlay video to regular TV? Apple might make it happen," http://arstechnica.com/apple/news/2011/03/stream-airplay-video-to-a-regular-tv-apple-migh..., 1 page, printed on 6/7/2011.
	59	"Using the Play To feature to stream media," http://windows.microsoft.com/en-US/windows7/using-the-play-to-feature-to-stream-media, 3 pages, printed on 6/7/2011.
	60	"YouTube – Leanback," http://www.youtube.com/t/leanback, 1 page, printed on 6/7/2011.
	61	"Yahoo!7 TV Guide for iPhone, iPod touch and iPad on the iTunes App Store," http://itunes.apple.com/au/app/yahoo-7-tv-guide/id424719927mt=8, 2 pages, printed on 6/7/2011.
	62	Hu, C., et al., "Mobile Media Content Sharing in UPnP-Based Home Network Environment," Journal of Information Science and Engineering 24, 1753-1769. (2008).
	63	Fallahkhair, S., et al., "Dual Device User interface Design for Ubiquitous Language Learning: Mobile Phone and Interactive Television (iTV)," Proceedings of the 2005 IEEE Int'l Workshop on Wireless an Mobile Technologies in Education, 8 pages, 2005.
	64	Ask Search Internet Search, session identifier random, printed on 11/19/11.
	65	Webopedia computer dictionary, session cookie, printed on 11/19/11.
	66	Webopedia computer dictionary, web identifier, printed on 11/19/11.

Examiner Signature	Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Filing Date June 25, 2012	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	67	Webopedia computer dictionary, user session, printed on 11/19/11.
	68	www.vbulletin.com, Best way to generate Random, Unique ID's, printed on 11/19/11.
	69	www.vbulletin.com, Best way to generate Random, Unique ID's, Internet Archive Wayback Machine, January 16, 2009.
	70	Official communication from the USPTO in Serial No. 13/245,001, dated December 8, 2011.
	71	U.S. Application No. 13/245,001, filed on September 26, 2011.

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Disclosure Form (PTO-1449)

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Samuel Borodach/Kim McKasty
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	95	95
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125
Pages:				
Claims:				
Claims in excess of 20	2202	5	30	150
Independent claims in excess of 3	2201	1	125	125
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**805**

Electronic Acknowledgement Receipt	
EFS ID:	13100007
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Brenda Jurgens
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	25-JUN-2012
Filing Date:	
Time Stamp:	18:28:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$805
RAM confirmation Number	5932
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Application Data Sheet	ads.pdf	1031576 f7d405251dee75107ab8ce19e11c01eb36260305	no	4
Warnings:					
Information:					
2	Transmittal of New Application	paptransmittal.pdf	89273 2a139d32d32d53e6a5b4c8be634c7d0ba7b275eb	no	2
Warnings:					
Information:					
3		appwfigs.pdf	910274 785cb8dbdc9a7ddb69ca74481cee98d12147bf20	yes	29

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	17
	Claims	18	24
	Abstract	25	25
	Drawings-only black and white line drawings	26	29

Warnings:					
Information:					
4		idsw1449.pdf	197328 c52e68710023b427c638fbc4052c552c2f276bde	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	5

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	38418 eedbfe1c5a8a860acc88cd0248eb224d806c4a43	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	2266869	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30160-0005001
	Application Number	
Title of Invention	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1 [Remove]

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	David		Strober	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Rye	State/Province	NY	Country of Residence i	US

Citizenship under 37 CFR 1.41(b) i: US

Mailing Address of Applicant:

Address 1	6 Davis Avenue		
Address 2	#B22		
City	Rye	State/Province	NY
Postal Code	10580	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. [Add]

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	26211		
Email Address	apsi@fr.com	[Add Email]	[Remove Email]

Application Information:

Title of the Invention	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER		
Attorney Docket Number	30160-0005001	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30160-0005001
	Application Number	
Title of Invention	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	26211		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation in part of	13157821	2011-06-10
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13157821	non provisional of	61477998	2011-04-21

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country [i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			○ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30160-0005001
	Application Number	
Title of Invention	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1 Remove

If the Assignee is an Organization check here. ☒			
Organization Name	Touchstream Technologies, Inc.		
Mailing Address Information:			
Address 1	8 Broadway		
Address 2			
City	Valhalla	**State/Province**	NY
Country [i]	US	Postal Code	10595
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button. Add

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Samuel Borodach/			Date (YYYY-MM-DD)	2012-06-25
First Name	Samuel	Last Name	Borodach	Registration Number	38388

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/532,546	06/25/2012	2447	805	30160-0005001	25	4

CONFIRMATION NO. 9012

26211
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

FILING RECEIPT

OC000000055240275

Date Mailed: 07/12/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

David Strober, Rye, NY;

Assignment For Published Patent Application

TOUCHSTREAM TECHNOLOGIES, INC., Valhalla, NY

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CIP of 13/157,821 06/10/2011
which claims benefit of 61/477,998 04/21/2011

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 07/06/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/532,546**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Preliminary Class

709

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/532,546

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	95		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	310		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	125		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	25 minus 20 =	* 5	x 30 =	150	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1	x 125 =	125			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	805		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/532,546	06/25/2012	David Strober	30160-0005001

CONFIRMATION NO. 9012

26211
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

FORMALITIES LETTER

OC000000055240276

Date Mailed: 07/12/2012

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
  A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A replacement abstract not exceeding 150 words in length and commencing on a separate sheet in compliance with 37 CFR 1.72(b) and 37 CFR 1.121 is required.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of $**65** for a small entity in compliance with 37 CFR 1.27, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is $**65** for a small entity
- $**65** Surcharge.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/squreshi/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

To: PATDOCTC@fr.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26211

Jul 12, 2012 05:27:50 AM

Dear PAIR Customer:

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26211 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:
The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
13532546	APP.FILE.REC	07/12/2012	30160-0005001
	NTC.MISS.PRT	07/12/2012	30160-0005001

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER, the application of which:

[] is attached hereto.
[X] was filed on June 25, 2012 as Application Serial No. 13/532,546.
[] was described and claimed in PCT International Application No. _____ filed on _____ and as amended under PCT Article 19 on _____.

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim the benefit under Title 35, United States Code, §119(e)(1) of any United States provisional application(s) listed below:

U.S. Serial No.	Filing Date	Status
61/477,998	April 21, 2011	

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose all information I know to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56(a) which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S. Serial No.	Filing Date	Status
13/157,821	June 10, 2011	Pending

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

Country	Application No.	Filing Date	Priority Claimed
			[] Yes [] No
			[] Yes [] No

I hereby appoint all registered practitioners associated with **PTO Customer Number 26211** to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Direct all telephone calls to SAMUEL BORODACH at telephone number (212) 765-5070.

Combined Declaration and Power of Attorney

Direct all correspondence to the following:

26211
PTO Customer Number

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor: DAVID STROBER

Inventor's Signature: _____ Date: 10/1/12

Residence Address: Rye, NY

Citizenship: U.S.

Post Office Address: 6 Davis Avenue B22
Rye, NY 10580

30703641.doc

ABSTRACT OF THE DISCLOSURE

A system for presenting content includes a display device storing a virtual client. A display host is operable to execute multiple instances of a browser each of which operates as a swappable media player that is operable to retrieve and load any of a plurality of different media players needed to play specified content. The display host is operable to perform operations including receiving from a switchboard server system a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player, retrieving and loading the specified media player from a content provider using the first instance of the swappable media player, playing the particular content in a first session using the specified media player, and causing a presentation of the content to be mirrored onto the virtual client residing on the display device.

30723367.doc

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Samuel Borodach/Paula Romeo
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Late filing fee for oath or declaration	2051	1	65	65
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	2251	1	75	75
Miscellaneous:				
			Total in USD ($)	**140**

Electronic Acknowledgement Receipt	
EFS ID:	13974215
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Paula Romeo
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	12-OCT-2012
Filing Date:	25-JUN-2012
Time Stamp:	15:29:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$140
RAM confirmation Number	2126
Deposit Account	061050
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Extension of Time	301600005001extension.pdf	324553 6acc3e19f434c1e6ec0eb43302cd08284554 38a2	no	1
Warnings:					
Information:					
2		301600005001responsemissing parts.pdf	1697635 6d946a1f526455451652e4356aba923a127 74c0a	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Applicant Response to Pre-Exam Formalities Notice	1	2
	Oath or Declaration filed	3	4
	Abstract	5	5

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32503 cb4c801aec4bb182067b704d36edc33ff58 a8152	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2054691		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: David Strober	Art Unit	:
Serial No.	: 13/532,546	Examiner	:
Filed	: June 25, 2012	Conf. No.	: 9012
Title	: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR ONE-MONTH EXTENSION OF TIME UNDER 37 C.F.R. §1.136

Please extend the period for response to the action dated July 12, 2012, for one month to and including October 12, 2012.

The fees in the amount of $75 are being paid concurrently herewith. In addition, please apply any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: October 12, 2012

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

30723370.doc

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: David Strober	Art Unit	:
Serial No.	: 13/532,546	Examiner	:
Filed	: June 25, 2012	Conf. No.	: 9012

Title : VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

MAIL STOP MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

In response to the Notice to File Missing Parts of Application under 37 CFR §1.53(b) mailed July 12, 2012 (copy enclosed), applicant claims small entity status (see 37 CFR §1.27) and submits herewith the following:

☒ Payment of the surcharge of $65 for late filing of the basic filing fee and/or declaration;

☒ A Combined Declaration and Power of Attorney in compliance with 37 CFR §1.63; and

☒ A replacement abstract of no more than 150 words.

The fees in the amount of $65 are being paid concurrently herewith. In addition, please apply any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number. It is understood that this perfects the application and no additional papers or filing fees are required.

Respectfully submitted,

Date: October 12, 2012

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945
30723350.doc

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/532,546

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	98		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	310		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	125		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	25 minus 20 =	* 5	x 31 =	155	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1	x 125 =	125			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	813		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/532,546	06/25/2012	2447	870	30160-0005001	25	4

CONFIRMATION NO. 9012

UPDATED FILING RECEIPT

26211
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

OC000000057193436

Date Mailed: 10/23/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)
David Strober, Rye, NY;

Applicant(s)
David Strober, Rye, NY;

Assignment For Published Patent Application
TOUCHSTREAM TECHNOLOGIES, INC., Valhalla, NY

Power of Attorney: The patent practitioners associated with Customer Number 26211

Domestic Priority data as claimed by applicant
This application is a CIP of 13/157,821 06/10/2011
which claims benefit of 61/477,998 04/21/2011

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 07/06/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/532,546**

Projected Publication Date: 01/31/2013

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Preliminary Class

709

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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To: PATDOCTC@fr.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26211

Oct 23, 2012 05:22:56 AM

Dear PAIR Customer:

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26211 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	APP.FILE.REC	10/23/2012	30160-0005001

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/532,546	06/25/2012	David Strober	30160-0005001

CONFIRMATION NO. 9012

26211
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

PUBLICATION NOTICE

OC000000058987747

Title:VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Publication No.US-2013-0031478-A1
Publication Date:01/31/2013

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

To: PATDOCTC@fr.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26211

Feb 01, 2013 05:30:50 AM

Dear PAIR Customer:

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26211 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	NTC.PUB	01/31/2013	30160-0005001

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

Substitute Disclosure Form	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 30160-0005001	Application No. 13/532,546
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant David Strober	
(37 CFR §1.98(b))		Filing Date June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	US 2010/0027974 A1	2010-02-04	Ansari			
	2	US 2005/0034151 A1	2005-02-10	Abramson			
	3	US 2007/0288715 A1	2007-12-13	Boswell et al.			
	4	US 2008/0077526 A1	2008-03-27	Arumugam			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Disclosure Form

Electronic Acknowledgement Receipt	
EFS ID:	15739126
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Maryann White
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	09-MAY-2013
Filing Date:	25-JUN-2012
Time Stamp:	18:36:43
Application Type:	Utility under 35 USC 111(a)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: David Strober	Art Unit	:
Serial No.	: 13/532,546	Examiner	:
Filed	: June 25, 2012	Conf. No.	: 9012
Title	: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER		

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the references listed on the enclosed PTO-1449 form. Copies of the listed U.S. patents and patent application publications will be provided on request.

This statement is being filed before the receipt of a first Office Action on the merits. Please apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: May 9, 2013

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

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Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	30160-0005001	13/532,546
	Applicant: David Strober	
	Filing Date: June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	2009/0172780	Jul 2, 2009	Sukeda et al.			
	2	2012/0059875	Mar 8, 2012	Clark			
	3	2011/0131607	Jun 2, 2011	Thomas et al.			
	4	2009/0108057	Apr 30, 2009	Mu et al.			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	5	2175607 A1	Apr 14, 2010	Europe				

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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(71) Applicant: **NEC Corporation**
Minato-ku
Tokyo 108-8001 (JP)

(72) Inventor: **Fok Ah Chuen, Frederic**
92100, BOULOGNE-BILLANCOURT (FR)

(74) Representative: **Ilgart, Jean-Christophe et al**
Brevalex
3, rue du Docteur Lancereaux
75008 Paris (FR)

(54) Method for establishing a thin client session

(57) The invention concerns a method for establishing a Thin Client session between a Thin Client device (2) and a Thin Client Server (4) exchanging Handshaking and initialization messages during a session negotiation above a SIP-based framework, wherein said Thin Client device (2) and said Thin Client Server (4) exchange additional information representative of the Thin Client context (30,32) enabling the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session.

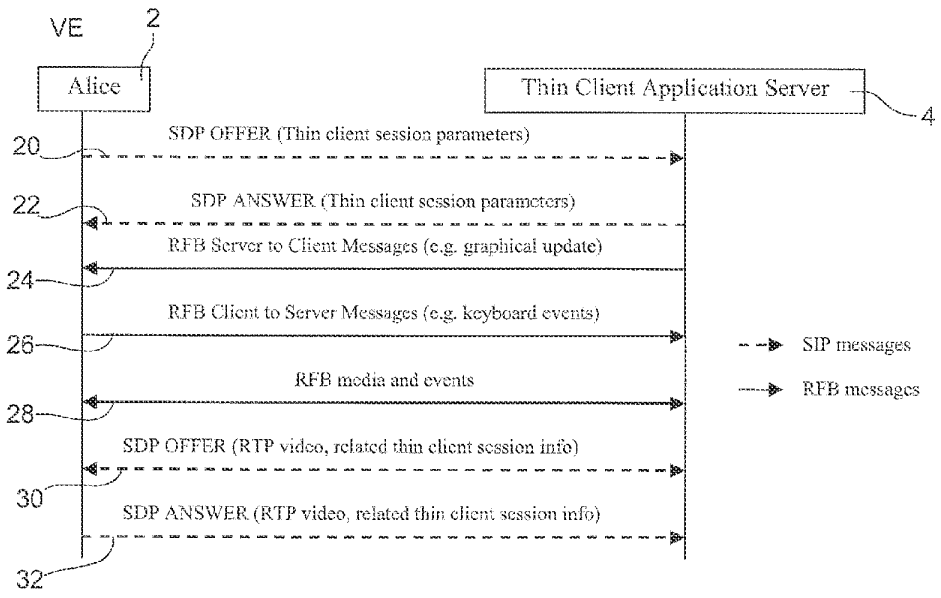


Fig 3

EP 2 175 607 A1

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Description

TECHNICAL DOMAIN

[0001] The invention pertains to telecommunication field and relates to a new session description to initiate a thin client system working above a SIP-based framework such as IMS.

[0002] More specifically, the invention concerns a method for improving the establishment of a Thin Client connection between a thin client device and a thin client server exchanging handshaking and initialization messages during a session negotiation above a Session Initiation Protocol (SIP)-based framework.

[0003] The invention concerns also a thin client device and thin client server adapted for implementing said method.

STATE OF PRIOR ART

[0004] The Session Description Protocol (SDP) [IETF RFC4566] is intended for describing multimedia sessions for the purposes of session announcement, session invitation, and other forms of multimedia session initiation. SDP is most commonly used for describing media streams that are transported over the Real-Time Transport Protocol (RTP) [IETF RFC3550], using the profiles for audio and video media defined in RTP Profile for Audio and Video Conferences with Minimal Control [IETF RFC3551]. Besides the MIME Type registration of RTP Payload Formats [IETF RFC3555] defines the RTP payload format for Audio and Video Conferences as MIME subtypes.

[0005] However, SDP can be used to describe other media profile than Audio and Video that can be transported over Real-time Transport Protocol (RTP). SDP is commonly carried in Session Initiation Protocol (SIP) [IETF RFC3261] messages in order to agree on a common media description among the endpoints. An Offer/Answer Model with Session Description Protocol (SDP) [IETF RFC3264] defines a framework by which two endpoints can exchange SDP media descriptions and come to an agreement as to which media streams should be used, along with the media related parameters.

[0006] In the typical case of a thin client session, it might be desirable to configure and establish media streams for remote desktop/application display as well as for control events over a packet or circuit switched bearer connection. Such session is usually achieved using thin client protocols such as Virtual Network Computing (VNC) based upon Remote Frame Buffer (RFB) Protocol or Remote Desktop Protocol (RDP), but also Independent Computing Architecture protocol (ICA), X11 protocol. Besides, pixels could even be streamed using Real-time Transport Protocol (RTP) and as such graphics primitives would be carried in RTP packets.

[0007] In the context of mobility, next generation network, and rich media application, it is important to note that Quality of Service (QoS), adaptivity, and authentication are key points and inspecting the media format is important as well for the resource reservation process and for the operator to control the radio bearer traffic as well as the IP flows (e.g. to apply appropriate resource allocation based on a given policy, user subscription, or service profile). Besides IP Multimedia Subsystem (IMS) - based on SIP and providing an overlay network above a core network - as defined by the Third Generation Partnership Project [3GPP TS 23.228] is also capable to interconnect with a Policy and Charging Control Architecture [3GPP TS 23.203] including the ability to authorize QoS resources.

[0008] Since applications range from simple text and/or graphic based application to audio and/or video based application that can suffer from network delays and high gigue ratio, a way to adapt to different types of traffic within a remote desktop control session is required.

[0009] From a Service aspect it is foreseen to combine a remote desktop access with other services such as phone call establishment or push-to-x services. By using SIP it becomes possible to extend traditional remote desktop control use cases.

[0010] From a QoS aspect it is also desirable to enable QoS control over the thin client media description. For instance Graphics and Events type of media can be allocated a predefined QoS profile, they could even be streamed over a packet or circuit switched bearer connection. Besides when a thin client device is moving, the access network environment may change so it might be desirable to re-allocate the appropriate quality settings (resource allocation, renegotiation of media parameters such as codecs, transport protocol, etc...).

[0011] From an authentication perspective, however, the well known thin client protocols use their own set of rules and mechanisms (i.e. a built-in negotiation) to authenticate and establish a connection between a thin client device and a thin client server.

[0012] The techniques of the prior art do not provide means to mix and adapt multimedia transfers such as audio/video with/to remote desktop control capabilities above a SIP framework.

[0013] The invention aims at adding remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, ...) pertaining to a session of remote desktop control.

PRESENTATION OF THE INVENTION

[0014] The object of the invention is achieved by a method for establishing a thin client connection between a thin client device and a thin client server exchanging handshaking and initialization messages during a Session negotiation above a Session Initiation Protocol (SIP)-based framework.

[0015] According to the invention, said Thin Client device and said Thin Client Server exchange additional in-

formation representative of the Thin Client context to enable the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session.

[0016] The additional information allows both multimedia transfers and remote desktop control capabilities and may consists of Thin Client information formatted in SDP (Session Description Protocol) offer/answer messages or XML-based offer/answer messages embedded in the body of SIP messages.

[0017] The remote desktop control capabilities comprise the function consisting of dynamically directing or redirecting graphical updates of at least one remote application from a first device onto a second device.

[0018] Said first device may be a mobile communication device and said second device may be a fixed communication device.

[0019] According to another aspect of the invention, said remote desktop control capabilities further comprise the function consisting of transferring uplink events, eventually on a separate radio bearer and/or separate IP connection than the one used for the downlink graphical updates. The radio bearer is a Layer 2 service used to transfer user data between User Equipment and radio access network as per 3GPP definition. A separate IP connection can be achieved by allocating different port number or through IP tunneling mechanisms without or with encryption (i.e. IPSec).

[0020] The remote desktop control capabilities further comprise function consisting of associating at least one audio/video stream to a session of remote desktop control (i.e. a thin client session).

[0021] In one embodiment of the invention, said additional information comprises remote display framebuffer coordinates and size corresponding to said audio/video streams associated to said thin client session. Said framebuffer coordinates and size enable to appropriately position the video rendering above the remote desktop display on the local screen of the device.

[0022] Moreover, said additional information allow sending a client request (FramebufferForgetRequest) instructing the server that a specific area on the framebuffer does not require update.

[0023] In another embodiment of the invention said additional information comprise window-id attribute and allow sending a client request (WindowUpdate) instructing a server that a graphical area identified by said window-id attribute has been resized, moved or both.

[0024] Thanks to the method according to the invention, it is possible to:

- allow the combination of services
- enable control of the display redirection of a remote application from a mobile device,
- enable Quality of Service as well as accurate session control
- enable the use a uniform negotiation to avoid a wide range of specific thin client authentication and media negotiation mechanisms.

[0025] Thanks to the invention, the negotiation steps of known protocols such as RFB or ITU T.120 (Data Protocol for multimedia conferencing) are partially or totally replaced by the SDP-based negotiation and new information is provided to allow mixing media traffic for a remote display connection. Negotiating such a thin client connection using the SDP and SIP framework provides flexibility in that the signaling and the control of the thin client session is distinguished from the screen update strategy applied by the previously cited well known thin client protocols. Advantageously the thin client session can benefits from session redirection feature and other well known SIP and SDP extensions.

[0026] In addition the thin client connection could be accurately tracked and controlled within the IP Multimedia Subsystem [3GPP TS 23.228] that is standardized by the Third Generation Partnership Project.

[0027] In some typical use cases, it might be desirable to send the uplinks user events such as the well known key and mouse events in another radio bearer and/or IP connection than the one in which are sent the graphical updates. By doing so Quality of Service can be applied and a strategy can be made as to regulate the responsiveness of the system, for instance by guaranteeing very high priority to the events bearer. Furthermore, in a mobility context, a mobile device might move from a wireless network area where a high bandwidth packet-switched bearer is available to another area where a Wireless Local Area Network (WLAN) connection with lower bandwidth is available. Therefore, the graphics media may suffer from delay and bandwidth variations. It is therefore desirable to renegotiate the session parameters and this can be done by using SIP and SDP offer/answer model and IMS mobility management procedures.

[0028] By using the proposed invention, it is possible to establish an uplink bearer to send user events and a downlink bearer to receive graphical updates. At the Thin Client device it is also possible to define alternative transport protocol to prepare the viewer to adapt to the viewer transmission mode (e.g. To switch from RFB/VNC over TCP protocol to RTP protocol) to enable some portion of screen display where a film is played and to be streamed using RTP while the background is just periodically updated using the RFB protocol. If a viewer does not support an alternative mechanism, it will just not be accepted during the negotiation phase.

[0029] The method according to the invention can be implemented with any other SIP and SDP extensions (RFC3108, RFC4975, draft-garcia-mmusic-sdp-cs-01,) without departing from the scope of present invention The method according to the invention is implemented by a thin client device and a thin client server comprising means for exchanging with said thin client server additional information representative of the Thin Client context to enable the combination and adaptive transfer of multiple media streams in at least one remote application

display during said thin client session, said additional information consisting of SDP (Session Description Protocol) offer/answer messages Or XML-based offer/answer messages embedded in the body of SIP messages.

[0030] Said thin client device may be a Mobile User Equipment comprising an interface to enable a user to register interest in media redirection in order to get notified upon reception of said media redirection, and to send a redirection answer.

[0031] Moreover, said Mobile User Equipment is adapted for establishing a separate IP connection for uplink events for triggering the allocation of separate radio bearer for transferring said uplink events on a separate radio bearer than the one used for downlink graphical updates, and for mapping the rendering of audio/video stream(s) to said remote display framebuffer on its screen. Said Mobile User Equipment comprises an interface to enable a user to register interest in media redirection in order to get notified upon reception of said media redirection, and to send a redirection answer.

[0032] The invention also concerns a Thin Client Server adapted for implementing the method according to the invention for establishing a Thin Client session with a Thin Client device, said Thin Client Server comprises means for exchanging with said Thin Client device additional information representative of the Thin Client context to enable the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session.

[0033] The invention allows an extension of the media types defined in ongoing work [draft-garcia-mmusic-sdp-collaboration-00] and defines new thin client media types and attributes.

[0034] To do so, the invention proposes to define the Control-Event media type. The existing "Control" media type is used to specify an additional conference control channel for the session. We need to use a different media type to precise a control channel for user events such as pointer or key events.

[0035] Finally the invention provides a way to mix multimedia streams with Thin Client remote display streams. The "Grouping of Media Lines in SDP" [IETF RFC3388] provides means to group media streams to express how different media streams within a session relate to each other, more particularly for the purpose of Lip synchronization or Flow identification. It should be noted that the grouping mechanisms depends on the semantic of the "a=group" session-level attribute. So we provide a new semantic for the thin client ("TC") context.

[0036] The implementation will be illustrated based on RFB protocol.

BRIEF DESCRIPTION OF THE FIGURES

[0037] The forgoing summary, as well as the following detailed description, will be better understood when read in conjunction with the appended figures illustrating an exemplary embodiment of the invention in which:

- Figure 1 schematically illustrates an IMS-based architecture;
- Figure 2 illustrates a thin client viewer showing a remote desktop consisting of several areas that can dynamically be adapted;
- Figure 3 illustrates a flow chart describing the steps of the method according to the invention
- Figure 4 schematically illustrates a an example of application display redirection according to the invention;

DESCRIPTION OF A DETAILED EMBODIMENT OF THE INVENTION

[0038] The invention will be described by reference to figure 1 illustrating an IMS architectural framework defined by the third generation partnership project [3GPP TS 23.228] for delivering IP multimedia services to a mobile device. The architecture comprises mobile user equipment 2 acting as a thin client device, a thin client server 4, a IMS Core System 6, a Policy Decision Function module 8 (PDF), a 3GPP Packet Switch (PS) Core Network 10. The IMS Core System 6 mainly comprises a Call Session Control Functions (CSCF) including Proxy-CSCF (P-CSCF), Serving-CSCF (S-CSCF), and Interrogating-CSCF (I-CSCF). The CSCF provides session control for subscribers accessing services within the IM (IP Multimedia) Core System 6. In essence the CSCF is a SIP Server. It has responsibility for interacting with network databases such as the HSS for mobility and AAA (Access, Authorization and Accounting) Servers for security. These modules are required to process SIP signalling packets in the IMS.

[0039] IMS Application Servers execute services and interface with S-SCSF. Some interfaces are illustrated in figure 1, as defined in [3GPP 23.228]:

The ISC interface is used to exchange messages between CSCF and thin client server 4.

The Gm interface is used to exchange SIP-based information between UE 2 and CSCF.

The GQ interface is used to exchange information policy decision information between CSCF and Policy Decision Function (PDF).

The interface Cx is intended for the communication between CSCF and Home Subscription Server (HSS) and the interface Dx for finding the correct HSS in multi-HSS environment.

The interface Sh used by the thin client Server 4 for communicating information with the HSS or with SIP/OSA Service Capability Server (OSA/SCS).

The interface Go used to control and authorize the Quality of Service and exchange correlation information between IMS and the 3GPP Policy and Charging Control (PCC) Architecture [3GPP TS 23.203].

The interface Ut used for controlling the Application Server and is based on HTTP protocol.

[0040] When using the IMS SIP signaling protocol the Thin Client UE 2 can connect to the IMS Thin Client Application Server (TCAS) 4 as depicted in figure 1 by establishing a SIP session. During this process, the Thin Client UE 2 and the TCAS 4 can negotiate the QoS and media parameters. The UE 2 may also perform some configurations on this TCAS 4 through the Ut interface, for instance to configure the desktop environment. The pixels generated by the application are streamed to the UE 2 in an end-to-end manner via Ut* interface and video or audio media can be streamed to the UE 2 too.

[0041] The method according to the invention extends SDP to describe the thin client session, the associated media, and the remote control events. An alternative would be to provide said description using XML syntax as defined by the W3C Extensible Markup Language (XML) 1.0 (Fourth Edition).

[0042] More particularly, the method allows the association of at least one audio/video stream to a thin client connection negotiated using SIP signaling in such a way that audio and/or video IP flows can be added dynamically and adaptively to a SIP session of remote desktop control whose associated IP flows can be rendered through thin client protocol mechanisms like RFB.

[0043] The following description provides the syntax and semantics of the extensions required for providing a description of a Thin Client session in SDP.

[0044] According to SDP [IETF RFC4566], the connection data line in SDP has the following syntax:

c = <nettype> <addrtype> <connection-address>

[0045] Where <nettype> indicates the network type, <addrtype> indicates the address type, and the <connection-address> is the connection address, which is dependent on the address type.

[0046] Basically the SDP announcement consists of a session-level section followed by one or more media-level sections as described in SDP [IETF RFC2327]. Session-level information provides the default values so if the connection data line is present at the session-level it applies to the media-level section unless the connection data line is conveyed in a media description. Note that if the connection data line is present in all media, it is not required at the session level.

[0047] The media description starts with an "m=" line and continues to the next media description or end of the whole session description. The "m=" media line as defined in IETF RFC4566 is as follows

m=<media><port><transport><fmt list>

[0048] Where the <media> is the media type, <port> is transport port to which the media stream will be sent, <transport> is the transport protocol whose value is dependent on the "c=" fields, and <fmt list> represents media formats. For audio and video the media formats are normally media payload type as defined in the RTP Audio/Video Profile.

[0049] At the moment the media types are defined for audio, video, application, data and control.

[0050] Thin client media types.

[0051] We initially consider the Remote Frame Buffer (RFB) protocol that can be used to control the display updates and for which various encoding are available.

[0052] The media type can be specific to the thin client technology. The media types can be "application/rfb", "application/T120".

m=application <port> <transport> RFB.

[0053] We further focus on the Remote Frame Buffer protocol in this document.

[0054] Thin client control event media types.

[0055] In addition to the graphical updates of the remote display, it is also possible to establish a specific connection for uplink events. For this purpose, the media type "application/control-events" is defined and the media line is:

m = application <port> <transport> control-events.
RFB specific attributes.

[0056] The attribute version "v=" must be given and it refers to the RFB protocol version number.

a=v: <version_number>

[0057] Where the version_number can be "3.8" meaning that RFB protocol version 3.8 applies.

[0058] The client may specify a list of supported encoding types in priority order. The encoding type is indicated in the framebuffer update messages sent by the Thin Client Server. It can be requested by the client to the server in usual RFB specific "setEncoding" messages. The server may or may not use this indication and pixel data may always be sent in raw encoding if required.

[0059] The encoding scheme attributes is in the form:

a=encoding-scheme: <encoding scheme value>

[0060] Where the <encoding scheme value> can be "RAW", "COPYRECT", "RRE", "HEXTILE", "ZLRE", "CURSOR", "CORRE", "ZLIB", ...

[0061] The display number may also be specified. If it is not indicated, then a default port is allocated. Actually the RFB server default port number is usually equal to (5900 + display_number) where display_number usually range from 0 to 6 resulting in 6 possible display connections.

[0062] The display attribute is in the form:

a=dpy: <display_number>

[0063] In the case of RFB protocol, the following additional attributes are provided.

[0064] The client may indicate whether the session is shared or not. If not indicated, the session must not be shared.

a=shared

[0065] The server must indicate the framebuffer size:

a=framebuff-w: <the width value>
a=framebuff-h: <the height value>

[0066] The client may indicate the following attributes as a preference and the server must indicate those attributes.

- a=pixformat-bpp: <bit-per-pixel value>
- a=depth: <depth value>
- a=big-endian
- =true-color
- a=red-max: <red-max value>
- a=green-max: <green-max value>
- a=blue-max: <blue-max value>
- a=red-shift: <red-shift value>
- a=green-shift: <green-shift value>
- =blue-shift: <blue-shift value>

[0067] For the sake of interoperability, the client and server behavior regarding the understanding of those previous attributes is same as specified in RFB specification 3.8 except that the Handshaking messages and initialization messages are replaced by SDP offer/answer messages.

[0068] TC semantic.

[0069] A viewer application that receives a session description that contains "m" lines that are grouped together using the TC semantics MUST display and associate a remote desktop control protocol (e.g. RFB) with corresponding media streams like RTP audio/video streams.

a=group:TC

[0070] Then the media-level attribute "a=mid:" must be used in each media line that belongs to a group.

[0071] For appropriate rendering of the remote display, the media line(s) corresponding to RTP streams (e.g. for video transfer) indicate further display location that is relative to the remote display frame buffer coordinates and size. With this information the thin client device is aware of the location of where should be rendered the RTP video stream on the remote desktop framebuffer. The client can therefore adapt the framebuffer update strategy. Particularier in the case of RFB where framebuffer updates are client-driven, the polling intervals can be adjusted as well as which portion of the remote desktop display should be updated.

a=area-x: <x position value>
a=area-y: <y position value>
a=area-w: <width value>
a=area-h: <height value>
It may also indicate the win-id attribute
a=wind-id: <window identifier>

[0072] Such win-id must be unique within a user session for remote desktop control. Use of this id is further explained in the next section.

[0073] RFB protocol extensions for window specific management on the framebuffer

[0074] RFB graphical update strategy is a client-driven screen update. In RFB specification 3.8, the client can request the update of portion of the whole screen to save bandwidth.

[0075] By introduction of the combination of video traffic in addition to framebuffer updates, the client can receive and map a video onto a dedicated portion of the screen.

[0076] For instance on a limited screen device such as a mobile phone, the client may decide to resize the video buffer to fit the whole mobile device screen. In such a case the client stops refreshing the framebuffer used for the RFB framebuffer update messages. We will call this specific framebuffer "desktop framebuffer" (desktop FB).

[0077] In another foreseen use case, the client receives the graphical update of a media player opened in a dedicated window. Then the client may freely move the video on top of the remote desktop framebuffer locally on its device, and the player may be shown or hidden upon user request. The problem in this situation is that the window movement might need to be indicated to the server for appropriate rendering and screen display management, more particularly if the desktop is shared among multiple users. For instance a first user may control the desktop while other participants may only see the resulting actions of said first user.

[0078] In practice the RTP video stream will be received and handled on a separate framebuffer. By introducing the ability to associate a video media to remote desktop capabilities, and by adding the win-id information, the client is able to freely handle the video media rendering on its screen (performing a rotation, switch to fullscreen mode, etc...) while still being associated to the same user session. The Win-id does not necessarily refer to a window but can also refer to a graphical area though in practice it might be easier to implement it using a window, more particularly if said window is likely to be resized or moved. Two new client requests are then defined:

The FramebufferForgetRequest (message-type, window-id, x-position, y-position, width, height) that tells the server that a specific area on the framebuffer does not require update. This is likely to happen if this area is refreshed by another media stream (e.g. H263 encoded video transported over RTP).

The WindowUpdate (message-type, window-id, x-position, y-position, width, height) that tells the serv-

er that a received media stream corresponding to a window (or graphical area) opened on the server has been resized, moved, or both.

Those client requests must not be used if no window-id exists, i.e. if no independent media stream corresponding to a window is received.

[0079] This also require the server to send the attribute "a=win-id" to indicate whether the media stream received matches a window on the server. If not, the win-id attribute is set to zero and if the attribute is not present the client must not correlate the media stream to a window.

[0080] When the media stream does not relate to any windows on the remote server, the client must not resize or move the media on the framebuffer so the WindowUpdate must not be used. However, in a poll model (or client driven framebuffer update) the client may use the FramebufferForgetRequest message in order to inform the server not to update the area specified in the request. However, in a push model, this may not be required as the server should already know that this area is updated using another protocol and encoding.

[0081] When the media stream relates to a window on the remote server, the above client requests (FramebufferForgetRequest and WindowUpdate) are used to update the position of the window on the remote server. The window-id information in the FramebufferForgetRequest enables the client to modify the area indication for which the server will not send any framebuffer updates.

[0082] Figure 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated.

[0083] The area B is the area of the screen located at (x,y) position relative to area A (X, Y Base coordinates). It is also characterized by it width (w) and height (h) dimensions. The graphical output is streamed over Real Time Protocol (RTP) and encoded for instance using H263 codec.

[0084] Any user interaction on the area B can therefore be associated to the remote desktop (background) and pointer events from Area B can be sent to the remote server as if they were performed on Area

A. This can be used when the area B is locally resized or moved on the thin client device' screen without necessarily triggering window resizing and movement at the server.

[0085] Figure 3 illustrates a thin client connection establishment between a UE 2 acting as thin client device and a remote desktop PC acting as a thin client server 4.

[0086] The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection).

[0087] At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.

[0088] Upon reception of said SDP offer, the Desktop 4 determines that the UE 2 wishes to establish a thin client connection using RFB protocol, determines that RFB protocol and proposed attributes are acceptable based on the environment where the UE 2 is located and, at step 22, sends back a SDP Answer Message indicating the RFB and attributes are selected.

[0089] The UE 2 and the Desktop 4 agree the direction for the transfer of graphical updates and events. In addition, they identify that the thin client connection pertains to the ongoing session between them.

[0090] After the thin client connection parameters are agreed on both side, the Desktop 4 sends to the UE 2, at step 24, the graphical updates message while said UE 2 sends, at step 26, uplink keys and pointer events to the Desktop 4.

[0091] The Desktop 4 may refuse a connection and can thereby set the port number corresponding to the Graphic or Event Stream to zero, as specified in IETF RFC3264.

[0092] If some thin client parameters are unknown from the Desktop 4, the later silently ignores such parameters, as specified in IETF RFC4566.

[0093] At step 28, the UE 2 and the Desktop 4 exchange RFB media and events.

[0094] At step 30, the user opens a media player to view a video and the Desktop 4 sends a second SDP Offer that the UE 2 may or may not accept. Actually the Desktop 4 wishes to send the video, for example, over RTP and a renegotiation is triggered with the new SDP Offer including the video parameters information. Since the video output is generated by the desktop media player application, the thin client session identifier and the graphical position information is given so that the UE 2 can display the video stream at the right position. Therefore the video stream is combined to the ongoing thin client session.

[0095] At step 32, The UE 2 acknowledges the Offer and sends back an Answer. The desktop 4 adapts the display updates so that the area where the video is streamed is not updated via the thin client protocol.

[0096] Figure 4 illustrates an use of the method according to the invention in application display redirection.

[0097] This situation may occur, for example, when a user decides to redirect a video that he receives on mobile UE 2 to a TV 40 SIP-connected at a server, for in-

stance at the set-top-box or any other back-end SIP server, and reachable via its public address.

[0098] In this case, at step 42, the UE 2 connects to the remote desktop 4 through an IP access network for communicating with the remote desktop PC 4. This also relates to steps 20 22, 24, 26, and 28 in figure 3.

[0099] The UE 2 interacts with the desktop by sending key and mouse events. At one moment in time the user opens a media player and decides to play the video.

[0100] At step 44 the desktop 4 sends a SDP Offer/Answer to enable streaming the video. This decision is based on a local policy and intelligence as well as on local server interface implementation. In a first embodiment this implies applications hosted on the server to request specific media transfer means to a thin client server module (we call this application aware media transfer adaptation). In a second embodiment this implies the thin client server module to autonomously select the most appropriate transfer means.

[0101] Upon reception of this request, the UE 2 sends back, at step 46, an answer to accept or refuse this video stream. In this typical example, the UE 2 supports the redirection feature. The user selects the redirection option and chooses to redirect the video to the TV 40 via the UE 2 User Interface. It is assumed that the mobile phone knows her TV SIP public address or IP address. This means that the thin client device provides a user interface for notifying the user whether to accept the media flow or direct it to another equipment. The Answer message contains the address of the TV and the ID of the application for which the redirection is requested to redirect e.g. the web browser display.

[0102] In this case the redirection refers to the display redirection of an application (this can be a web browser, an instant messaging application, a video,).

[0103] The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.

[0104] The media negotiation follows with the TV 40 through SIP if SIP is supported. It may be possible that the desktop 4 negotiates the video transfer via other means.

[0105] At step 48, the desktop 4 sends the SDP offer to the TV 40.

[0106] At step 50 the SDP Offer is accepted by the TV which sends back a SDP Answer.

[0107] At step 52, the UE 2 is notified that the TV 40 accepted the redirection.

[0108] Finally, at step 54, the video is displayed on the TV screen 40. The user may continue interacting with the remote desktop 4 using remote desktop control means.

[0109] In the above example the TV 40 is preferably SIP-connected at a server, for instance at the set-top-box or any other back-end SIP server, and that it is reachable via its public address.

Claims

1. Method for establishing a Thin Client session between a Thin Client device (2) and a Thin Client Server (4) exchanging Handshaking and initialization messages during a session negotiation above a SIP-based framework, **characterized in that** said Thin Client device (2) and said Thin Client Server (4) exchange additional information representative of the Thin Client context enabling the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session.

2. Method according to claim 1 wherein said additional information consists of Thin Client information formatted in SDP (Session Description Protocol) offer/answer messages.

3. Method according to claim 1 wherein said additional information consists of Thin Client information formatted in XML-based offer/answer messages embedded in the body of SIP messages.

4. Method according to claim 2 or claim 3 wherein said additional information comprises both multimedia transfers and remote desktop control capabilities.

5. Method according to claim 4 wherein said remote desktop control capabilities further comprises dynamically directing or redirecting graphical updates of a remote application from a first device onto a second device.

6. Method according to claim 5 wherein said first device is a mobile communication device and said second device is a fixed communication device.

7. Method according to claim 6 comprising, transferring uplink events on a separate radio bearer than the one used for the downlink graphical updates.

8. Method according to claim 7 comprising transferring uplink events on a separate IP connection that the one used for the downlink graphical updates.

9. Method according to claim 1 comprising, associating at least one audio/video stream to the thin client session.

10. Method according to claim 8 wherein said additional information comprises remote display framebuffer coordinates and size corresponding to said audio/video streams associated to said thin client session.

11. Method according to claim 9 wherein said additional information allows sending a client request (FramebufferForgetRequest) instructing the server that a specific area on the framebuffer does not require update.

12. Method according to claim 11 wherein said additional information comprises window-id attribute.

13. Method according to claim 12 wherein said additional information allow sending a client request (WindowUpdate) instructing a server that a graphical area identified by said window-id attribute has been resized, moved or both.

14. A thin client device (2) adapted for implementing the method according to claim 1 for establishing a Thin Client session with a Thin Client Server (4), **characterized by** means for exchanging with said Thin Client Server (4) additional information representative of the Thin Client context enabling the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session, said additional information consisting of SDP (Session Description Protocol) offer/answer messages Or XML-based offer/answer messages embedded in the body of SIP messages.

15. A thin client device (2) according to claim 14 consisting of a Mobile User Equipment comprising an interface to enable a user to register interest in media redirection in order to get notified upon reception of said media redirection, and to send a redirection answer.

16. A thin client device (2) according to claim 14 adapted for establishing a separate IP connection for uplink events, for triggering the allocation of separate radio bearer for transferring said uplink events on a separate radio bearer than the one used for downlink graphical updates, and for mapping the rendering of audio/video stream(s) to said remote display framebuffer on its screen.

17. A Thin Client Server (4) adapted for implementing the method according to claim 1 for establishing a Thin Client session with a Thin Client device (2), **characterized by** means for exchanging with said Thin Client device additional information representative of the Thin Client context enabling the combination and adaptive transfer of multiple media streams in at least one remote application display during said thin client session.

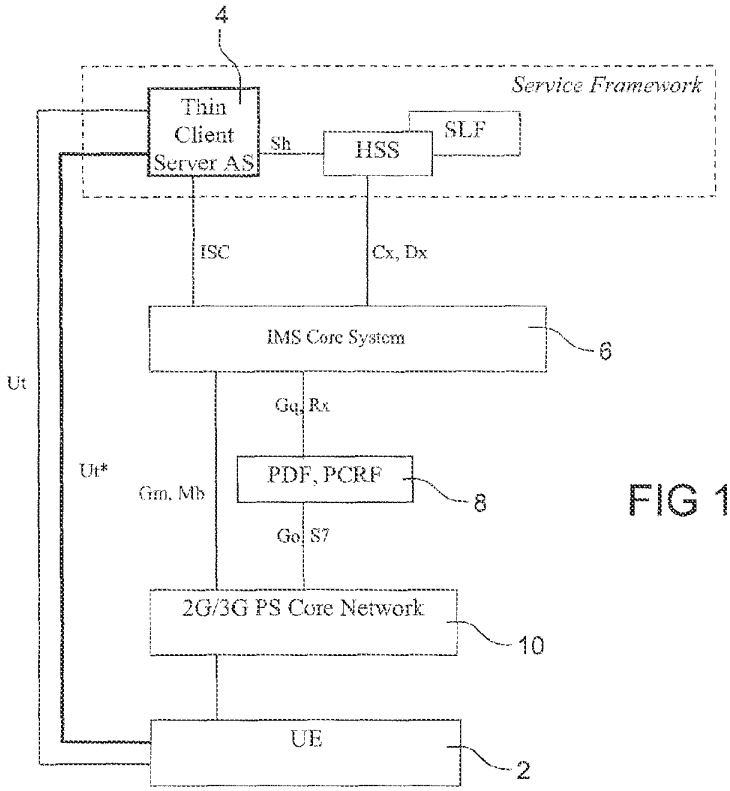

4
Service Framework
Thin Client Server AS
Sh
HSS
SLF
ISC
Cx, Dx
IMS Core System
6
Ut
Gq, Rx
Ut*
Gm, Mb
PDF, PCRF
8
Go, S7
2G/3G PS Core Network
10
UE
2

FIG 1

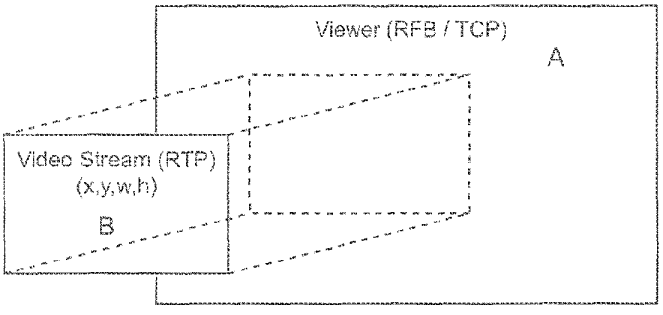

Viewer (RFB / TCP)
A
Video Stream (RTP)
(x,y,w,h)
B

Fig 2

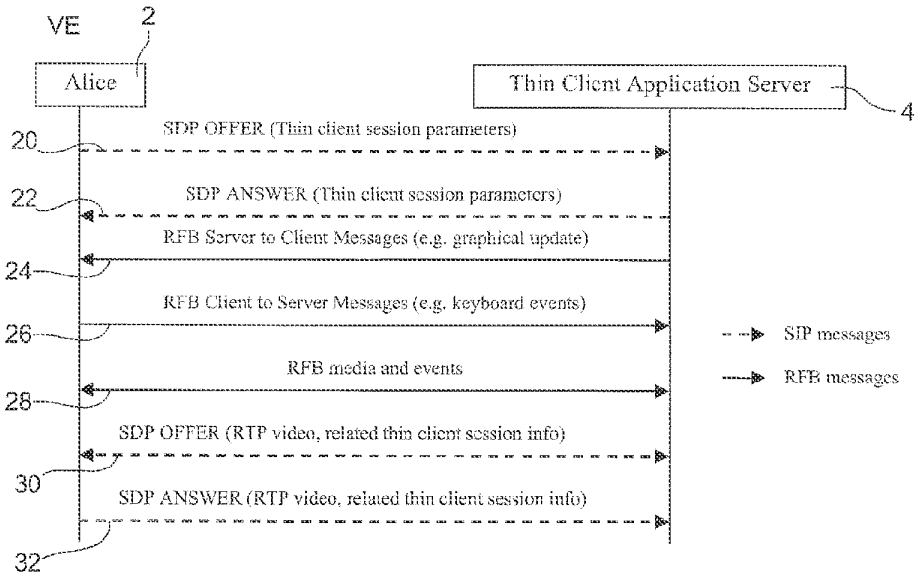

VE
2
Alice
Thin Client Application Server
4
SDP OFFER (Thin client session parameters)
20
SDP ANSWER (Thin client session parameters)
22
RFB Server to Client Messages (e.g. graphical update)
24
RFB Client to Server Messages (e.g. keyboard events)
26
RFB media and events
28
SDP OFFER (RTP video, related thin client session info)
30
SDP ANSWER (RTP video, related thin client session info)
32
SIP messages
RFB messages

Fig 3

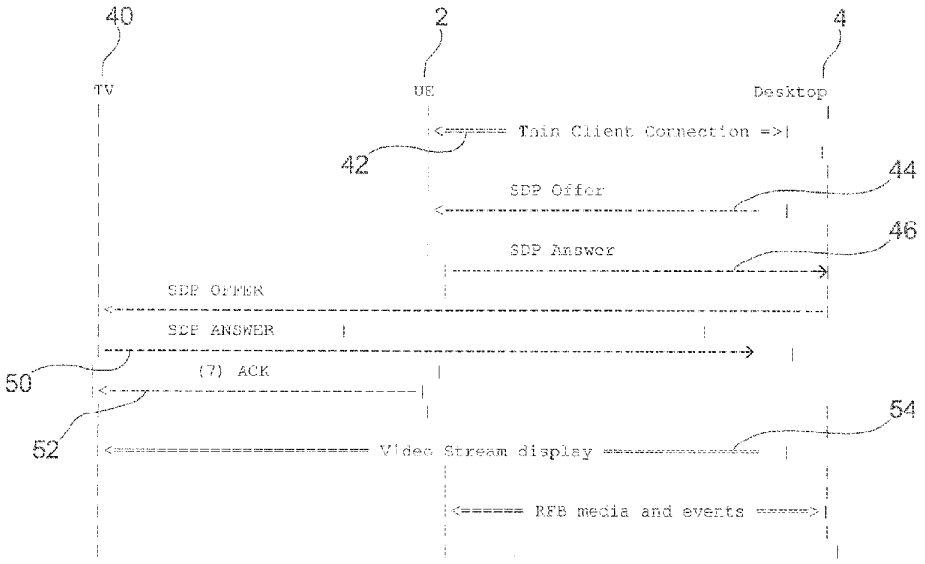

40
TV
2
UE
4
Desktop
<======= Thin Client Connection =>|
42
SDP Offer
44
SDP Answer
46
SDP OFFER
SDP ANSWER
(7) ACK
50
52
<========== Video Stream display ==========
54
<====== RFB media and events ======>

FIG 4

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 08 16 6122

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	LENNOX H SCHULZRINNE J NIEH R BARRATO COLUMBIA U J: "Protocols for Application and Desktop Sharing; draft-lennox-avt-app-sharing-00.txt" IETF STANDARD-WORKING-DRAFT, INTERNET ENGINEERING TASK FORCE, IETF, CH, 1 December 2004 (2004-12-01), pages 1-22, XP015039313 ISSN: 0000-0004 * page 3 - page 9 * * page 16 - page 18 * -----	1-17	INV. H04L29/06
X,D	GARCIA-MARTIN NOKIA SIEMENS NETWORKS J OTT HELSINKI UNIVERSITY OF TECHNOLOGY M: "Session Description Protocol (SDP) Extensions and Conventions for Collaboration Applications; draft-garcia-mmusic-sdp-collaboration-00.txt" IETF STANDARD-WORKING-DRAFT, INTERNET ENGINEERING TASK FORCE, IETF, CH, 18 February 2008 (2008-02-18), pages 1-22, XP015052905 ISSN: 0000-0004 * page 3 - page 14 * -----	1-9,14, 15,17	TECHNICAL FIELDS SEARCHED (IPC) H04L
X	US 2007/058637 A1 (LO TUN HAN FELIX [CN]) 15 March 2007 (2007-03-15) * figures 16,17,19 * * paragraph [0076] - paragraph [0086] * ----- -/--	1-6,14, 15,17	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	24 March 2009	Jurca, Alexandru

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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EUROPEAN SEARCH REPORT

Application Number
EP 08 16 6122

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	OTT TZI J: "SDP Attributes for T.120 Data Conferencing; draft-ott-mmusic-sdp-t120 00.txt" IETF STANDARD-WORKING-DRAFT, INTERNET ENGINEERING TASK FORCE, IETF, CH, 12 July 2004 (2004-07-12), pages 1-7, XP015033580 ISSN: 0000-0004 * page 2 - page 5 *	1-6,14, 15,17	
X	BARTON J J ET AL: "Dialing for Displays: Session Initiation Protocol for Opportunistic Augmentation" PERVASIVE COMPUTING AND COMMUNICATIONS, 2006. PERCOM 2006. FOURTH ANNU AL IEEE INTERNATIONAL CONFERENCE ON PISA, ITALY 13-17 MARCH 2006, PISCATAWAY, NJ, USA,IEEE, 13 March 2006 (2006-03-13), pages 1-6, XP010910642 ISBN: 978-0-7695-2518-1 * page 1 - page 4 *	1-6,14, 15,17	
			TECHNICAL FIELDS SEARCHED (IPC)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	24 March 2009	Jurca, Alexandru

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 16 6122

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-03-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007058637 A1	15-03-2007	WO 2007031021 A1	22-03-2007
		CN 101107830 A	16-01-2008

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Electronic Acknowledgement Receipt	
EFS ID:	16555512
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Maryann White
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	09-AUG-2013
Filing Date:	25-JUN-2012
Time Stamp:	19:50:00
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		30160-0005001IDS.pdf	159018 9eff189c4f177f03025a6699962014320fda269d	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Information Disclosure Statement (IDS) Form (SB08)	2	2

Warnings:					
Information:					
2	Foreign Reference	EP2175607.pdf	674050 a4645f2ecf02c662a28d22f14b0b039d443ea642	no	14
Warnings:					
Information:					
		Total Files Size (in bytes):	833068		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: David Strober	Art Unit	:
Serial No.	: 13/532,546	Examiner	:
Filed	: June 25, 2012	Conf. No.	: 9012
Title	: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER		

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the references listed on the enclosed PTO-SB-08 or Disclosure Form. A copy of the listed foreign patent document is enclosed; copies of any listed U.S. patents and patent application publications will be provided on request.

This statement is being filed before the receipt of a first Office Action on the merits. Please apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: August 9, 2013

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

26211 7590 11/07/2014

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
HOPE, DARRIN	

ART UNIT	PAPER NUMBER
2173	

NOTIFICATION DATE	DELIVERY MODE
11/07/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 13/532,546	Applicant(s) STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2012*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1-25* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-25* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *25 June 2012* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date *06/25/2012;05/09/2013;08/09/2013*.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions. This Office Action is responsive to the communications filed on 25 June 2012. Claims 1-25 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1, 3-11, and 13-25 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US 2007/0155506 A1).

3. **Per claim 1**,Chuen discloses a machine-implemented method of presenting content on a display device (Abstract), the method comprising:

- receiving, in a display host (e.g., Thin Client Application Server 4), a communication from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection).* "), wherein the display host is operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated.* "), wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a*

SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control. "; paragraphs [0019], [0026], [0046], [0050]);

- opening a first session using a first instance of the swappable media player (paragraphs [0007, [0012], [0016], [0018]; paragraph [0133], "*Upon reception of said SDP offer, the Desktop 4 determines that the UE 2 wishes to establish a thin client connection using RFB protocol, determines that RFB protocol and proposed attributes are acceptable based on the environment where the UE 2 is located and, at step 22, sends back a SDP Answer Message indicating the RFB and attributes are selected.* "); but does not expressly disclose:
- requesting assignment of a unique identifier for the first session from a switchboard server system;
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device .

4. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system (Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*

- receiving a unique identifier (e.g., unique identifier 115 as shown in Fig. 2) for the first session from the switchboard server system (paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier. ...*"; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* ") ;
- displaying the unique identifier in the first session (paragraph [0035], "*...As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* ");
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

5. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to

improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

6. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

7. **Per claim 3**, Chuen and Malik disclose the method of claim further including:

- receiving in the display host a message indicating that particular content is to be played in the first session using a specified media player (Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving and loading the specified media player (Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player (Chuen, paragraph [0139] and
- causing a presentation of the content to be mirrored onto the virtual client residing on the display device(Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a

presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

8. **Per claim 4,** Chuen and Malik disclose the method of claim 3 further including:

- receiving in the display host a second message indicating that particular second content is to be played in the first session using a specified second media player (Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ");
- retrieving and loading the second media player (Chuen, paragraphs [0149-0152]);
- playing the particular second content in the first session using the specified second media player(Chuen, paragraph [0153]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).

9. **Per claim 5**, Chuen and Malik disclose the method of claim 1 wherein the content comprises video (Chuen, paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to*

negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control."; paragraph [0019]; Malik, paragraph [0005]*).*

10. **Per claim 6**, Chuen and Malik disclose the method of claim 1 wherein the content comprises streaming media (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 12).

11. **Per claim 7**, Chuen and Malik disclose the method of claim 1 wherein the content comprises visual content (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 1).

12. **Per claim 8**, Chuen and Malik disclose the method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier (Chuen, paragraph [0034]).

13. **Per claim 9**, Chuen and Malik disclose the method of claim 1 further including:

- receiving, in the display host, a communication from a second display device (Malik, paragraph [0033]);
- opening a second session using a second instance of the swappable media player (Malik, paragraph [0034]);
- requesting from the switchboard server system assignment of a second unique identifier for the second session Malik, Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015]);

- receiving a second unique identifier for the second session from the switchboard server system(Malik,paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* ") ;
- displaying the second unique identifier in the second session (Malik, paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* "); and
- causing the second unique identifier to be mirrored onto a virtual client residing on the second display device (Malik, paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

14. **Per claim 10**, Chuen and Malik disclose the method of claim 9 further including:

- receiving in the display host a second message indicating that particular content is to be played in the first session using a specified media player (Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving and loading the specified second media player (Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device (Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

15. **Per claim 11**, Chuen and Malik disclose the method of claim 10 wherein the first and second sessions at least partially overlap in time with one another(Malik, paragraph [0027]; Fig. 2 illustrate wherein the first and second sessions at least partially overlap in time with one another since all the players are forward the unique identifier to play a multiplayer game instance.).

16. **Per claim 13**.Chuen discloses a system for presenting content comprising:

- a display device storing a virtual client (e.g., thin client device 2; paragraph [0018]);
- a display host (e.g., thin client application server 4) operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]); and
- a switchboard server system(e.g., thin client application server 4), wherein the display host is operable to perform operations including:
- receiving a communication from the display device(e.g., step 20);
- receiving, in a display host (e.g., Thin Client Application Server 4), a communication from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol),*

IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection). "), wherein the display host is operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated. ")*, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- opening a first session using a first instance of the swappable media player (paragraphs [0007, [0012], [0016], [0018]; paragraph [0133], "*Upon reception of said SDP offer, the Desktop 4 determines that the UE 2 wishes to establish a thin client connection using RFB protocol, determines that RFB protocol and proposed attributes are acceptable based on the environment where the UE 2 is*

located and, at step 22, sends back a SDP Answer Message indicating the RFB and attributes are selected. "); but does not expressly disclose:

- requesting assignment of a unique identifier for the first session from a switchboard server system;
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device .

17. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system (Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*
- receiving a unique identifier (e.g., unique identifier 115 as shown in Fig. 2) for the first session from the switchboard server system (paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled*

number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... . ") ;

- displaying the unique identifier in the first session (paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* ");
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

18. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

19. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

20. **Per claim 14**, Chuen and Malik disclose the system of claim 13 wherein the display host is further operable to perform operations including:

- receiving a message from the switchboard server system indicating that particular content is to be played in the first session using a specified media player(Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving the second media player from a content provider and loading the second media player(Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(Chuen, paragraph [0139]); and
- causing a presentation of the content to be mirrored onto the virtual client residing on the display device (Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

21. **Per claim 15**, Chuen and Malik disclose the system of claim 14 wherein the display host is further operable to perform operations including:

- receiving a second message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player(Malik, paragraph [0033]);
- retrieving the second media player from a content provider and loading the second media player(Malik, paragraph [0034]);
- playing the particular second content in the first session using the specified second media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

22. Per claim 16, Chuen and Malik disclose the system of claim 14 wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

- receiving a communication from the second display device(Malik, paragraph [0033]);
- opening a second session using a second instance of the swappable media player(Malik, paragraph [0034]);
- requesting from the switchboard server system assignment of a second unique identifier for the second session; receiving a second unique identifier for the

second session from the switchboard server system; displaying the second unique identifier in the second session(Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*

- causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170);
- receiving a second message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player(Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving the second media player from a content provider and loading the second media player(Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular second content in the second session using the specified second media player(Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device(Malik, paragraph [0036]; Fig. 2

illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

23. Per claim 17, Chuen discloses a machine-implemented method of presenting content on a display device, the method comprising:

- receiving in a display host a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player, wherein the display host is operable to execute multiple instances of the swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (e.g., Step 20; paragraph [0132]);
- retrieving and loading the specified media player using the first instance of the swappable media player; (e.g., Step 22; paragraph [0133]);
- playing the particular content in a first session using the specified media player(e.g., step 30; paragraph [0139]); but does not expressly disclose:
- causing a presentation of the content to be mirrored onto a virtual client residing on a display device associated with the first session(paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

24. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay

devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

25. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 17.

26. **Per claim 18**. Chuen and Malik disclose the method of claim 17 including:

- receiving in the display host a second message indicating that a specified second media player is to be used to play particular second content using the first instance of a swappable media player (Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving and loading the second media player using the first instance of the swappable media player(Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular second content in the first session using the specified second media player(Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device (Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.; Malik, Fig. 2 illustrates causing a

presentation of the content to be mirrored onto the virtual client residing on the display device, i.e., game content 220).

27. **Per claim 19**, Chuen and Malik disclose the method of claim 17 wherein the message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player includes a unique identifier for the first session (Malik, paragraph [0035]).

28. **Per claim 20**, Chuen and Malik disclose the method of claim 19 wherein causing a presentation of the content to be mirrored onto the virtual client includes incorporating a watermark into the content before it is mirrored onto the virtual client, wherein the watermark includes the unique identifier (Malik, paragraphs [0035-0036]).

29. **Per claim 21**, Chuen and Malik disclose the method of claim 20 wherein the watermark also includes another identifier that is uniquely associated with the virtual client (Chuen, paragraph [0114]).

30. **Per claim 22**, Chuen discloses a system for presenting content (Abstract) comprising:

- a display device storing a virtual client (e.g., thin client device 2; paragraph [0018]);
- a display host (e.g., thin client application server 4) operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract;

paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]); and

- a switchboard server system(e.g., thin client application server 4), wherein the display host is operable to perform operations including:
- receiving from the switchboard server system a message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player(e.g., step 20);
- retrieving and loading the specified media player using the first instance of the swappable media player; (e.g., Step 22; paragraph [0133]);
- playing the particular content in a first session using the specified media player(e.g., step 30; paragraph [0139]); but does not expressly disclose:
- causing a presentation of the content to be mirrored onto a virtual client residing on a display device associated with the first session(paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

31. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay

devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

32. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 22.

33. **Per claim 23**, Chuen and Malik disclose the system of claim 22 wherein the message indicating that a specified media player is to be used to play particular content using a first instance of a swappable media player includes a unique identifier for the first session(Malik, paragraph [0035]).

34. **Per claim 24**, Chuen and Malik disclose the system of claim 23 the display host is further operable to incorporate a watermark into the content before the content is mirrored onto the virtual client (Chuen, Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.), wherein the watermark includes the unique identifier (Chuen, paragraph [0114]).

35. **Per claim 25**, Chuen and Malik disclose the system of claim 24 wherein the watermark also includes another identifier that is uniquely associated with the virtual client(Chuen, paragraph [0114])..

36. Claims 2 and 12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US

2007/0155506 A1), and further in view of Sukeda et al. (Hereinafter, Sukeda, US 2009/0172780 A1).

37. **Per claim 2**, Chuen and Malik disclose the method of claim 1 but do not expressly disclose wherein the unique identifier comprises a QR code.

38. Sukeda discloses wherein the unique identifier comprises a QR code (Sukeda, paragraphs [0052], [0066], [0070], [0077]).

39. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen-Malik the thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

40. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

41. **Per claim 12**, Chuen and Malik disclose the method of claim 1 but do not expressly disclose method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

42. Sukeda discloses wherein the display host retrieves the specified media player from a content provider via the Internet (Abstract; paragraph [0013]).

43. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen-Malik the thin client-server device to improve the device with reasonable expectation that this would result in a thin

client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

44. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN HOPE whose telephone number is (571)270-5079. The examiner can normally be reached on M-TH - 7-4:30, F - 7-3:30, Alt. Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kieu D. Vu can be reached on (571)272-4057. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DARRIN HOPE/
Examiner, Art Unit 2173

/TADEESE HAILU/
Primary Examiner, Art Unit 2173

Notice of References Cited	Application/Control No. 13/532,546	Applicant(s)/Patent Under Reexamination STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2007/0155506	07-2007	Malik, Dale	463/042
*	B	US-2012/0102209	04-2012	Fok Ah Chuen et al.	709/228
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Substitute Disclosure Form	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 30160-0005001	Application No. 13/532,546
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant David Strober	
(37 CFR §1.98(b))		Filing Date June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	2009/0172780	Jul 2, 2009	Sukeda et al.			
	2	2012/0059875	Mar 8, 2012	Clark			
	3	2011/0131607	Jun 2, 2011	Thomas et al.			
	4	2009/0108057	Apr 30, 2009	Mu et al.			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	5	2175607 A1	Apr 14, 2010	Europe				

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document

Examiner Signature	/Darrin Hope/	Date Considered	/D.H./ 11/03/2014

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.H./

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	11/03/2014								
	1	✓								
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Sheet 1 of 4

Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 30160-0005001	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	Applicant David Strober	
	Filing Date June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	7058356	06/06/2006	Slotznick			
	2	7835505	11/16/2010	Toyama et al.			
	3	7849485	12/07/2010	Paik et al.			
	4	2006/0083194	04/20/2006	Dhrimaj et al.			
	5	2006/0203758	09/14/2006	King Tee et al.			
	6	2007/0202923	08/30/2007	Jung et al.			
	7	2008/0155600	06/26/2008	Klappert et al.			
	8	2009/0228919	09/10/2009	Zott et al.			
	9	2010/0137028	06/03/2010	Farris et al.			
	10	2010/0205628	08/12/2010	Davis et al.			
	11	2011/0030020	02/03/2011	Halttunen			
	12	2002/0075332 A1	06/2002	Geilfuss et al.			
	13	2002/0120666 A1	08/2002	Landsman et al.			
	14	2002/0129102 A1	09/2002	Landsman et al.			
	15	2002/0133518 A1	09/2002	Landsman et al.			
	16	2002/0198778 a1	12/2002	Landsman et al.			
	17	2003/0004804 a1	01/2003	Landsman et al.			
	18	2003/0005000 a1	01/2003	Landsman et al.			
	19	2003/0018885 a1	01/2003	Landsman et al			
	20	2003/0023488 a1	01/2003	Landsman et al			
	21	2003/0028565 a1	02/2003	Landsman et al			
	22	2003/0193520	10/2003	Oetzel, Kenneth G.			
	23	2004/0088728 a1	05/2004	Shimizu, Seiya			
	24	2005/0144305	06/2005	Fegan et al.			

Examiner Signature /Darrin Hope/	Date Considered /D.H./ 11/03/2014

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form (PTO-1449)

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.H./

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	25	2006/0098624 a1	05/2006	Morgan et al.			
	26	2006/0101098 a1	05/2006	Morgan et al.			
	27	2007/0094408 a1	04/2007	Gundla et al.			
	28	2008/0008439 a1	01/2008	Liu et al.			
	29	2008/0028037 a1	01/2008	Moyer et al.			
	30	7,330,875 b1	02/2008	Parasnis et al.			
	31	2008/0126943 a1	05/2008	Parasnis et al.			
	32	7,424,718 b2	09/2008	Dutton, Faron			
	33	2008/0267369 a1	10/2008	Parlamas et al.			
	34	2008/0270881 a1	10/2008	Meyer et al.			
	35	7,440,972 b2	10/2008	Oetzel, Kenneth G.			
	36	7,769827 b2	08/2010	Girouard et al.			
	37	2010/0265939 a1	10/2010	Parlamas et al.			
	38	2010/0281042 a1	11/2010	Windes et al.			
	39	2011/0060998 a1	03/2011	Schwartz et al.			
	40	2011/0090898	04/2011	Patel et al.			
	41	2011/0107227 a1	05/2011	Rempell et al.			
	42	2011/0138354 a1	06/2011	Hertenstein et al.			
	43	2011/0214148 a1	09/2011	Gossweiler et al.			
	44	2011/0231265 a1	09/2011	Brown et al.			
	45	2011/0231566 a1	09/2011	Gelter et al.			
	46	2011/0296465	12/1/2011	Krishnan et al.			

Examiner Signature	Date Considered
/Darrin Hope/	/D.H./ 11/03/2014

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Sheet 3 of 4

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	Filing Date June 25, 2012	Group Art Unit

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	47	CN101534449	09/16/2009	China				
	48	CN101577650	11/11/2009	China				
	49	CN101778198	07/14/2010	China				
	50	CN101815073	08/25/2010	China				
	51							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	52	Hachman, M., "Snapstick's Media Streaming App/Box: Hands On," www.pcmag.com/article2/0,2817,2375455,00.asp, 2 pages. (January 8, 2011).
	53	Dolcourt, J., CES: Snapstick takes on Apple TV, Google TV," http://news.cnet.com/8301-17938_105-20025100-1.html, 3 pages, (December 9, 2010).
	54	Shaivitz, M., "The Web to Your TV, With a Flick of a Wrist? Slapstick Says Yes," http://techcocktail.com/the-web-to-our-tv-with-a-flick-of-a-wrist-slapstick-says-yes-2010-12, 2 pages, (December 10, 2010).
	55	Snapstick – Home, "Snapstick," http://www.snapstick.com/, 2 pages, printed on 3/2/2011.
	56	Paul, I., Hands On: YouTube Leanback, PCWORLD, http://www.pcworld.com/article/200769/hands_on_youtube_leanback.html, 3 pages, (July 9, 2010).
	57	Using AirPlay, Article HT4437, http://support.apple.com/kb/HT4437, 3 pages, (April 18, 2011).
	58	Cheng, J., "Stream AirPlay video to regular TV? Apple might make it happen," http://arstechnica.com/apple/news/2011/03/stream-airplay-video-to-a-regular-tv-apple-migh..., 1 page, printed on 6/7/2011.
	59	"Using the Play To feature to stream media," http://windows.microsoft.com/en-US/windows7/using-the-play-to-feature-to-stream-media, 3 pages, printed on 6/7/2011.
	60	"YouTube – Leanback," http://www.youtube.com/t/leanback, 1 page, printed on 6/7/2011.
	61	"Yahoo!7 TV Guide for iPhone, iPod touch and iPad on the iTunes App Store," http://itunes.apple.com/au/app/yahoo-7-tv-guide/id424719927mt=8, 2 pages, printed on 6/7/2011.
	62	Hu, C., et al., "Mobile Media Content Sharing in UPnP-Based Home Network Environment," Journal of Information Science and Engineering 24, 1753-1769. (2008).
	63	Fallahkhair, S., et al., "Dual Device User interface Design for Ubiquitous Language Learning: Mobile Phone and Interactive Television (iTV)," Proceedings of the 2005 IEEE Int'l Workshop on Wireless an Mobile Technologies in Education, 8 pages, 2005.
	64	Ask Search Internet Search, session identifier random, printed on 11/19/11.
	65	Webopedia computer dictionary, session cookie, printed on 11/19/11.
	66	Webopedia computer dictionary, web identifier, printed on 11/19/11.

Examiner Signature /Darrin Hope/	Date Considered /D.H./ 11/03/2014

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Sheet 4 of 4

Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 30160-0005001	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	Applicant David Strober	
	Filing Date June 25, 2012	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	67	Webopedia computer dictionary, user session, printed on 11/19/11.
	68	www.vbulletin.com, Best way to generate Random, Unique ID's, printed on 11/19/11.
	69	www.vbulletin.com, Best way to generate Random, Unique ID's, Internet Archive Wayback Machine, January 16, 2009.
	70	Official communication from the USPTO in Serial No. 13/245,001, dated December 8, 2011.
	71	U.S. Application No. 13/245,001, filed on September 26, 2011.

Examiner Signature /Darrin Hope/	Date Considered /D.H./ 11/03/2014
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	Art Unit
	DARRIN HOPE	2173

CPC- SEARCHED		
Symbol	Date	Examiner
G06F3/01	11/3/2014	DH

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
715/716		11/3/2014	DH

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 9012

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/532,546	06/25/2012	715	2173	30160-0005001

APPLICANTS

INVENTORS

David Strober, Rye, NY;

**** CONTINUING DATA ***************************

This application is a CIP of 13/157,821 06/10/2011
which claims benefit of 61/477,998 04/21/2011

**** FOREIGN APPLICATIONS ***************************

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07/06/2012

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /DARRIN HOPE/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		NY	4	25	4

ADDRESS

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

TITLE

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
870	No._____ to charge/credit DEPOSIT ACCOUNT	☐ 1.16 Fees (Filing)
	No._____ for following:	☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

BIB (Rev. 05/07).

Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	30160-0005001	13/532,546
	Applicant: David Strober	
	Filing Date: June 25, 2012	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	1	US 2010/0027974 A1	2010-02-04	Ansari			
	2	US 2005/0034151 A1	2005-02-10	Abramson			
	3	US 2007/0288715 A1	2007-12-13	Boswell et al.			
	4	US 2008/0077526 A1	2008-03-27	Arumugam			

Foreign Patent Documents or Published Foreign Patent Applications

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Other Documents (include Author, Title, Date, and Place of Publication)

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"US 20130031478"	US-PGPUB; USPAT	OR	OFF	2014/11/03 14:08
L2	2853	715/716.ccls.	US-PGPUB; USPAT	OR	OFF	2014/11/03 14:08
L3	1189	G06F3/01.cpc.	US-PGPUB; USPAT	OR	OFF	2014/11/03 14:09
L4	52	L2 and L3	US-PGPUB; USPAT	OR	OFF	2014/11/03 14:09
L5	199	("20120272148" "20130124759" "20120272147" "8356251" "8595342" "20090275403" "20100138744" "20120158511" "8621352" "8266246" "8631407" "20080301189" "20080256378" "20120084653" "20090106357" "8504917" "20120222064" "20020161797" "20130290419" "20050022127" "20100121693" "20070294621" "20120317485" "20100115119" "20120030726" "20120089912" "20090133067" "20130238993" "8060407" "20100281508" "20100118200" "7716376" "20030061305" "8046672" "20110125712" "20130086609" "20070166683" "8352371" "8622839" "20080270903" "20090307092" "20060015911" "20130238995" "7890599" "20060173974" "8517829" "7824268" "20070239611" "20040268400" "8244707" "20020129089" "20060026162" "8229796" "20080181575" "7849160" "20100287580" "7739596" "20120271688" "20120324552" "8219911" "20030137531" "8589368" "8199718" "20130086607" "20130238757" "20070239546" "20120198444" "20050091107" "20130232420" "8055781" "7962548" "8028064" "8285404" "20120215646" "8556715" "7975310" "20040225564" "20090204639" "8588824" "8379668" "20080249986" "20020065925" "8000581" "20130203490" "20120310783" "8301596" "20120239510" "20030233349" "8020099" "7665115" "8162753"	US-PGPUB; USPAT	OR	OFF	2014/11/03 14:11

		"20090249222" "20110179357" "20090177966" "20090228569" "20130165164" "20040252400" "20120297279" "20120072543" "8397266" "20120166950" "20130339138" "8392452" "20110179010" "7426537" "20080175569" "7934010" "8020185" "8209396" "8090774" "20030182139" "20030052913" "7984097" "20090176572" "20110035466" "20080005348" "8571936" "20110004517" "20130344955" "20110150432" "8425291" "7941477" "8320890" "20050019015" "7529831" "20070100833" "8607285" "20080168568" "20110119149" "20140004934" "20130203489" "8565739" "20130038794" "8556722" "20120239496" "20110058675" "20060136572" "20100211466" "20080114645" "20120158524" "8606637" "8499241" "20080212943" "20060136577" "20090282245" "20110274409" "20050102379" "7660558" "20130084991" "20080021957" "20090228897" "20080232763" "20090251409" "20120151466" "8416070" "8026805" "20060018205" "8000690" "8271333" "20090176568" "20090157500" "20110270742" "7822866" "20070169087" "20100275221" "8175638" "20090109339" "7382879" "20110258623" "20130263182" "20050044189" "20100217993" "20060179048" "20110022471" "6859838" "8112490" "20100254674" "20130346588" "7769829" "20040045040" "20120251071" "8122236" "8438210" "20100169780" "20080281689" "8078665" "20070265073" "20030225834" "20130011008" "20130238418" "20100325549" "20130084959" "20100100636" "8595475" "20110041060" "20090061841" "20130079132" "8435121" "20080320531").pn.				
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"20080120501" "20130196761"
"20080129864" "20040051812"
"7836511" "20120035994" "8185625"
"20140006156" "20070294773"
"7917645" "20040267715"
"20110138018" "20110202636"
"7996566" "6884172" "7603113"
"8429516" "20060277098"
"20120178434" "20070282898"
"8275746" "20020188760"
"20090106659" "8285118"
"20100077435" "20060019751"
"20020138593" "7627808"
"20130290848" "7519911" "7500007"
"20100085857" "7590752"
"20070204003" "8392959"
"20110184744" "7056217"
"20060080702" "20130155261"
"8112504" "8055688" "8126936"
"6973475" "20110176555"
"20060206492" "8255527" "8249569"
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"20060020724" "20130237319"
"7115034" "20100131978"
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"20070011713" "20060292537"
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"20110111862" "20090254607"
"7949333" "20090216814"
"20050210101" "8307390"
"20090307658" "8290604" "8201201"
"8062134" "20110055864"
"20070105588" "20060014585"
"20120239661" "20080114861"
"7574691" "20060136964"
"20040183756" "20070217716"
"20060068861" "7343414"
"20090190902" "20120209770"
"8572490" "8506405" "8370455"
"20070016865" "20080235142"
"7870282" "20090234476"
"20090150406" "7433922" "8137200"
"20090271706" "20100131613"
"20130150989" "20120047436"
"7787904" "7789758" "20100023893"
"7809790" "20070294772"
"20060149632" "20110158610"
"20080077483" "8209385" "7647297"
"8435115" "20120191811"
"20130191751" "8332530" "7867093"
"20080026732" "20140024450"
"20020138641" "7483958"
"20100180010" "20120215599"
"20050169467" "20080276272"
"7975062" "8145203" "7632186"
"20040103297" "8504572" "8571935"
"7695369" "7565429" "20090106258"
"20100325646" "7761816" "7054888"
"8025572" "20130304549"
"20050278773" "20100150105"

		"8428257" "20100023578" "20110069936" "20030132953" "20110307782" "20130232418" "20070155310" "20130060646" "7721032" "20050034151" "7975021" "7496277" "20100235741" "20030151618" "20120036392" "20120330760" "20130061131" "20070269030" "20040148399").pn.				
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S7	13	S6 and QR near2 code$1	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:38
S8	996	S6 and (not strober).inv.	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:40
S9	996	S6 and (not strober).inv. and (not touchstream).as.	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:41
S10	1	("20100125644").PN.	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:46
S11	5	S6 and (not strober).inv. and (not touchstream).as. and (virtual near2 browser)	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:51
S12	17	S6 and (not strober).inv. and (not touchstream).as. and (virtual near2	US-PGPUB;	OR	OFF	2014/01/28 06:52

		client)	USPAT			
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S14	145	(sling near2 media).as.	US-PGPUB; USPAT	OR	OFF	2014/01/28 06:57
S15	59	S6 and (not strober).inv. and (not touchstream).as. and HDMI	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:00
S16	2	S6 and (not strober).inv. and (not touchstream).as. and HDMI and hulu	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:03
S17	28	S6 and (not strober).inv. and (not touchstream).as. and hulu	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:05
S18	10	S6 and (not strober).inv. and (not touchstream).as. and smart near2 tv	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:06
S19	16	S6 and smart near2 (tv or television)	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:43
S20	307	"715".clas. and smart near2 (tv or television)	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:44
S21	1	"20140013239"	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:46
S22	11	("20040044723" | "20080281919" | "20080305813" | "20090265163" | "20110083111" | "20110142016" | "7188181" | "7620667" | "7751347" | "7844297" | "8112490").PN.	US-PGPUB; USPAT	OR	OFF	2014/01/28 07:48
S23	270	S6 and (not strober).inv. and (not touchstream).as. and (retriev$3 with media with player$1)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:23
S24	3	S6 and (not strober).inv. and (not touchstream).as. and (retriev$3 with media with player$1) and (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:23
S25	3	S6 and (not strober).inv. and (not touchstream).as. and (retriev$3 with media with player$1) and (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:26
S26	3	S6 and (not strober).inv. and (not touchstream).as. and (retriev$3 with media with player$1) and (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:26
S27	3	S6 and (retriev$3 with media with player$1) and (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:26
S28	3	S6 and (media with player$1) same (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:27
S29	1	swap$7 same (media with player$1) same (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:29

S30	1	(swap$7 or exchang$7) same (media with player$1) same (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:29
S31	2	(swap$7 or exchang$7 or replace$7) same (media with player$1) same (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:30
S32	2	(swap$7 or exchang$7 or replace$7) same (media same player$1) same (browser with instances)	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:46
S33	1	"20090117890"	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:55
S34	1	"20060064351"	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:56
S35	3	"6813630"	US-PGPUB; USPAT	OR	OFF	2014/01/28 08:57
S36	37	"7426537"	US-PGPUB; USPAT	OR	OFF	2014/01/28 09:06
S37	52	("20020120666" | "20030193520" | "20070202923" | "20080008439" | "20080028037" | "20100205628" | "7424718" | "20050034151" | "20090108057" | "20030004804" | "20060083194" | "20110231265" | "7769827" | "20050144305" | "20060098624" | "20060101098" | "20070094408" | "20080267369" | "20110030020" | "20110060998" | "7058356" | "20090172780" | "20020133518" | "20080126943" | "20100137028" | "20110138354" | "20110214148" | "20110296465" | "7330875" | "20100027974" | "20110131607" | "20030023488" | "20030028565" | "20100281042" | "20110090898" | "20110107227" | "20020198778" | "20060203758" | "20080270881" | "20090228919" | "0783505" | "20070288715" | "20030018885" | "20040088728" | "20080155600" | "20100265939" | "20110231566" | "7440972" | "20030005000" | "7849485" | "20080077526" | "20120059875").PN.	US-PGPUB; USPAT	OR	OFF	2014/01/28 09:37
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S41	1	("20050246624").PN. and DHCP with client	US-PGPUB; USPAT	OR	OFF	2014/01/28 10:53
S42	1	("20050246624").PN. and DHCP with ip	US-	OR	OFF	2014/01/28

		near2 address	PGPUB; USPAT			10:54
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S44	0	("20050246624").PN. and DHCP with identif$7	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:06
S45	1	("20050246624").PN. and logical	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:06
S46	0	("20050246624").PN. and session with ip	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:07
S47	1	("20050246624").PN. and session	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:07
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S57	8	S56 and sync$9 near2 code$1	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:48
S58	0	S56 and sync$9 near2 code$1 same QR	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:52
S59	0	S56 and sync$9 same code$1 same QR	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:52
S60	0	S56 and sync$9 and code$1 same QR	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:53
S61	9	S56 and code$1 same QR	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:53
S62	0	S56 and vmc and (code$1 same QR)	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:58
S63	0	S56 and vmc	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:58
S64	9	S56 and virtualization	US-PGPUB; USPAT	OR	OFF	2014/01/28 11:58
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S81	1000	S76 or S77 or S78 or S79 or S80	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:31
S82	86	S81 and virtual near5 (client or "user interface")	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:33
S83	0	S81 and "virtual client"	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:37
S84	39	S81 and SIP	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:38
S85	2	S81 and vnc	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:45
S86	9	("virtual client").ti.	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:45
S87	62	("virtual client") and set$1top	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:47
S88	0	("virtual client") and set$1top and "TV 40"	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:49
S89	0	virtual near2 client and set$1top and "TV 40"	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:50
S90	6	virtual and set$1top and "TV 40"	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:50
S91	40	S81 and "thin client"	US-PGPUB; USPAT	OR	OFF	2014/02/18 07:51
S92	29	S81 and "thin client" and session	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:03
S93	29	S81 and "thin client" and session$1	US-PGPUB;	OR	OFF	2014/02/18 08:03

			USPAT			
S94	4	S81 and "thin client" same stor$3 same display same device	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:13
S95	0	S81 and "virtual client" same stor$3 same display same device	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:14
S96	8	"virtual client" same stor$3 same display same device	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:14
S97	5	"virtual client" same stor$3 same "display device"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:16
S98	1	"virtual client" same resid$3 same "display device"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:16
S99	1	"20120102209"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:17
S100	57	(virtual near3 user near3 interface).ti.	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:18
S101	4	(virtual near3 user near3 interface).ti. and set$1top	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:19
S102	1	("20110179106").pn. and "212"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:22
S103	1	("20110179106").pn. and "210"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:23
S104	1	("20110179106").pn. and "VNC server"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:44
S105	1	("20110179106").pn. and "208"	US-PGPUB; USPAT	OR	OFF	2014/02/18 08:54
S106	1	("20110179106").pn. and flash	US-PGPUB; USPAT	OR	OFF	2014/02/18 09:00
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S114	0	S112 and sip and thin near2 client	US-PGPUB; USPAT	OR	OFF	2014/05/08 09:56
S115	40	S112 and thin near2 client	US-PGPUB; USPAT	OR	OFF	2014/05/08 09:56
S116	1	S112 and thin near2 client and mirror	US-PGPUB; USPAT	OR	OFF	2014/05/08 10:03

S117	2	S112 and thin near2 client and mirror$3	US-PGPUB; USPAT	OR	OFF	2014/05/08 10:03
S118	1	"20110179106"	US-PGPUB; USPAT	OR	OFF	2014/05/08 10:07
S119	1	"20110179106 " and "VNC server"	US-PGPUB; USPAT	OR	OFF	2014/05/08 10:43
S120	1	"20110179106 " and "virtual UI server"	US-PGPUB; USPAT	OR	OFF	2014/05/08 10:51
S121	0	"20110179106 " and "virtual UI server" with receiv$3	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:39
S122	1	"20110179106 " and "virtual UI server" same receiv$3	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:39
S123	1	"20110179106 " and "virtual UI server"	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:40
S124	121	thin near2 client with stb	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:44
S125	0	thin near2 client with sUI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:45
S126	167	thin near2 client with UI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:45
S127	1	stb same thin near2 client with UI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:46
S128	14	("20120011557" | "20120246689" | "20090252176" | "20100198979" | "20110286721" | "20080134258" | "20100325672" | "20110055864" | "20120028567" | "20060007960" | "20110202945" | "6543053" | "20110061086" | "20050129233").PN.	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:48
S129	1	stb same thin near2 client same UI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:50
S130	0	settop same thin near2 client same UI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:51
S131	1	set$1top same thin near2 client same UI	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:51
S132	4	("20080101466" | "20090178063" | "20100333150" | "20120192234").PN.	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:53
S133	10	thin near2 client with UI and mirror$3	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:55
S134	199	("20120272148" "20130124759" "20120272147" "8356251" "8595342" "20090275403" "20100138744"	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:57

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S142	85	S141 and swap$9	US-PGPUB; USPAT	OR	OFF	2014/05/08 13:59
S143	5	S141 and dynamic$7 with load$3 with media with player$1	US-PGPUB; USPAT	OR	OFF	2014/05/08 14:02
S144	8	S141 and dynamic$7 with load$3 with player$1	US-PGPUB; USPAT	OR	OFF	2014/05/08 14:06
S145	0	S141 and "QR code"	US-PGPUB; USPAT	OR	OFF	2014/05/08 14:07
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S173	32	S171 and television and "715".clas.	US-PGPUB; USPAT	OR	OFF	2014/05/18 13:39
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Cc: PAIR_eOfficeAction@uspto.gov
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Nov 07, 2014 05:30:08 AM

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	CTNF	11/07/2014	30160-0005001
	892	11/07/2014	30160-0005001
	1449	11/07/2014	30160-0005001
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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	David Strober	Art Unit	:	2173
Serial No.	:	13/532,546	Examiner	:	Hope, Darrin
Filed	:	June 25, 2012	Conf. No.	:	9012
Title	:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT IN REPLY TO OFFICE ACTION OF NOVEMBER 7, 2014

Please amend the above-identified application as follows:

Amendments to the claims.

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A machine-implemented method of presenting content on a display device, the method comprising:

receiving, in a display host, a communication from a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from a switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session; ~~and~~

causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;

receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier;

in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving in the display host a second message from the switchboard server system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier; and

executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device.

2. (Original) The method of claim 1 wherein the unique identifier comprises a QR code.

3. (Canceled)

4. (Currently amended) The method of claim 1 [[3]] further including:

receiving in the display host a ~~second~~ third message from the switchboard server system ~~indicating~~ instructing that particular second content is to be played in the first session using a specified second media player;

in response to the third message, retrieving and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

5. (Original) The method of claim 1 wherein the content comprises video.

6. (Original) The method of claim 1 wherein the content comprises streaming media.

7. (Original) The method of claim 1 wherein the content comprises visual content.

8. (Original) The method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier.

9. (Original) The method of claim 1 further including:

receiving, in the display host, a communication from a second display device;

opening a second session using a second instance of the swappable media player;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session; and

causing the second unique identifier to be mirrored onto a virtual client residing on the second display device.

10. (Currently amended) The method of claim 9 further including:

receiving in the display host a ~~second~~ third message indicating that particular second content is to be played in the second session using a specified second media player;

in response to the third message, retrieving and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

11. (Original) The method of claim 10 wherein the first and second sessions at least partially overlap in time with one another.

12. (Original) The method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

13. (Currently amended) A system for presenting content comprising:

~~a display device storing a virtual client;~~

a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; and

a switchboard server system,

wherein the display host is operable to perform operations including:

receiving a communication from ~~the~~ a display device storing a virtual client;

in response to receiving the communication, opening a first session using a first instance of the swappable media player;

~~requesting assignment of a unique identifier for the first session from the switchboard server system;~~

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session; ~~and~~

causing the image of the unique identifier to be mirrored onto the virtual client residing on the display device

receiving a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier;

in response to receiving the first message, retrieving and the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving a second message from the switchboard server system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier; and

executing the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device.

14. (Canceled)

15. (Currently amended) The system of claim 13 [[14]] wherein the display host is further operable to perform operations including:

receiving a ~~second~~ third message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player;

in response to receiving the third message, retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

16. (Currently amended) The system of claim 13 [[14]] wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

receiving a communication from the second display device;

in response to receiving the communication from the second display device, opening a second session using a second instance of the swappable media player;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session;

causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device.

receiving a ~~second~~ fourth message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player;

retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

17 - 25. (Canceled)

REMARKS

Claims 1-2, 4-13 and 15-16 are presented for further examination.

Claims 3, 14 and 17-25 are canceled without prejudice.

No new matter is introduced by the amendments, which are supported by the specification as originally filed.

The present application describes, among other things, a method of presenting content on a display device. The method can include, in some implementations, various steps performed by a display host (*e.g.*, 22 in FIG. 1), some of which are in response to communications from a display device (*e.g.*, 23 in FIG. 1) and some of which are in response to messages sent by a switchboard server system (*e.g.*, 24 FIG. 1) in response to a message originating in a handheld Internet-enabled personal computing device (*e.g.*, 20 in FIG. 1). The method can facilitate using the personal computing device to control content that is presented on the display device. Various messages regarding what content to play, what media player (*i.e.*, computer software application) to use, and/or what play control commands to execute, are transmitted from the personal computing device to the switchboard system (*e.g.*, by way of a network such as the Internet), which then forwards a corresponding message to the virtual display host for execution.

The virtual display host is operable "to execute multiple instances of a browser each of which operates as a *swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content*." The presentation of particular content being played in a particular session then can be mirrored onto the virtual client residing on the display device.

An advantage, in some implementations, of providing a swappable media player (*i.e.*, that can retrieve and load any of a plurality of different media players needed to play specified content) in the virtual display host is that the techniques can be used even if the display device has somewhat limited processing power and would not be sufficiently powerful to run the swappable media player (par. [0009] of the Specification). Further, the techniques can, in some

cases, facilitate centralized processing of the swappable media player for multiple display devices (*Id.*) Also, providing the switchboard server system as well as the display host can allow additional functionality to be provided by the switchboard server system (*see, e.g.*, pars. [0029] – [0030] of the Specification).

As recited, for example, in claim 1, a display host receives a communication *from a display device* and, in response, opens a first session is opened using a first instance of a swappable media player. A unique identifier for the first session is received the switchboard server system, the unique identifier is displayed in the first session, and the display of the unique identifier is mirrored onto a virtual client residing on the display device.

Also according to claim 1, a first message is received, in the display host, *from the switchboard server system* instructing that particular content be played in the first session using a specified one of the media players. The first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier. In response to receiving the first message, the display host retrieves and loads the specified media player using the first instance of the swappable media player, and plays the particular content in the first session using the specified media player. A presentation of the particular content is mirrored onto the virtual client residing on the display device.

Further, according to claim 1, a second message is received, in the display host, *from the switchboard server system* instructing that a particular play control command be executed with respect to the particular content being played in the first session. The second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier. The display host then executes the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device.

Rejections under 35 USC §103(a) (pre-AIA)

The Office rejected the claims as follows:

(1) Claims 1, 3-11 and 13-25 were rejected as unpatentable over Chuen (US 2012/0102209) in view of Malik (US 2007/0155506).

(2) Claims 2 and 12 were rejected as unpatentable over Chuen in view of Malik and further in view of Sukeda (US 2009/0172780).

Applicant respectfully requests reconsideration.

Chuen, for example, describes a method for establishing a thin client session that allows, for example, a user to redirect video received in a mobile device 2 to a TV 40 by interacting with a thin client server (desktop) 4. Also, as described by Chuen, a user interaction on an Area B of a screen can be associated to a remote desktop, and pointer events from Area B can be sent to a remote server as if they were performed on an Area A (pars. [0127] – [0129]).

Malik describes a game server 110 that initiates an instance 112 of a game. The instance includes a unique identifier 115 which is transmitted from the server 110 to a display 134 associated with a set top box 140. The potential players can observe the unique identifier 115 in video information presented in the display 134 and then can communicate user name and device information, along with the unique identifier, back to the game server. Those players and their wireless devices are then associated with the game instance.

Neither Chuen nor Malik, however, teaches or suggests a display host operable to execute multiple instances of a browser "each of which operates as a swappable media player, wherein *each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players* needed to play specified content."

Furthermore, neither Chuen nor Malik, taken alone or in combination, teach or suggest the particular features now recited in the method of claim 2. In particular, those references fail to

teach a display host that performs each of the following, together with the other associated features recited in claim 1:

- "*in response to receiving the communication* from the display device, opening a first session using a first instance of the swappable media player," "requesting assignment of a unique identifier for the first session from a switchboard server system," "receiving a unique identifier for the first session from the switchboard server system," "displaying the unique identifier in the first session," and "causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device."
- "receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host *in response to a message originating in a handheld Internet-enabled personal computing device* and containing the unique identifier," and "*in response* to receiving the first message, retrieving and loading" "the specified media player using the first instance of the swappable media player," "playing the particular content in the first session using the specified media player," and "causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device."
- "receiving in the display host a second message from the switchboard server system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host *in response to another message originating in the handheld Internet-enabled personal computing device* and containing the unique identifier," and "executing" "the particular play control command with respect to the

particular content being played in the first session that is mirrored onto the virtual client residing on the display device."

Further, as already noted, claim 1 recites that the method includes "receiving in the display host a second message from the switchboard server system *instructing that a particular play control command be executed with respect to the particular content being played in the first session*" that previously was opened "*using the first instance of the swappable media player*." Thus, the play control command is directed to the swappable media player, not to a desktop itself.

Sukeda fails to cure the deficiencies of the combination of Chuen nor Malik.

At least for the foregoing reasons, the rejections of claim 1 and its dependent claims should be withdrawn and the claims should be allowed.

Claim 13 and its dependent claims also should be allowed for at least similar reasons.

Conclusion

It is believed that all rejections of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the preceding arguments and amendments, the claims are believed to be in condition for allowance.

Applicant also respectfully requests consideration of any Information Disclosure Statements filed in this application which have not yet been considered by the Examiner.

Any fees for extensions of time are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: April 7, 2015

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

30863960.doc

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Samuel Borodach/Maryann White
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	2252	1	300	300
Miscellaneous:				
			Total in USD ($)	**300**

Electronic Acknowledgement Receipt	
EFS ID:	21994974
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Maryann White
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	07-APR-2015
Filing Date:	25-JUN-2012
Time Stamp:	16:37:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$300
RAM confirmation Number	3143
Deposit Account	061050
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	
Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		30160-0005001Response.pdf	128081 c0ed74055c0091ef1040fe2ad17e277a984c43fa	yes	13

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	7
Applicant Arguments/Remarks Made in an Amendment	8	13

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30836 06acdc135263b61abdccff00c31c98254f13ce3c	no	2

Warnings:

Information:

Total Files Size (in bytes):	158917

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/532,546	Filing Date 06/25/2012	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	04/07/2015	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 14	Minus	** 25	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***4	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/CRYSTAL QUEEN/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

26211 7590 07/30/2015
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
HOPE, DARRIN	

ART UNIT	PAPER NUMBER
2173	

NOTIFICATION DATE	DELIVERY MODE
07/30/2015	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 13/532,546	Applicant(s) STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7 April 2015*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1,2,4-13,15 and 16* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,2,4-13,15 and 16* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *25 June 2012* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions. This Office Action is responsive to the communications filed on 7 April 2015. Claims 1-2, 4-13, and 15-16 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1, 4-11, and 13, 15, and 16 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US 2007/015506 A1).

3. **Per claim 1**,Chuen discloses a machine-implemented method of presenting content on a display device (Abstract), the method comprising:

- receiving, in a display host (e.g., Thin Client Application Server 4), a communication (e.g., Step 20 as shown in Fig. 3 'SDP OFFER(THIN CLIENT SESSION PARAMETERS') from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection).* "; paragraph [0132], "*At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment."*), wherein the display host is operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated.* ")*,* wherein each

instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player(e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(paragraph [0153);

- causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device(Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).
- receiving in the display host a second message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the second message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device(Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ").

4. Chuen does not expressly disclose:

- requesting assignment of a unique identifier for the first session from a switchboard server system;
- receiving a unique identifier for the first session from the switchboard server system ; and
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device .

5. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system(Abstract, "*...A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...* "; paragraph [0005], "*...The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier....* ");
- receiving a unique identifier for the first session from the switchboard server system (e.g., Step 420 'PROVIDE A UNIQUE IDENTIFIER' as shown in Fig. 4'; paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015];

paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* "; Examiner's Note: The Examiner reasonably and broadly interprets the game server to be a switchboard server.);

- displaying the unique identifier in the first session (paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* "); and
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

6. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

7. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

8. **Per claim 4,** Chuen and Malik disclose the method of claim 3 further including:

- receiving in the display host a third message from the switchboard server system instructing that particular second content is to be played in the first session using a specified second media player (Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ");
- in response to the third message, retrieving and loading the second media player (Chuen, paragraphs [0149-0152]);
- playing the particular second content in the first session using the specified second media player(Chuen, paragraph [0153]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).

9. **Per claim 5**, Chuen and Malik disclose the method of claim 1 wherein the content comprises video (Chuen, paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.";* paragraph [0019]; Malik, paragraph [0005]*).*

10. **Per claim 6**, Chuen and Malik disclose the method of claim 1 wherein the content comprises streaming media (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 12).

11. **Per claim 7**, Chuen and Malik disclose the method of claim 1 wherein the content comprises visual content (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 1).

12. **Per claim 8**, Chuen and Malik disclose the method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier (Chuen, paragraph [0034]).

13. **Per claim 9**, Chuen and Malik disclose the method of claim 1 further including:

- receiving, in the display host, a communication from a second display device (Malik, paragraph [0033]);
- opening a second session using a second instance of the swappable media player (Malik, paragraph [0034]);

- requesting from the switchboard server system assignment of a second unique identifier for the second session Malik, Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015]);
- receiving a second unique identifier for the second session from the switchboard server system(Malik,paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140...* . ") ;
- displaying the second unique identifier in the second session (Malik, paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* "); and
- causing the second unique identifier to be mirrored onto a virtual client residing on the second display device (Malik, paragraph [0036]; Fig. 2 illustrates

displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

14. **Per claim 10**, Chuen and Malik disclose the method of claim 9 further including:

- receiving in the display host a third message indicating that particular content is to be played in the first session using a specified media player (Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- in response to the third message, retrieving and loading the specified second media player (Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device (Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e., game content 220).

15. **Per claim 11**, Chuen and Malik disclose the method of claim 10 wherein the first and second sessions at least partially overlap in time with one another(Malik, paragraph [0027]; Fig. 2 illustrate wherein the first and second sessions at least partially overlap in

time with one another since all the players are forward the unique identifier to play a multiplayer game instance.).

16. **Per claim 13**.Chuen discloses a system for presenting content comprising:

- a display host (e.g., thin client application server 4) operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]); and
- a switchboard server system(e.g., thin client application server 4), wherein the display host is operable to perform operations including:
- receiving a communication from a display device(e.g., step 20) storing a virtual client (e.g., thin client device 2; paragraph [0018]);
- receiving, in a display host (e.g., Thin Client Application Server 4), a communication from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings*

(RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection). "), wherein the display host is operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated. ")*, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- opening a first session using a first instance of the swappable media player (paragraphs [0007, [0012], [0016], [0018]; paragraph [0133], "*Upon reception of said SDP offer, the Desktop 4 determines that the UE 2 wishes to establish a thin client connection using RFB protocol, determines that RFB protocol and*

proposed attributes are acceptable based on the environment where the UE 2 is located and, at step 22, sends back a SDP Answer Message indicating the RFB and attributes are selected. ");

- receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player(e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(paragraph [0153);
- causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device(Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).

- receiving in the display host a second message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the second message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device(Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* "); but does not expressly disclose:
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device .

17. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system (Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*
- receiving a unique identifier (e.g., unique identifier 115 as shown in Fig. 2) for the first session from the switchboard server system (paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* ") ;
- displaying the unique identifier in the first session (paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier...* ");

- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

18. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more deplay devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

19. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

20. **Per claim 15**, Chuen and Malik disclose the system of claim 14 wherein the display host is further operable to perform operations including:

- receiving a second message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player(Malik, paragraph [0033]);
- retrieving the second media player from a content provider and loading the second media player(Malik, paragraph [0034]);

- playing the particular second content in the first session using the specified second media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

21. Per claim 16, Chuen and Malik disclose the system of claim 13 wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

- receiving a communication from the second display device(Malik, paragraph [0033]);
- in response to receiving the communication from the second display device,opening a second session using a second instance of the swappable media player(Malik, paragraph [0034]);
- requesting from the switchboard server system assignment of a second unique identifier for the second session; receiving a second unique identifier for the second session from the switchboard server system; displaying the second unique identifier in the second session(Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*

- causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170);
- receiving a fourth message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player(Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- retrieving the second media player from a content provider and loading the second media player(Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular second content in the second session using the specified second media player(Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device(Malik, paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

22. Claims 2 and 12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US

2007/0155506 A1), and further in view of Sukeda et al. (Hereinafter, Sukeda, US 2009/0172780 A1).

23. **Per claim 2**, Chuen and Malik disclose the method of claim 1 but do not expressly disclose wherein the unique identifier comprises a QR code.

24. Sukeda discloses wherein the unique identifier comprises a QR code (Sukeda, paragraphs [0052], [0066], [0070], [0077]).

25. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen-Malik the thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

26. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 1.

27. **Per claim 12**, Chuen and Malik disclose the method of claim 1 but do not expressly disclose method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

28. Sukeda discloses wherein the display host retrieves the specified media player from a content provider via the Internet (Abstract; paragraph [0013]).

29. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen-Malik the thin client-server device to improve the device with reasonable expectation that this would result in a thin

client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

30. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen and Malik to obtain the invention as specified in claim 12.

Response to Arguments

31. Applicant's arguments filed 7 April 2015 have been fully considered but they are not persuasive.

32. On page 10, the Applicant argues that “neither Chuen nor Malik, however, teaches or suggests a display host operable to execute multiple instances of a browser "each of which operates as a swappable media player, wherein each instance of the swappable media player is" operable to retrieve and load any of a plurality of different media players needed to play specified content."

33. The Examiner disagrees since Chuen teaches and suggests a display host operable to execute multiple instances of a browser "each of which operates as a swappable media player, wherein each instance of the swappable media player is" operable to retrieve and load any of a plurality of different media players needed to play specified content" (See paragraphs [0011], [0014], [0050], and [0131]).

34. Furthermore, the Applicant argues that “neither Chuen nor Malik, taken alone or in combination, teach or suggest the particular features now recited in the method of claim 2. “

35. The Examiner disagrees since neither Chuen nor Malik were relied upon to disclose claim 2. Sukeda discloses wherein the unique identifier comprises a QR code (Sukeda, paragraphs [0052], [0066], [0070], [0077]).

36. Finally, the Applicant argues that neither Chuen nor Malik disclose the amended claim 1.

37. The Examiner disagrees as described in the above rejection. Therefore, the Examiner maintains the rejection of Claims 1-2, 4-13, and 15-16.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN HOPE whose telephone number is (571)270-5079. The examiner can normally be reached on M-TH - 7-4:30, F - 7-3:30, Alt. Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kieu D. Vu can be reached on (571)272-4057. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DARRIN HOPE/
Examiner, Art Unit 2173

/TADEESE HAILU/
Primary Examiner, Art Unit 2173

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	11/03/2014	07/25/2015							
	1	✓	✓							
	2	✓	✓							
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	Art Unit
	DARRIN HOPE	2173

CPC- SEARCHED		
Symbol	Date	Examiner
G06F3/01	11/3/2014	DH

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
715/716		11/3/2014	DH

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	7/25/2015	DH

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S16	235	(((display or gaming or tablet or personal or laptop))near2 (device or apparatus or terminal or console or computer)) or television) same (send$3 or transmi$9) same "unique identifier" same (host or stb or PC	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:02
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S19	0	S14 and "unique code" and "QR code"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:09
S20	9	S14 and "QR code"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:09
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S25	2	S14 and television same "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:12
S26	410	S14 and "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:14
S27	2	S14 and "unique identifier" same television	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:14
S28	47	S14 and "unique identifier" same display	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:15

S29	7	S14 and "unique identifier" same display same host	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:15
S30	0	S14 and humpelmann	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:16
S31	0	S14 and humpelman	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:16
S32	42	S14 and hump$9	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:16
S33	2	S14 and hump$9.inv.	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:17
S34	167	S14 and "thin client"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:17
S35	3	S14 and "thin client" same identifier	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:18
S36	0	S14 and "thin client" same identifier same television	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:19
S37	9	S14 and identifier same television same unique	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:19
S38	9	S14 and QR	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:20
S39	25	S14 and google.as.	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:02
S40	0	S14 and hromecast	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:05
S41	37	chromecast	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:05
S42	12	chromecast and "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:07
S43	41	S1 and "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:07
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S62	2500	S49 S50 S51 S52 S53 S54 S55 S56 S57 S58 S59 S60 S61	US-PGPUB; USPAT	OR	OFF	2015/07/25 13:44
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S64	18	S62 and play near2 tv	US-PGPUB; USPAT	OR	OFF	2015/07/25 13:46
S65	43	S62 and callback	US-PGPUB; USPAT	OR	OFF	2015/07/25 13:52
S66	1	("20070155506").pn.	US-PGPUB; USPAT	OR	OFF	2015/07/25 13:59
S67	1	("20070155506").pn. and "160"	US-PGPUB; USPAT	OR	OFF	2015/07/25 14:00
S68	1	("20070155506").pn. and "220"	US-PGPUB; USPAT	OR	OFF	2015/07/25 14:04
S69	1	("20090172780 ").pn. and display with switching	US-PGPUB; USPAT	OR	OFF	2015/07/25 15:14

7/25/2015 5:44:22 PM
C:\Users\dhope\Documents\EAST\Workspaces\13532546amd.wsp

To: PATDOCTC@fr.com,,
From: PAIR_eOfficeAction@uspto.gov
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Subject: Private PAIR Correspondence Notification for Customer Number 26211

Jul 30, 2015 05:44:47 AM

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	CTFR	07/30/2015	30160-0005001

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Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	13/532,546
Filing Date	June 25, 2012
First Named Inventor	David Strober
Art Unit	
Examiner Name	
Attorney Docket Number	30160-0005001

This is a Request for Continued Examination (RCE) under 37 CFR 1 .114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. ☐ Other _____

   b. ☒ Enclosed

      i. ☒ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv. ☐ Other _____

2. Miscellaneous

   Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a

   a. ☐ period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
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      i. ☒ RCE fee required under 37 CFR 1.17(e)

      ii ☒ Extension of time fee (37 CFR 1.136 and 1.17)

      iii ☒ Other any deficiencies

   b. ☐ Check in the amount of $ _____ enclosed

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	/Richard Wong/	Date	January 28, 2016
Name (Print/Type)	Richard Wong	Registration No.	73,259

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

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This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	David Strober	Art Unit	:	2173
Serial No.	:	13/532,546	Examiner	:	Darrin Hope
Filed	:	June 25, 2012	Conf. No.	:	9012

Title : VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

MAIL STOP RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT IN REPLY TO ACTION OF JULY 30, 2015

Please consider the following reply.

Amendments to the claims

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A machine-implemented method of presenting content on a display device, the method comprising:

receiving, in a display host, a communication from a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from a switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session;

causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;

receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier;

in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving in the display host a second message from the switchboard server system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier; and

executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device,

the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player.

2. (Original) The method of claim 1 wherein the unique identifier comprises a QR code.

3. (Canceled)

4. (Previously Presented) The method of claim 1 further including:

receiving in the display host a third message from the switchboard server system instructing that particular second content is to be played in the first session using a specified second media player;

in response to the third message, retrieving and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

5. (Original) The method of claim 1 wherein the content comprises video.

6. (Original) The method of claim 1 wherein the content comprises streaming media.

7. (Original) The method of claim 1 wherein the content comprises visual content.

8. (Original) The method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier.

9. (Currently Amended) The method of claim 1 further including:

receiving, in the display host, a communication from a second display device;

opening a second session using a second instance of the swappable media player while the first instance of the swappable media player is open;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session; and

causing the second unique identifier to be mirrored onto a virtual client residing on the second display device.

10. (Previously Presented) The method of claim 9 further including:

receiving in the display host a third message indicating that particular second content is to be played in the second session using a specified second media player;

in response to the third message, retrieving and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

11. (Original) The method of claim 10 wherein the first and second sessions at least partially overlap in time with one another.

12. (Original) The method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

13. (Currently Amended) A system for presenting content comprising:

a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; and

a switchboard server system,

wherein the display host is operable to perform operations including:

receiving a communication from a display device storing a virtual client;

in response to receiving the communication, opening a first session using a first instance of the swappable media player;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session;

causing the image of the unique identifier to be mirrored onto the virtual client residing on the display device

receiving a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier;

in response to receiving the first message, retrieving and the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving a second message from the switchboard server system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier; and

executing the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device,

operations including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player.

14. (Canceled)

15. (Previously Presented) The system of claim 13 wherein the display host is further operable to perform operations including:

receiving a third message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player;

in response to receiving the third message, retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the first session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

16. (Previously Presented) The system of claim 13 wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

receiving a communication from the second display device;

in response to receiving the communication from the second display device, opening a second session using a second instance of the swappable media player;

requesting from the switchboard server system assignment of a second unique identifier for the second session;

receiving a second unique identifier for the second session from the switchboard server system;

displaying the second unique identifier in the second session;

causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device.

receiving a fourth message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player;

retrieving the second media player from a content provider and loading the second media player;

playing the particular second content in the second session using the specified second media player; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device.

17 - 25. (Canceled)

26. (New) The method of claim 1, wherein converting the particular play control command into the corresponding code comprises selecting the corresponding code from among a plurality of specific codes, each of which represents a corresponding playback control command for a respective media player.

27. (New) The method of claim 1, wherein converting the particular play control command into the corresponding code comprises:

determining an identity of the specific media player;

loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the specific media player; and

converting the command into the corresponding code based on the set of protocols or application programming interfaces.

28. (New) A machine-implemented method of presenting content on a display device, the method comprising:

receiving, in a display host, a communication from a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from a switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session;

causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;

receiving, in the switchboard server system, a first message originating in a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises the unique identifier and a first command instructing that particular content be played in the first session using a specified one of the media players,

converting the first command into a corresponding first code to control playing of the particular content on the specified media player;

receiving in the display host the first code and information corresponding to the unique identifier from the switchboard server system;

in response to receiving the first code and the unique identifier, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving, in the switchboard server system, a second message originating in the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second command instructing that a particular play control command be executed with respect to the particular content being played in the first session,

converting the second command into a corresponding second code to control playing of the particular content on the specified media player;

receiving in the display host a the second code and information corresponding to the unique identifier from the switchboard server system; and

executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device.

REMARKS

Claims 1-2, 4-13, 15-16, and 26-28 are presented for further examination.

Claim Rejections – 35 USC § 103

Claims 1, 4-11, 13, and 15-16 were rejected under pre-AIA 35 U.S.C. § 103(a) as allegedly being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) (hereinafter "Fok Ah Chuen") in view of Malik (US 2007/0155506 A1) (hereinafter "Malik").

Claims 2 and 12 were rejected under pre-AIA 35 U.S.C. § 103(a) as allegedly being unpatentable over Fok Ah Chuen in view of Malik, and further in view of Sukeda et al. (US 2009/0172780 A1) (hereinafter "Sukeda").

Reconsideration is respectfully in view of the foregoing amendments and the following remarks.

Claim 1 has been amended to recite "the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player." Support for the amendments can be found, for example, in par. [0029] of the specification as originally filed. No new matter has been added.

Fok Ah Chuen, Malik, and Sukeda do not disclose or suggest such a feature, either alone or in any combination. Fok Ah Chuen discloses a "method for establishing a Thin Client session between a Thin Client device … and a Thin Client server" (*see* Abstract). Malik discloses implementations that "enable an interactive game" (*see* Abstract). Sukeda discloses implementations "for displaying various contents such as moving images, still images, and texts" (*see* Abstract). However, none of these references discloses or suggests converting commands at all, much less converting a play control command into a corresponding code to control playing of content on a particular media player. As such, Fok Ah Chuen, Malik, and Sukeda do not disclose or suggest "the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player," as recited in the amended claim.

Therefore, in view of the foregoing amendments and remarks, the rejection of claim 1 should be withdrawn and the claim allowed. Claims 2 and 4-12 depend either directly or indirectly from claim 1, and for at least the same reasons, the rejection of claims 2 and 4-12 also should be withdrawn and the claims allowed.

Claim 13 has been amended to recite similar limitations as claim 1, and for at least the same reasons as discussed above, the rejection of claim 13 also should be withdrawn and the claim allowed. Claims 15 and 16 depend from claim 13 and for at least the same reasons, the rejection of claims 15 and 16 also should be withdrawn and the claims allowed.

Claim 9 depends from claim 1, and should be allowed for at least the same reasons as discussed above. Claim 9 has also been amended to recite:

> 9. The method of claim 1 further including:
>
> receiving, in the display host, a communication from a second display device;
>
> opening a second session using a second instance of the swappable media player <u>while the first instance of the swappable media player is open</u>;
>
> requesting from the switchboard server system assignment of a second unique identifier for the second session;
>
> receiving a second unique identifier for the second session from the switchboard server system;
>
> displaying the second unique identifier in the second session; and
>
> causing the second unique identifier to be mirrored onto a virtual client residing on the second display device.

That is, a <u>*second*</u> session is opened using a <u>*second*</u> instance of a swappable media player <u>*while the first instance of the swappable media player is open*</u>, and a <u>*second*</u> unique identifier is

displayed in the *second* session. Support for the amendments can be found, for example, in par. [0017] of the specification as originally filed. No new matter has been added.

In the present Office Action, the Office contends that Malik teaches the features of previously presented claim 9. However, Malik does not disclose or suggest that a *second* session is opened using a *second* instance of a swappable media player *while the first instance of the swappable media player is open*, and that a *second* unique identifier is displayed in the *second* session. Indeed, Malik merely discloses that a system that "provides a unique identifier associated with an instance of the interactive game" (*see* par. [0015]). However, Malik does not disclose or suggest opening multiple instances of the "interactive game" simultaneously and mirroring a different unique identifier on each of the instances. Therefore, Malik does not disclose or suggest each of the features of amended claim 9.

Therefore, for at least this additional reason, claim 9 should be allowed.

New Claims

Newly presented claims 26 and 27 depend from claim 1, and should be allowable at least for the reasons discussed above. Furthermore, these claims recite additional language that renders them independently patentable. Support for the features recited in these claims can be found, for example, in par. [0029] of the specification as originally filed.

Newly presented claim 28 recites similar subject matter as claim 1, and also should be allowable at least for the reasons discussed above. For example, claim 28 recites "receiving … a first message … compris[ing] the unique identifier and a first command instructing that particular content be played in the first session using a specified one of the media players," and "converting the first command into a corresponding first code to control playing of the particular content on the specified media player." Claim 28 also recites "receiving … a second message … compris[ing] the unique identifier and a second command instructing that a particular play control command be executed with respect to the particular content being played in the first session," and "converting the second command into a corresponding second code to control playing of the particular content on the specified media player." Support for the features recited in claim 28 can be found, for example, in par. [0029] of the specification as originally filed.

Conclusion

The Applicant submits that all of the claims are in condition for allowance and request entry of the proposed amendments and confirmation of allowance by the Examiner. It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify applicants' agreement. In addition, because the arguments made above may not be exhaustive, there may be additional reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Further, the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The fee for a three-month extension of time is being paid with this reply on the Electronic Filing System. Apply those fees and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: January 28, 2016

/Richard Wong/
Richard Wong
Reg. No. 73,259

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

30901138.doc

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Richard Wong/Maryann White
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
Request for Continued Examination	2801	1	600	600
		Total in USD ($)		**1300**

Electronic Acknowledgement Receipt	
EFS ID:	24759290
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Richard Wong/Maryann White
Filer Authorized By:	Richard Wong
Attorney Docket Number:	30160-0005001
Receipt Date:	28-JAN-2016
Filing Date:	25-JUN-2012
Time Stamp:	20:06:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1300
RAM confirmation Number	8492
Deposit Account	061050
Authorized User	FISH & RICHARDSON P C
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	30160-0005001RCE.pdf	141618 b41ce77d0eb814c990a9643b05f8f50c935ce798	no	1
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
2		30160-0005001Response.pdf	107557 7cf033389c891daff26553658dd83679268c77c3	yes	13

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	9
Applicant Arguments/Remarks Made in an Amendment	10	13

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32888 f5c380a30ab7e09e21a7cd1becd7fb6f776aa793	no	2
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/532,546	Filing Date 06/25/2012	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	01/28/2016	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 17	Minus	** 25	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***4	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	**0**

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/LAVINIA JOHNSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

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P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
HOPE, DARRIN	

ART UNIT	PAPER NUMBER
2173	

NOTIFICATION DATE	DELIVERY MODE
07/15/2016	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 13/532,546	Applicant(s) STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/28/2016*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1,2,4-13,15,16 and 26-28* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,2,4-13,15,16 and 26-28* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *25 June 2012* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions. This Office Action is responsive to the communications filed on 28 January 2016. Claims 1-2, 4-13, 15-16, and 26-28 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1, 4-8, 13, 15, 16, 26, 27, and 28 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US 2007/0155506 A1), and further in view of Mahajan et al. (Hereinafter, Mahajan, US 2009/0248802 A1).

3. **Per claim 1**,Chuen discloses a machine-implemented method of presenting content on a display device (Abstract), the method comprising:

- receiving, in a display host (e.g., Thin Client Application Server 4), a communication (e.g., Step 20 as shown in Fig. 3 'SDP OFFER(THIN CLIENT SESSION PARAMETERS') from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection).* "; paragraph [0132], "*At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment."*), wherein the display host is operable to execute multiple instances of a browser (Abstract; e.g., thin client viewer as shown in Fig 2; paragraph [0018]; paragraph [0022]; paragraph [0046]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependent upon the area A such as the area B is illustrated.* "),

wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer,… ;* paragraph [0074]; paragraph [0082]*) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player(e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(paragraph [0153]);

- causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device(Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).
- receiving in the display host a second message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the second message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device(Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ").

4. Chuen does not expressly disclose:

- requesting assignment of a unique identifier for the first session from a switchboard server system;
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device; and
- the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player.

5. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system(Abstract, "…*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game…* "; paragraph [0005], "*…The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier….* ");
- receiving a unique identifier for the first session from the switchboard server system (e.g., Step 420 'PROVIDE A UNIQUE IDENTIFIER' as shown in Fig. 4'; paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In*

response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier. …"; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140… .* "; Examiner's Note: The Examiner reasonably and broadly interprets the game server to be a switchboard server.);

- displaying the unique identifier in the first session (paragraph [0035], "…*As noted by the encircled number "5," the host and local players can observe unique identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier…* "); and
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

6. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more display

devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

7. Mahajan discloses the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player (e.g., method 500 as shown in Fig. 5; paragraph [0014]; paragraph [0034]; paragraph [0037] paragraph [0050]; paragraphs [0059-0063]).

8. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Mahajan system and method for managing multimedia operations in remote sessions in the Chuen-Malik thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to manage multimedia operations in remote sessions. This method for improving the thin client-server device of Chuen and Malik was within the ordinary ability of one of ordinary skill in the art based on the teachings of Mahajan.

9.

10. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, and Mahajan to obtain the invention as specified in claim 1.

11. **Per claim 4,** Chuen, Malik, and Mahajan disclose the method of claim 3 further including:

- receiving in the display host a third message from the switchboard server system instructing that particular second content is to be played in the first session using a specified second media player (Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ");
- in response to the third message, retrieving and loading the second media player (Chuen, paragraphs [0149-0152]);
- playing the particular second content in the first session using the specified second media player(Chuen, paragraph [0153]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).

12. **Per claim 5**, Chuen, Malik, and Mahajan disclose the method of claim 1 wherein the content comprises video (Chuen, paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video*

transfer, audio transfer, . . .) pertaining to a session of remote desktop control.";

paragraph [0019]; Malik, paragraph [0005]*).*

13. **Per claim 6**, Chuen, Malik, and Mahajan disclose the method of claim 1 wherein the content comprises streaming media (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 12).

14. **Per claim 7**, Chuen, Malik, and Mahajan disclose the method of claim 1 wherein the content comprises visual content (Chuen, paragraphs [0015], [0017], [0018], [0026], [0032]; Malik, See claim 1).

15. **Per claim 8**, Chuen, Malik, and Mahajan disclose the method of claim 1 further including contacting the switchboard server system to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the previously assigned unique identifier (Chuen, paragraph [0034]).

- playing the particular content in the first session using the specified media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device (Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e., game content 220).

16. **Per claim 13**.Chuen discloses a system for presenting content comprising:

- a display host (e.g., thin client application server 4) operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]); and
- a switchboard server system(e.g., thin client application server 4), wherein the display host is operable to perform operations including:
- receiving a communication from a display device(e.g., step 20) storing a virtual client (e.g., thin client device 2; paragraph [0018]);
- receiving, in a display host (e.g., Thin Client Application Server 4), a communication from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or*

Circuit Switched connection). "), wherein the display host is operable to execute multiple instances of a browser (e.g., thin client viewer as shown in Fig 2; paragraph [0022]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependant upon the area A such as the area B is illustrated. ")*, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer, . . .) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- opening a first session using a first instance of the swappable media player (paragraphs [0007, [0012], [0016], [0018]; paragraph [0133], "*Upon reception of said SDP offer, the Desktop 4 determines that the UE 2 wishes to establish a thin client connection using RFB protocol, determines that RFB protocol and proposed attributes are acceptable based on the environment where the UE 2 is located and, at step 22, sends back a SDP Answer Message indicating the RFB and attributes are selected.* ");

- receiving in the display host a first message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- in response to receiving the first message, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player(e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(paragraph [0153);
- causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device(Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).
- receiving in the display host a second message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the second message is sent by the

switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);

- executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device(Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* "); but does not expressly disclose:
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device,
- converting the first command into a corresponding first code to control playing of the particular content on the specified media player;

- operations including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player.

17. Malik discloses:

- requesting assignment of a unique identifier for the first session from a switchboard server system (Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*
- receiving a unique identifier (e.g., unique identifier 115 as shown in Fig. 2) for the first session from the switchboard server system (paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier. ...*"; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* ") ;
- displaying the unique identifier in the first session (paragraph [0035], "...*As noted by the encircled number "5," the host and local players can observe unique*

identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier... ");

- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

18. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more display devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

19. Mahajan discloses operations including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player (e.g., method 500 as shown in Fig. 5; paragraph [0014]; paragraph [0034]; paragraph [0037] paragraph [0050]; paragraphs [0059-0063]).

20. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Mahajan system and method for managing multimedia operations in remote sessions in the Chuen-Malik thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server

device that could make it easier to manage multimedia operations in remote sessions. This method for improving the thin client-server device of Chuen and Malik was within the ordinary ability of one of ordinary skill in the art based on the teachings of Mahajan.

21.

22. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, and Mahajan to obtain the invention as specified in claim 13.

23. **Per claim 15**, Chuen, Malik, and Mahajan disclose the system of claim 14 wherein the display host is further operable to perform operations including:

- receiving a second message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player(Malik, paragraph [0033]);
- retrieving the second media player from a content provider and loading the second media player(Malik, paragraph [0034]);
- playing the particular second content in the first session using the specified second media player (Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the display device(Chuen, paragraphs [0141-0142]; Fig. 4 illustrate establishing a connection so that content displayed on client device 2 can be redirected for display an a television 40.;Malik, Fig. 2 illustrates causing a presentation of the content to be mirrored onto the virtual client residing on the display device, i.e, game content 220).

24. Per claim 16, Chuen, Malik, and Mahajan disclose the system of claim 13 wherein the system includes a second display device storing a virtual client, wherein the display host is further operable to perform operations including:

- receiving a communication from the second display device(Malik, paragraph [0033]);
- in response to receiving the communication from the second display device,opening a second session using a second instance of the swappable media player(Malik, paragraph [0034]);
- requesting from the switchboard server system assignment of a second unique identifier for the second session; receiving a second unique identifier for the second session from the switchboard server system; displaying the second unique identifier in the second session(Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015])*;*
- causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170);
- receiving a fourth message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player(Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising*

Thin client session attributes and further parameters required for the appropriate SIP session establishment.);

- retrieving the second media player from a content provider and loading the second media player(Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular second content in the second session using the specified second media player(Chuen, paragraph [0139]); and
- causing a presentation of the second content to be mirrored onto the virtual client residing on the second display device(Malik, paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

25. **Per claim 26**, Chuen, Malik, and Mahajan disclose the method of claim 1, wherein converting the particular play control command into the corresponding code comprises selecting the corresponding code from among a plurality of specific codes, each of which represents a corresponding playback control command for a respective media player (Mahajan, paragraph [0014] "… *The client can convert the generic commands into commands that are specific to a platform supported by the client. The client's platform can then process the commands to achieve the desired effect (i.e., play, pause, stop, etc.) on the client device.* ").

26. **Per claim 27**, Chuen, Malik, and Mahajan disclose the method of claim 1, wherein converting the particular play control command into the corresponding code comprises:

- determining an identity of the specific media player (Mahajan, paragraph [0014]; paragraph [0036]);
- loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the specific media player(Mahajan, paragraph [0037]); and
- converting the command into the corresponding code based on the set of protocols or application programming interfaces(Mahajan, paragraphs [0038-0041]).

27. **Per claim 28,** Chuen discloses a machine-implemented method of presenting content on a display device (Abstract), the method comprising:

- receiving, in a display host (e.g., Thin Client Application Server 4), a communication (e.g., Step 20 as shown in Fig. 3 'SDP OFFER(THIN CLIENT SESSION PARAMETERS') from a display device (e.g., Thin Client Device 2; paragraphs [0131], "*The UE 2 connects through an IP access network for communicating with the remote desktop PC 4 and initiates a SDP Offer/Answer containing thin client parameters including Graphics encoding scheme, the transport settings (RFB (remote framebuffer), RDP (Remote Desktop Protocol), ICA (Independent Computing Architecture protocol), or pixels/RTP (Real-time Transport Protocol), IP Addresses and port number and radio bearer settings (Packet switched or Circuit Switched connection).* "; paragraph [0132], "*At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client*

session attributes and further parameters required for the appropriate SIP session establishment."), wherein the display host is operable to execute multiple instances of a browser (Abstract; e.g., thin client viewer as shown in Fig 2; paragraph [0018]; paragraph [0022]; paragraph [0046]) each of which operates as a swappable media player(paragraph [00127], "*FIG. 2 illustrates a thin client viewer rendering a remote application display (remote desktop) consisting of several areas that can be dynamically adapted. The Area A is the background of the remote desktop that is graphically updated based on RFB protocol. The other areas are dependent upon the area A such as the area B is illustrated. "),* wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content (Abstract; paragraph [0014], "*An exemplary object of the present invention is to add remote desktop control to existing functionalities in order to negotiate the media within a SIP session and allow adaptive media transfer (i.e. video transfer, audio transfer,… ;* paragraph [0074]; paragraph [0082]*) pertaining to a session of remote desktop control.* "; paragraphs [0019], [0026], [0046], [0050]);

- in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player (e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);
- playing the particular content in the first session using the specified media player(paragraph [0153]);

- receiving, in the switchboard server system, a second message originating in the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second command instructing that a particular play control command be executed with respect to the particular content being played in the first session (e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);
- causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device(Fig. 4 illustrates causing a presentation of the second content to be mirrored onto the virtual client residing on the display device where content from one device is redirected for display on another device.).
- receiving in the display host a second message from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the second message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier(e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);

- executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device(Chuen, paragraph [0147], "*The Desktop 4 receives the message, interprets the message and prepares to redirect the media to the TV 40. No screen updates corresponding to the area where the video output is located is sent to the UE 2. This requires the Answer message to include an indication as to whether the output stream still is streamed to the mobile device or not.* ").

28. Chuen does not expressly disclose:

- requesting assignment of a unique identifier for the first session from a switchboard server system;
- receiving a unique identifier for the first session from the switchboard server system ;
- displaying the unique identifier in the first session;
- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;
- converting the first command into a corresponding first code to control playing of the particular content on the specified media player; and
- converting the second command into a corresponding second code to control playing of the particular content on the specified media player.

Malik discloses:

- requesting ass ignment of a unique identifier for the first session from a switchboard server system(Abstract, "…*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game…* "; paragraph [0005], "*…The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier….* ");
- receiving a unique identifier for the first session from the switchboard server system (e.g., Step 420 'PROVIDE A UNIQUE IDENTIFIER' as shown in Fig. 4'; paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* …"; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140… .* "; Examiner's Note: The Examiner reasonably and broadly interprets the game server to be a switchboard server.);
- displaying the unique identifier in the first session (paragraph [0035], "…*As noted by the encircled number "5," the host and local players can observe unique*

identifier 115 in the video information presented in display 134 and/or hear a message that includes the unique identifier… "); and

- causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device (paragraph [0036]; Fig. 2 illustrates displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

29. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Malik unique identifier in Chuen's thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to register the connection of one or more display devices to a display host. This method for improving the thin client-server device of Chuen was within the ordinary ability of one of ordinary skill in the art based on the teachings of Malik.

30. Mahajan discloses:

- converting the first command into a corresponding first code to control playing of the particular content on the specified media player(e.g., method 500 as shown in Fig. 5; paragraph [0014]; paragraph [0034]; paragraph [0037] paragraph [0050]; paragraphs [0059-0063]); and
- converting the second command into a corresponding second code to control playing of the particular content on the specified media player(e.g., method 500 as shown in Fig. 5; paragraph [0014]; paragraph [0034]; paragraph [0037] paragraph [0050]; paragraphs [0059-0063]).

31. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Mahajan system and method for managing multimedia operations in remote sessions in the Chuen-Malik thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could make it easier to manage multimedia operations in remote sessions. This method for improving the thin client-server device of Chuen and Malik was within the ordinary ability of one of ordinary skill in the art based on the teachings of Mahajan.

32.

33. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, and Mahajan to obtain the invention as specified in claim 28.

34. **Per claim 28**, Chuen discloses a machine-implemented method of presenting content on a display device (Abstract)the method comprising:

receiving, in a display host, a communication from a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player;

requesting assignment of a unique identifier for the first session from a switchboard server system;

receiving a unique identifier for the first session from the switchboard server system;

displaying the unique identifier in the first session;

causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;

receiving, in the switchboard server system, a first message originating in a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises the unique identifier and a first command instructing that particular content be played in the first session using a specified one of the media players,

converting the first command into a corresponding first code to control playing of the particular content on the specified media player;

receiving in the display host the first code and information corresponding to the unique identifier from the switchboard server system;

in response to receiving the first code and the unique identifier, retrieving and loading, by the display host, the specified media player using the first instance of the swappable media player;

playing the particular content in the first session using the specified media player;

causing a presentation of the particular content to be mirrored onto the virtual client residing on the display device;

receiving, in the switchboard server system, a second message originating in the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second command instructing that a particular play

control command be executed with respect to the particular content being played in the first session,

converting the second command into a corresponding second code to control playing of the particular content on the specified media player;

receiving in the display host a the second code and information corresponding to the unique identifier from the switchboard server system; and

executing, by the display host, the particular play control command with respect to the particular content being played in the first session that is mirrored onto the virtual client residing on the display device.

35.

36.

37. Claims 2 and 12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US 2007/0155506 A1), Mahajan et al. (Hereinafter, Mahajan, US 2009/0248802 A1), and further in view of Sukeda et al. (Hereinafter, Sukeda, US 2009/0172780 A1).

38. Per claim 2, Chuen, Malik, and Mahajan disclose the method of claim 1 but do not expressly disclose wherein the unique identifier comprises a QR code.

39. Sukeda discloses wherein the unique identifier comprises a QR code (Sukeda, paragraphs [0052], [0066], [0070], [0077]).

40. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen, Malik, and Mahajan thin client-server device to improve the device with reasonable expectation that this would result in

a thin client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

41. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, Mahajan, and Sukeda to obtain the invention as specified in claim 2.

42. **Per claim 12**, Chuen, Malik, and Mahajan disclose the method of claim 1 but do not expressly disclose method of claim 3 wherein the display host retrieves the specified media player from a content provider via the Internet.

43. Sukeda discloses wherein the display host retrieves the specified media player from a content provider via the Internet (Abstract; paragraph [0013]).

44. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Sukeda QR code in the Chuen, Malik, and Mahajan thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could display a QR code as part of an invitation to remote users to establish a session (See Malik paragraph [0035]).

45. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, Mahajan, and Sukeda to obtain the invention as specified in claim 12.

46. Claims 9, 10, 11 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 A1) in view of Malik (US 2007/0155506 A1), Mahajan et al. (Hereinafter, Mahajan, US 2009/0248802 A1), and further in view of Hu et al. (Hereinafter, Hu, US 8,402,494 B1).

47. **Per claim 9**, Chuen, Malik, and Mahajan disclose the method of claim 1 further including:

- receiving, in the display host, a communication from a second display device (Malik, paragraph [0033]);
- requesting from the switchboard server system assignment of a second unique identifier for the second session Malik, Abstract, "...*A game server, in response to a user request, provides a unique identifier associated with an instance of the interactive game...";* paragraph [0015]);
- receiving a second unique identifier for the second session from the switchboard server system(Malik, paragraph [0005], "*The first controller is used to establish a communication session with the game server to communicate a request to start a game. In response, the game server communicates a unique identifier. The game server then registers one or more wireless communication devices that communicate the unique identifier.* ..."; paragraph [0006]; paragraph [0007]; paragraph [0015]; paragraphs [0021-0022]; paragraphs [0027], [0029-0030]; paragraph [0035], "*As indicated by the encircled number "4," game server 110 in turn initiates a game instance 112, which includes unique identifier 115. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140. Unique identifier 115 is transmitted from game server 110 to display 134 via set top box 140... .* ") ; and
- causing the second unique identifier to be mirrored onto a virtual client residing on the second display device (Malik, paragraph [0036]; Fig. 2 illustrates

displaying unique identifier 115 on display 130. The unique identifier is forwarded to remote display devices, e.g., 160, 162, and 170).

48. Chuen, Malik, and Mahajan do not expressly disclose opening a second session using a second instance of the swappable media player.

49. Hu discloses opening a second session using a second instance of the swappable media player (Fig. 2; column 5, lines 4-50).

50. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the Hu content switching in the Chuen, Malik, and Mahajan thin client-server device to improve the device with reasonable expectation that this would result in a thin client-server device that could allow for seamless switching of content.

51. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Chuen, Malik, Mahajan, and Hu to obtain the invention as specified in claim 9.

52. **Per claim 10**, Chuen, Malik, Mahajan, and Hu disclose the method of claim 9 further including:

- receiving in the display host a third message indicating that particular content is to be played in the first session using a specified media player (Chuen, e.g., Step 20 as shown in Fig. 2; paragraphs [0132], *At step 20, the UE 2 transmits to the Desktop 4 the SDP offer comprising Thin client session attributes and further parameters required for the appropriate SIP session establishment.*);

- in response to the third message, retrieving and loading the specified second media player (Chuen, e.g., Steps 22-28 as shown in Fig. 3; paragraph [0133-0138]);

53. **Per claim 11**, Chuen, Malik, Mahajan, and Hu disclose the method of claim 10 wherein the first and second sessions at least partially overlap in time with one another (Malik, paragraph [0027]; Fig. 2 illustrate wherein the first and second sessions at least partially overlap in time with one another since all the players are forward the unique identifier to play a multiplayer game instance.).

Response to Arguments

54. Applicant's arguments filed 28 January 2016 have been fully considered but they are not persuasive.

55. On pages 10-11, the Applicant argues that Fok Ah Chuen, Malik, and Sukeda do not disclose or suggest "the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player."

56. The Examiner disagrees since Fok Ah Chuen, Malik, and Sukeda were not relied upon to disclose or suggest "the method including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player." Mahajan discloses operations including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular

media player (e.g., method 500 as shown in Fig. 5; paragraph [0014]; paragraph [0034]; paragraph [0037] paragraph [0050]; paragraphs [0059-0063]).

57. Therefore, the rejection of claim 1 cannot be withdrawn and the claim cannot be allowed in view of the new rejection of claim 1. Claims 2 and 4-12 depend either directly or indirectly from claim 1, and for at least the same reasons, the rejection of claims 2 and 4-12 also cannot be withdrawn and the claims cannot be allowed.

58. Claim 13 has been amended to recite similar limitations as claim 1, and for at least the same reasons as discussed above, the rejection of claim 13 also cannot be withdrawn and the claim cannot be allowed. Claims 15 and 16 depend from claim 13 and for at least the same reasons, the rejection of claims 15 and 16 also cannot withdrawn and the claims cannot allowed.

59. Furthermore, the Applicant argues, with respect to claim 9, that “Malik does not disclose or suggest that a second session is opened using a second instance of a swappable media player while the first instance of the swappable media laver is open, and that a second unique identifier is displayed in the second session.

60. The Examiner disagrees since Fok Ah Chuen, Malik, and Sukeda were not relied upon to disclose or suggest that a second session is opened using a second instance of a swappable media player while the first instance of the swappable media laver is open, and that a second unique identifier is displayed in the second session.

61. Therefore, the Examiner maintains the rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN HOPE whose telephone number is (571)270-5079. The examiner can normally be reached on M-TH - 7-4:30, F - 7-3:30, Alt. Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kieu D. Vu can be reached on (571)272-4057. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DARRIN HOPE/
Examiner, Art Unit 2173

/TADEESE HAILU/

Primary Examiner, Art Unit 2173

Notice of References Cited	Application/Control No. 13/532,546	Applicant(s)/Patent Under Reexamination STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-8,402,494 B1	03-2013	Hu; Ningning	H04N5/268	709/230
*	B	US-2009/0248802 A1	10-2009	Mahajan; Rajneesh	G06F9/4445	709/204
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	11/03/2014	07/25/2015	07/08/2016						
	1	✓	✓	✓						
	2	✓	✓	✓						
	3	✓	-	-						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	✓	✓						
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S14	2500	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13	US-PGPUB; USPAT	OR	OFF	2015/07/24 06:54
S15	1037	((display near2 (device or apparatus or terminal)) or television) same (send$3 or transmi$9) same "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 06:57
S16	235	(((display or gaming or tablet or personal or laptop))near2 (device or apparatus or terminal or console or computer)) or television) same (send$3 or transmi$9) same "unique identifier" same (host or stb or PC	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:02
S18	10	S16 and S14	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:05
S19	0	S14 and "unique code" and "QR code"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:09
S20	9	S14 and "QR code"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:09
S21	0	S14 and television with "unique code"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:11
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S26	410	S14 and "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:14
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S28	47	S14 and "unique identifier" same display	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:15
S29	7	S14 and "unique identifier" same display same host	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:15
S30	0	S14 and humpelmann	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:16
S31	0	S14 and humpelman	US-	OR	OFF	2015/07/24

			PGPUB; USPAT			07:16
S32	42	S14 and hump$9	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:16
S33	2	S14 and hump$9.inv.	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:17
S34	167	S14 and "thin client"	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:17
S35	3	S14 and "thin client" same identifier	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:18
S36	0	S14 and "thin client" same identifier same television	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:19
S37	9	S14 and identifier same television same unique	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:19
S38	9	S14 and QR	US-PGPUB; USPAT	OR	OFF	2015/07/24 07:20
S39	25	S14 and google.as.	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:02
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S41	37	chromecast	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:05
S42	12	chromecast and "unique identifier"	US-PGPUB; USPAT	OR	OFF	2015/07/24 08:07
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S88	5	S83 and thin$1client with media with player	US-PGPUB; USPAT	OR	OFF	2016/06/29 08:21
S89	5	S83 and thin$1client same media with player	US-PGPUB; USPAT	OR	OFF	2016/06/29 08:22
S90	5	S83 and thin$1client same media same player	US-PGPUB; USPAT	OR	OFF	2016/06/29 08:22
S91	21	S83 and thin$1client same player	US-PGPUB; USPAT	OR	OFF	2016/06/29 08:23
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			USPAT			
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S100	1	("20120102209").PN. and rfb	US-PGPUB; USPAT	OR	OFF	2016/06/29 09:57
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S103	2	"US 20130031478"	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2016/06/29 13:55
S104	0	AUDI OBOX.as.	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:06
S105	5	AUDI OBOX	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:06
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S119	2500	S106 S107 S108 S109 S110 S111 S112 S113 S114 S115 S116 S117 S118	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:07
S120	12	cloud$1based and S119	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:07
S121	0	cloud$1based and S119 and saas	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:12
S122	16350	saas	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:12
S123	13343	saas and cloud	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:12
S124	662	saas and cloud and "715".clas.	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:13
S125	516	hospitality with entertainment	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:24
S126	27	hospitality with entertainment and QR with code	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:27
S127	1	hospitality with entertainment and QR with code and thin$1client	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:29
S128	490	smart with signage	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:32
S129	35	samsung.as. and smart with signage	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:32
S130	3	broadsign.as.	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:38
S131	19	saas and cloud and "715".clas. and QR	US-	OR	OFF	2016/06/29

		with code	PGPUB; USPAT			14:41
S132	3	casting and cloud and "715".clas. and QR with code	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:43
S133	0	cloud$1based with media with player and "715".clas. and QR with code	US-PGPUB; USPAT	OR	OFF	2016/06/29 14:46
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S156	1	S153 and swap$9 same (first with second with instance)	US-PGPUB; USPAT	OR	OFF	2016/07/06 12:45
S157	9	S153 and "media player" same (first with second with instance)	US-PGPUB; USPAT	OR	OFF	2016/07/06 12:46
S158	6	S153 and switch$3 same (first with second with instance)	US-PGPUB; USPAT	OR	OFF	2016/07/06 12:54
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S162	0	S153 and display$3 same (first with second with instance) same codec	US-PGPUB; USPAT	OR	OFF	2016/07/06 12:59
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EAST Search History (Interference)

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	Art Unit
	DARRIN HOPE	2173

CPC- SEARCHED		
Symbol	Date	Examiner
G06F3/01	11/3/2014	DH

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
715/716		11/3/2014	DH

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	7/25/2015	DH
EAST	7/8/2016	DH

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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Jul 15, 2016 05:39:54 AM

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	CTNF	07/15/2016	30160-0005001
	892	07/15/2016	30160-0005001

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UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	David Strober	Art Unit	:	2173
Serial No.	:	13/532,546	Examiner	:	Darrin Hope
Filed	:	June 25, 2012	Conf. No.	:	9012
Title	:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER			

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the references listed on the enclosed PTO 1449 Disclosure Form. Copies of the listed foreign patent documents are enclosed.

A copy of a communication from a foreign patent office in a related foreign application is also enclosed (listed as item 4) and indicates the relevance of the other listed foreign-language references.

This statement is being filed after a first action on the merits, but before receipt of a final action or a notice of allowance. A late submission fee in the amount of $90, specified by 37 CFR §1.17(p), is being paid with this statement. Apply any necessary charges or credits to deposit account 06-1050, referencing the above attorney docket number.

Please contact the undersigned if there are any questions regarding this Statement.

Respectfully submitted,

Date: July 28, 2016

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

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Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	30160-0005001	13/532,546
	Applicant: David Strober	
	Filing Date: June 25, 2012	Group Art Unit: 2173

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	1.	2006-525771 A		JP			See English counterpart in Desig. ID No. 2	
	2.	2004100500A2		WO				
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(71) Applicant *(for all designated States except US)*: THOMSON LICENSING S.A. [FR/FR]; 46, Quai A. Le Gallo, F-92648 Boulogne (FR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: GRIMES, Kevin, Lloyd [US/US]; 12427 Haydon Court, Fishers, IN 46038 (US). BURNETT, Angela, Renee [US/US]; 6821 Bretton Wood Drive, Indianapolis, IN 46268 (US).

(74) Agents: TRIPOLI, Joseph, S. et al.; c/o Thomson Licensing Inc., 2 Independence Way, Suite 200, Princeton, NJ 08540 (US).

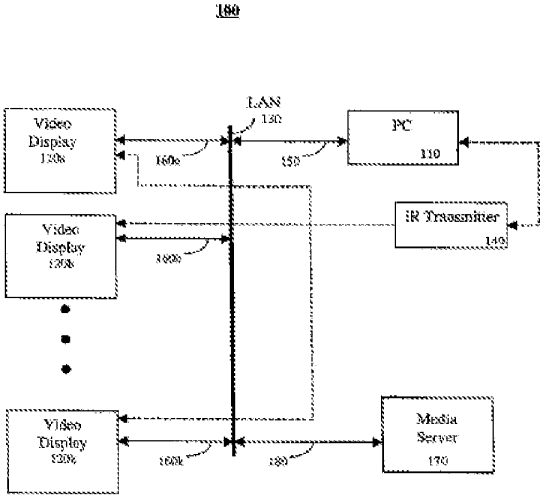
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(54) Title: SYSTEM AND METHOD FOR COMMUNICATING WITH A DISPLAY DEVICE VIA A NETWORK



(57) Abstract: A system (100) and corresponding methods are provided for enabling communication with an electronic apparatus via a network. The system comprises: a first device (140) for transmitting a communication comprising identification parameters associated with a second device (110), wherein the communication is compatible with a communication protocol of a first electronic apparatus (120a, b ...k); a first electronic apparatus for communicating with the second device, wherein first electronic apparatus comprises a first interface for wirelessly communicating with the first device and a second interface for communicating with the second device via a network (130); and a second device for communicating with the first electronic apparatus, with the second device communicating the first electronic apparatus via the network.

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SYSTEM AND METHOD FOR COMMUNICATING WITH A DISPLAY DEVICE VIA A NETWORK

FIELD OF THE INVENTION

The present invention relates to communicating with an electronic apparatus and, more particularly, to a system and method for communicating with a video display device via a network.

BACKGROUND OF THE INVENTION

Electronic appliances such as video display devices may be controlled via a computer through a network connection. Adjustments such as changing the volume or color alignment are no longer performed by adjusting a knob on a video display device such as a television rather they are performed digitally by interfacing with a menu on the video display device's screen or via an infrared remote. The introduction of computer controlled video display devices has enhanced the features and capabilities of modern video display devices. For example, computer controlled video display devices can be electronically diagnosed for service or repair, subjected to automated testing and controlled to perform a variety of functions. In addition, these video display devices can be connected together via a local area network (LAN) using networking protocols such as Ethernet, token ring, asynchronous transfer mode (ATM), etc.

In order to perform a desired function such as the servicing or testing a computer controllable video display device, a number of communication techniques have been developed by video display device manufacturers and service providers to realize such operations. These techniques typically require a computer and an infrared transmitter, which are used by a service technician, to communicate with a computer controlled video display device. The communication channel between the computer and the video display device sometimes takes place over an Ethernet connection. For security reasons, however, the computer controlled video display device will typically only allow access to a computer that is compatible with the video display device, thereby, preventing an un-authorized user from gaining access to the video display device.

In order to communicate with a video display device via a computer, a service technician having knowledge of the video display device's IP address and port reconfigures the IP address and port of their computer. This process can be somewhat prohibitive due to a lack of networking knowledge by the service technician and the proliferation of operating systems that preclude the ability to automate the configuration and restoration of the computer's IP address. In addition, current

communication techniques prevent a service technician from communicating with more than one video display device at a time over a network.

Accordingly, there is a need for a system and method of communicating with one or more electronic appliances, such as a video display device, via a network where a service technician does not need extensive knowledge of networking environments.

SUMMARY OF THE INVENTION

In one embodiment of the present invention, a method for communicating with an electronic apparatus via a network is presented. The method comprises the steps of: receiving a communication comprising identification parameters associated with a computer, wherein the communication is compatible with a communication protocol of a first electronic apparatus; transmitting a request to establish communication with the computer associated with the received identification parameters, wherein the request is transmitted via a network; receiving a response to the request, wherein the response attempts to establish communication between the computer and the first electronic apparatus, wherein the response is transmitted via the network; and validating the response to the request to ensure that the computer to which the request to establish communication was transmitted is the computer associated with the received identification parameters. A system for implementing the described method is also disclosed.

In another embodiment of the present invention, a method for communicating with a media server for receiving media objects based on the properties of a display device is presented. The method determines the type of display technology used for a display device whereby the display device receives a media object that is optimized for visual playback for that display device. Display devices with different display technologies receive different media objects generated from the same source material.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be better understood in accordance with the following exemplary figures, in which:

FIG. 1 is a block diagram of a system for communicating with an electronic apparatus according to an exemplary embodiment of the present invention;

FIG. 2 is a block diagram of a personal computer (PC) for use with the present invention;

FIG. 3 is a block diagram of a control system of a video display device for use with the present invention;

FIG. 4 is a flowchart showing an operation of a system for communicating with a video display device according to an exemplary embodiment of the present invention; and

FIG. 5 is a flowchart showing an operation of a system for communicating with a video display device depending on the properties of the video display device according to an exemplary embodiment of the present invention.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

As used herein, the term "media object" includes audio, video, textual, multimedia data files, and streaming media files. Multimedia objects comprise any combination of text, image, video, and audio data. Streaming media comprises audio, video, multimedia, textual, and interactive data files that are delivered to a user via the Internet, satellite or other communications network environment and begin to play on the user's computer/ device before delivery of the entire file is completed. Media objects may be transmitted over any communications network including via the Internet, satellite (digital satellite system, digital video system-satellite), cable, digital subscriber line, T1 lines, wireless network, or other delivery systems capable of delivering media objects.

Examples of the content of media objects include songs, political speeches, news broadcasts, movie trailers, movies, television show broadcasts, radio broadcasts, financial conference calls, live concerts, web-cam footage, and other special events. Media objects are encoded in various formats including REALAUDIO®, REALVIDEO®, REALMEDIA®, APPLE QUICKTIME®, MICROSOFT WINDOWS® MEDIA FORMAT, QUICKTIME®, MPEG-2 (MOTION PICTURE EXPERTS GROUP) VIDEO COMPRESSION, MPEG-4 VIDEO AND/OR AUDIO COMPRESSION, JOINT VIDEO TEAM COMPRESSION FORMAT (MPEG-4 part 10 AVC, H.264), MPEG-2 LAYER III AUDIO, MP3®. Typically, media objects are designated with extensions (suffixes) indicating compatibility with specific formats. For example, media objects (e.g., audio and video files) ending in one of the extensions, .ram, .rm, .rpm, are compatible with the REALMEDIA® format. Some examples of file extensions and their compatible formats are listed in the Table 1. A more exhaustive list of media types, extensions and compatible formats may be found at http://www.bowers.cc/extensions2.htm.

Format	Extension
REALMEDIA®	.ram, .rm, .rpm
APPLE QUICKTIME®	.mov, .qif
MICROSOFT WINDOWS® MEDIA PLAYER	.wma, .cmr, .avi

MACROMEDIA FLASH	.swf, .swl
MPEG	.mpg, .mpa, .mp1, .mp2
MPEG-2 LAYER III Audio	.mp3, .m3a, .m3u

TABLE 1

The illustrated embodiments of the invention operate with media objects that contain video data for presenting a video presentation of "near to motion picture quality". Such media objects may be encoded in a variety of formats such as MPEG-2 (Motion Picture Standards Group Standard ISO/IEC 13818-1:2000) and ITU-T H.264/ MPEG AVC (ISO/IEC 14496-10), or may be uncompressed video. It is noted that the invention also operates with over the air broadcasted programming such as used for Advanced Television System (ATSC) or Digital Video Broadcasts (DVB) compliant video signals.

FIG. 1 is a block diagram of a system 100 for communicating with an electronic apparatus according to an exemplary embodiment of the present invention. As shown in FIG. 1, the system 100 includes, inter alia, a personal computer (PC) 110, electronic appliances, for example, video display devices 120a, b ... k, an infrared (IR) transmitter 140, and media server 170. The PC 110 and the video display devices 120a, b ... k, are connected together over a local area network (LAN) 130 via a pair of connection means 150, 160a, b ... k, and connection means 180.

The PC 110 may be a portable or laptop computer, a personal digital assistant (PDA), etc. that is capable of communicating with the video display devices 120a, b ... k using a communication protocol such as a factory defined or proprietary protocol that is capable of supporting a feature set of one of the video display devices 120a, b ... k. The video display devices 120a, b ... k may be digital video display device having enhanced-definition television (EDTV) and high-definition video television (HDTV) capabilities, and plasma, liquid crystal, organic light emitting, or cathode ray tube (CRT) displays, etc. The video display devices 120a, b ... k are also capable of communicating with a device such as the PC 110 and IR transmitter 140 via external interfaces, such as an interface menu at the video display devices 120a, b ... k, the connection means 150, 160a, b ... k or an infrared receiver. The IR transmitter 140 may be a common video display device remote control such as a universal remote control having infrared transmission capabilities. Video display devices 120a, b...k, are

also preferably capable of decoding received media objects using a media player application such as REALPLAYER or WINDOWS MEDIA PLAYER.

It is to be understood, that although the electronic apparatus of FIG. 1 is illustrated as one of several video display devices 120a, b ... k, the electronic apparatus can be any number of network devices such as satellite receiver, digital video disk (DVD) player, stereo equipment, etc., other personal computers, set top boxes, and which can be connected over a network and accessed via a client-server or peer to peer architecture.

The LAN 130 may use networking protocols such as Ethernet using a 10BaseT, 100BaseT or 1000BaseT standard, token ring, asynchronous transfer mode (ATM), etc. or any networking protocol that allows for automatic configuration and restoration of a video display device's internet protocol (IP) address. The connection means 150, 160a, b ... k, and connection means 180, may be a twisted pair cable capable of connecting the PC 110 and video display devices 120a, b ... k over, for example, an Ethernet network. The connection means 150, 160 a, b ... k, and connection means 180 may also be terminated with RJ-45 style Ethernet connectors, although other connectors may be used.

It is also contemplated that connection means 150 and 180 may be a connection to LAN 130 through the use of a network fabric, such as the Internet. The use the network fabric may be any type of network known in the art. Preferably, such a network is capable of accommodating multiple connections between resources at a server side of a server and at the client side of a client, such connections being UDP based, TCP/IP based, or a mixture of both. The bandwidth accommodated by network 150 is preferably a large bandwidth connection such as a T1 connection (1.5 Megabits per second, Mbps), T3 connection (45 Mbps), DS3 connection (45 Mbps), OC3 connection (155 Mbps), OC12 (248000 Mbps), and the like.

Media server 170 is a storage device such as a matrix of hard drives having a capacity of Terabytes and/or Gigabytes capable of storing multiple media objects. Media server 170 is also capable of delivering such media objects to display devices 120a...k through connection means 180 via LAN 130.

FIG. 2 is a block diagram of a PC 200 for use with the present invention. The PC 200 may be used in place of or in conjunction with the PC 110 of FIG. 1. The PC 200 includes a central processing unit (CPU) 210 and a memory 220 and, is connected to an input 230 and an output 240 via a data bus 250. The memory 220 includes a random access memory (RAM) 260 and a read only memory (ROM) 270. The memory 220 can also include a database, disk drive, tape drive, etc., or a combination thereof. The RAM 260 function as a data memory that stores data used during execution of a

program in the CPU 210 and is used as a work area. The ROM 270 functions as a program memory for storing a program executed in the CPU 210. The input 230 is constituted by a keyboard, mouse, connecting means, input device, etc. and the output 240 is constituted by a liquid crystal display (LCD), CRT display, printer, connecting means, etc.

It is to be understood that the CPU 210 and memory 220 include data associated with communicating via a number of communication protocols used by an electronic apparatus, for example, the video display devices 120a, b ... k of FIG. 1. The data associated with communicating with the video display devices 120a, b ...k includes, inter alia, identification parameters such as the PC's 200 IP address, port and password. Further, the PC 200 includes software stored in its memory 220 to provide service technicians with a method to diagnose and repair the video display devices 120a, b ...k. This software may be of the type commonly used by video display device service technicians such as, CHIPPER CHECK™ available from Thomson, to service and diagnose the problems of video display devices.

FIG. 3 is a block diagram of a control system of a video display device 300 for use with the present invention. The control system 300 includes, inter alia, a microprocessor (μP) 310, an electrically erasable programmable read only memory (EEPROM) 320 and output devices 340. The microprocessor 310, EEPROM 320 and output devices 340 communicate with each other via a data bus 350. An input 360 is connected to the microprocessor 310 and, a backend processor 330 is connected to the data bus 350.

The microprocessor 310 communicates with the output devices 340 such as light emitting diodes (LEDs), digital video interfaces (e.g., high definition multimedia interface (HDMI) 1394), infrared transmitters, etc. and the backend processor 330 to control a digital video display device such as one of the video display devices 120a, b ... k of FIG. 1. The microprocessor 310 also communicates with the backend processor 330 to perform backend processing such as video processing and, the backend processor 330 is also coupled to the output device 340 to control, for example, display parameters and to improve video quality. The microprocessor 310 also receives input 360 from a video display device's front panel, remote control, EEPROM 320 and any of the devices that are connected to the data bus 350. The EEPROM 320 stores values used by the microprocessor to control one of the video display devices 120a, b ... k. These values may include, for example, alignment information, initialization signals and customer information. Exemplary customer information may include a channel scan list, color, brightness and volume levels.

The EEPROM 320 includes information such as values associated with one of the video display devices 120a, b ... k that were stored in the EEPROM 320 when one of the video display devices 120a, b ... k were made. The EEPROM 320 also has the ability to have information written to it from an external device such as the PC 110 or IR transmitter 140. Thus, for example, the EEPROM 320 can store identification parameters written to it from the PC 110. These parameters may include the PC's 110 IP address and port, thereby allowing the PC 110 to communicate with one of the video display devices 120a, b ... k. Once the PC 110 is in communication with one of the video display devices 120a, b ... k, the PC's 110 service and testing software sends commands to one of the video display devices 120a, b ... k to perform a number of operations on one of the video display devices 120a, b ... k.

FIG. 4 is a flowchart showing an operation 400 of a system for communicating with a video display device according to an exemplary embodiment of the present invention. As shown in FIG. 4, a service technician transmits a communication to, for example, a video display device 120a of FIG. 1 (step 410). The communication is transmitted by, for example, the IR transmitter 140 of FIG. 1. It is to be understood that the communication may also be transmitted to the video display device 120a by accessing an interface menu on the video display device's 120a screen and inputting the communication. The communication includes parameters associated with identifying a PC, for example, PC 110 of FIG. 1 to the video display device 120a. These parameters include, inter alia, the PC's 110 IP address and port. It should be understood that the communication is transmitted via a factory defined protocol or a proprietary protocol that is compatible with the video display device 120a

After the communication has been transmitted, it is received by the video display device 120a (step 420). An infrared receiver located at the video display device 120a receives this communication. Upon receipt of the communication, the video display device 120a stores the identification parameters associated with the communication in a memory, such as the EEPROM 320 of FIG. 3 (step 430). This occurs, because the communication was transmitted via a protocol used by the video display device 120a that is considered safe to communicate with, thereby permitting data associated with the communication to be stored. Once the identification parameters, which include the PC's 110 IP address and port, are stored in the video display device's 120a memory, the video display device 120a transmits a signal to the PC 110 (on the port specified in the communication of step 410) in an effort to establish communication between the video display device 120a and the PC 110 (step 440). In other words, the video display device 120a is attempting to complete a handshake with the PC 110 by transmitting a message via a handshaking protocol telling the PC 110

that it has received the PC's 110 identification information and is ready to receive further communication from the PC 110.

Upon receipt of the video display device's 120a request to establish further communication, the PC 110 responds to the request by transmitting a communication indicating that it is the device with which the video display device 120a should be communicating (step 450), thereby completing the handshake. This handshake assures both the video display device 120a and the PC 110 that they are connected to each other and not an imposter or an unauthorized user and, is possible because the PC's 110 IP address and port were programmed into the memory of the video display device 120a by the service technician in step 410. It is to be understood that in this configuration the video display device 120a functions as a client and the PC 110 functions as a remote server in client-server software architecture.

After a secure communication channel between the video display device 120a and the PC 110 is established, the PC 110 may then communicate with the video display device 120a to perform a desired function on the video display device related to, for example, servicing or testing (step 460). The function to be performed may be one of a color, geometry, video, stereo or picture-in-picture (PIP) alignment, or an adjustment to various calibration values associated with picture quality, etc.

In an alternative embodiment of the present invention, the PC 110 of FIG. 1 can communicate with more than one electronic apparatuses, such as the video display devices 120a, b ... k. This is accomplished by transmitting the PC's 110 IP address and port to, for example, the video display device 120b, when the PC 110 is already in communication with the video display device 120a (by performing the same or similar process as described above in steps 410-450 of FIG. 4). In order to accomplish this, the PC 110 assigns a different port to the video display device 120b. Once the steps 410-450 are completed the PC 110 may then begin to perform a desired function on the video display device 120b, while still performing desired functions on the video display device 120a. When performing functions on more than one video display device, the PC 110 can have separate windows for each video display device on an output such as an LCD display.

It is to be further understood that the PC's 110 IP address and port (for video display device 120b) can be transmitted to the video display device 120b at the same time the PC 110 IP address and port (for video display device 120a) are transmitted to the video display device 120a. Thereby, enabling a service technician to connect and then communicate with more than one video display device simultaneously.

By communicating with more than one video display device the PC 110 offers flexibility to a service technician, because they are not limited to performing functions

on one video display device at a time. In addition, by having control of more than one video display device or electronic apparatus a service technician and/or authorized user of the present invention may for example, simultaneously turn multiple video display devices off or on, change channels, volume, etc. or view, for example, the same movie on several DVD players.

In an alternative variant of the present invention a computer's identification information may be transmitted wirelessly from a transmitter using Bluetooth, Institute of Electrical and Electronics Engineers (IEEE) 802.11 or Infrared Data Association (IrDA) wireless transmission technologies.

FIG. 5 is a flowchart disclosing a method 500 for communicating with a video display device to receive a media object depending on the properties of the video display device. Specifically, it is recognized that with the development of video display device technologies such as OLED, plasma, LCD, and the like, there may be variances in the rendering of media service on a display device. For example, a media service encoded with MPEG-2 video codec may be of a motion picture quality when displayed on a Cathode Ray Tube (CRT) display device but may be blurred when rendered on an OLED display device.

The cause for the problem given in the example above pertains to encoding methodology used for encoding a media service. Typically, encoders use compression techniques that reduce the size of encoded media object from the original source material. For example, an MPEG-2 based encoder accomplishes a 40 to 50:1 type of compression when used to encode video based source material. Part of the compression takes advantage of techniques known as psychometric functions that are related to how human beings perceive media objects visually and aurally, where a percentage of data can be eliminated from source material without a human perceiving the loss of such data. The development of MPEG-2 and other encoding techniques are developed with humans being tested to determine what visual or audio information needs to be kept and what can eliminated from source material, see ITU Recommendation BT.500-8, "Methodology for Subjective Assessment of the Quality of Television Pictures," 1998, for background about testing human visual perception.

Additionally with the development of new display technologies, a human may be able to notice artifacts due to an encoding technique selected (for example, on an OLED display device) that would not be as apparent on a second display device (a CRT display). Continuing with the present example, it may be the case that a human would notice artifacts of the macroblocks used for MPEG-2 encoded video on an OLED display device that would not be apparent to a human on the CRT. This may due to the underlying physical properties of the display device technology used to render a video

image. Hence, the screen refresh techniques for the CRT may be better at hiding such artifacts of MPEG-2 than the screen refresh techniques for an OLED display device.

Recognizing these deficiencies of human perception, the present invention discloses architecture for delivering media objects in an encoding format optimized for display device used to render such media object. For an illustrative embodiment of the present invention by referring to FIG. 1, video display device 120a represents a CRT based video display device and video display device 120b is an OLED display device. Both display devices are connected to media server 170 through a connection means 180.

In step 510, display device 120a requests a media object from media server 170. For example, the request for a media object is for a movie that is delivered through a video on demand system or a media object delivered as streaming media through the Internet. Media server 170 receives this request, in step 520, and determines the capabilities of display device 120a. In the preferred embodiment of the invention, display device 120a transmits identification parameters as part of device parameters that identify the display device technology used for that device when rendering a media service. For example, the display device 120a transmits metadata identifying the display device as a CRT based television. Table II presents an exemplary embodiment of a metadata field DISPLAYDEVICE and corresponding values that may be used to identify a display device technology using an Extensible Markup Language format. For example, metadata received as <DISPLAYDEVICE> CRT </DISPLAYDEVICE> represents a CRT based display device technology. Other metadata formats may be used, in accordance with the principles of the present invention.

DISPLAY TECHNOLOGY	VALUE
Cathode Ray Tube	CRT
Organic Light Emitting Diode	OLE
Liquid Crystal Display	LCD
Liquid Crystal on Silicon	LCO
Digital Light Projector	DLP
Plasma	PLA

TABLE 2

Alternatively, based on the request by display device 120a for a media object, the IP and/or port address of display device 120a is transmitted as part of the request. Media server 170 preferably has a database that contains information that identifies the technology used for identifying the display device by the IP address and/or port address information that is part of the request. This information could be entered in by a user and stored by media server 170 when registering the display device through a network connection.

Step 530 presents an optional step where display device 120a communicates identification parameters to media server 170. This communication is typically in response to a query made by media server 170 requesting the display technology used for the display device. Preferably, this communication of identification parameters is similar to the metadata presented in TABLE 2, although other formats of identification parameters may be used.

In response to the identification parameters received by media server 170, in step 540 the media server communicates a media object to video display 120a that corresponds to the display technology used for the display device. In the preferred embodiment, media server 170 utilizes a lookup table or database entry that designates a display technology to an encoding technique that has been predefined as producing an optimal video image for the display device technology. For example, for a CRT it may be determined that MPEG-2 encoded media object produces an optimal video presentation compared to an OLED display where a Windows Media 9 encoded media object may produce the optimal video presentation. Any encoding format may be selected, in accordance with the determinations made by the operator of media server 170. These determinations may change as new encoding techniques are created as with further improvements in display device technologies.

In the preferred embodiment, media server 170 stores multiple versions of the same source material as media objects encoded in different formats. In the present example, media server 170 would store the source material of a movie as a media object encoded in MPEG-2 format and a media object encoded in Windows Media 9 format. Alternatively, media server 170 would encode the source material of a media object into the appropriate format in real time or in close to real time using an encoder, in accordance with the designated encoding format for a display technology as described above.

Media server 170 then transmits the MPEG-2 encoded media object to display device 120a that is designated as a CRT, for this example. The media object is transmitted through connection means 180 and LAN 130 to display device 120a. If

display device 120b requests the same movie, media server 170 would transmit the Windows Media 9 encoded media object to the OLED based display device, as specified above. Other encoding formats and display devices are to be considered in accordance with the principles of the present invention.

In addition, for each format of a media object, visual attributes of the source material used to generate a media object are to be modified as to produce an optimal video picture for a specific display technology. Visual attributes to be modified include color, tint, contrast, hue, saturation, brightness, frame rate, lines per field, pixels, and the like. The visual attributes are selected and modified in accordance with experimentally determined parameters for providing the optimal viewing video on a display device for a particular technology.

In step 550, the display device receiving the media object renders the object as video. In the present example, each display device has a decoder capable of decoding a received media service. Hence, display device 120a has an MPEG-2 video decoder and display device 120b has a Windows Media 9 video decoder. The decoder or decoders for a display device are to be selected in accordance with the format of the media objects to be decoded by the display device.

In an alternative embodiment of the present invention, sub-channels or "minor" channels of a multi-casted digital broadcast may be used to transmit multiple versions of a media object as used for an ATSC or DVB based television system. Specifically, a sub-channel for a digital broadcast system may be designated to carry programs for a display device of a first technology and utilize a second sub-channel to carry programs for a display device of a second technology, where the media object is generated from the same source material. For example, a program transmitted on a first sub-channel may have the gamma values of the color of the programming be modified for display on a plasma device compared to a program carried on a second sub-channel where the programming would be color corrected for display on a LCD screen. Other attributes of programming may be modified in accordance with the principles of the present invention.

It is to be understood that the present invention may be implemented in various forms of hardware, software, firmware, special purpose processors, or a combination thereof. In one embodiment, the present invention may be implemented in software as an application program tangibly embodied on a program storage device. The application program may be uploaded to, and executed by, a machine comprising any suitable architecture.

It is to be further understood that, because some of the constituent system components and method steps depicted in the accompanying figures may be

implemented in software, the actual connections between the system components (or the process steps) may differ depending on the manner in which the present invention is programmed. Given the teachings of the present invention provided herein, one of ordinary skill in the art will be able to contemplate these and similar implementations or configurations of the present invention.

CLAIMS

What is claimed is:

1. A method for communicating with an electronic apparatus via a network, the method comprising:

receiving a communication (420) comprising identification parameters associated with a computer, wherein the communication is compatible with a communication protocol of a first electronic apparatus;

transmitting a request (440) to establish communication with the computer associated with the received identification parameters, wherein the request is transmitted via a network;

receiving a response to the request, wherein the response attempts to establish communication between the computer and the first electronic apparatus, wherein the response is transmitted via the network; and

validating the response (450) to the request to ensure that the computer to which the request to establish communication was transmitted is the computer associated with the received identification parameters.

2. The method of claim 1, wherein the request to establish communication between the computer and the first electronic apparatus is transmitted from the first electronic apparatus with which the communication is desired.

3. The method of claim 1, wherein the first electronic apparatus uses a factory defined communication protocol.

4. The method of claim 1, wherein the identification parameters associated with the computer comprise an IP address and port of the computer.

5. The method of claim 1, further comprising:

storing the identification parameters (430) associated with the computer in a memory of the first electronic apparatus.

6. The method of claim 1, further comprising:

receiving a command from the computer (460), wherein the command is associated with performing a desired function on the first electronic apparatus.

7. The method of claim 6, wherein the desired function is associated with one of servicing, testing and controlling the first electronic apparatus.

8. The method of claim 1, wherein the network is an Ethernet network.

9. The method of claim 1, further comprising:

receiving a communication comprising identification parameters associated with the computer, wherein the communication is compatible with a communication protocol of a second electronic apparatus;

transmitting a request to establish communication with the computer associated with the received identification parameters, wherein the request is transmitted via the network;

receiving a response to the request, wherein the response attempts to establish communication between the computer and the second electronic apparatus, wherein the response is transmitted via the network; and

validating the response to the request to ensure that the computer to which the request to establish communication was transmitted is the computer associated with the received identification parameters.

10. The method of claim 9, further comprising:

receiving a command from the computer, wherein the command is associated with performing a desired function on the second electronic apparatus.

11. A method for communicating with an electronic apparatus via a network, the method comprising:

transmitting a communication (410) comprising identification parameters associated with a computer to a first electronic apparatus, wherein the communication is compatible with a communication protocol of the first electronic apparatus;

receiving a request to establish communication with the first electronic apparatus, wherein the request is transmitted via a network; and

transmitting a response to the request, wherein the response attempts to establish communication between the computer and the first electronic apparatus, wherein the response is transmitted via the network.

12. The method of claim 11, wherein the communication comprising identification parameters associated with the computer uses a proprietary protocol used by the first electronic apparatus.

13. The method of claim 11, wherein the identification parameters comprise an IP address and port of the computer.

14. The method of claim 11, further comprising:

transmitting a command to the first electronic apparatus, wherein the command is associated with performing a desired function on the first electronic apparatus.

15. The method of claim 14, wherein the desired function is associated with one of servicing, testing and controlling the first electronic apparatus.

16. The method of claim 11, wherein the network is an Ethernet network.

17. The method of claim 11, further comprising:

transmitting a communication comprising identification parameters associated with the computer to a second electronic apparatus, wherein the communication is compatible with a communication protocol of the second electronic apparatus;

receiving a request to establish communication with the second electronic apparatus, wherein the request is transmitted via the network; and

transmitting a response to the request, wherein the response attempts to establish communication between the computer and the second electronic apparatus, wherein the response is transmitted via the network.

18. The method of claim 17, further comprising:

transmitting a command to the second electronic apparatus, wherein the command is associated with performing a desired function on the second electronic apparatus.

19. A system (100) for communicating with an electronic apparatus via a network, the system comprising:

a first device (140) for transmitting a communication comprising identification parameters associated with a second device (110), wherein the communication is compatible with a communication protocol of a first electronic apparatus (120a, b ... k);

a first electronic apparatus for communicating with the second device, wherein first electronic apparatus comprises a first interface for wirelessly communicating with the first device and a second interface for communicating with the second device via a network (130); and

a second device for communicating with the first electronic apparatus, wherein the second device communicates with the first electronic apparatus via the network.

20. The system of claim 19, wherein the first device is an infrared transmitter.

21. The system of claim 19, wherein the identification parameters transmitted by the first device comprise an internet protocol (IP) address and port associated with the second device.

22. The system of claim 19, wherein the second device is a computer.

23. The system of claim 19, wherein the first electronic apparatus is a video display device.

24. The system of claim 19, wherein the network is an Ethernet network.

25. The system of claim 19, wherein the first interface of the first electronic apparatus decodes an infrared signal.

26. The system of claim 19, wherein the first electronic apparatus further comprises:

a memory for storing the identification parameters associated with the second device.

27. The system of claim 19, wherein the second interface is an Ethernet connector.

28. The system of claim 19, wherein the first electronic apparatus executes commands transmitted by the second device that are associated with performing a desired function on the first electronic apparatus.

29. The system of claim 19, wherein the first and second devices use a proprietary protocol compatible with the first electronic apparatus.

30. The system of claim 19, further comprising:

a second electronic apparatus for communicating with the second device via the network after the first electronic apparatus has established communication with the second device.

31. The system of claim 30, wherein the second electronic apparatus is a video display device.

32. A computer program product comprising a computer useable medium having computer program logic recorded thereon for communicating with an electronic apparatus via a network, the computer program logic comprising:

program code for receiving a communication comprising identification parameters associated with a computer, wherein the communication is compatible with a communication protocol of an electronic apparatus;

program code for transmitting a request to establish communication with the computer associated with the received identification parameters, wherein the request is transmitted via a network;

program code for receiving a response to the request, wherein the response attempts to establish communication between the computer and the electronic apparatus, wherein the response is transmitted via the network; and

program code for validating the response to the request to ensure that the computer to which the request to establish communication was transmitted is the computer associated with the received identification parameters.

33. A computer program product comprising a computer useable medium having computer program logic recorded thereon for communicating with an electronic apparatus via a network, the computer program logic comprising:

program code for transmitting a communication comprising identification parameters associated with a computer to an electronic apparatus, wherein the communication is compatible with a communication protocol of the electronic apparatus;

program code for receiving a request to establish communication with the electronic apparatus, wherein the request is transmitted via a network; and

program code for transmitting a response to the request, wherein the response attempts to establish communication between the computer and the electronic apparatus, wherein the response is transmitted via the network.

34. A system (100) for communicating with a video display device via an Ethernet network, the system comprising:

an infrared transmitter (140) for wirelessly transmitting an infrared signal to a video display device (120a, b ... k) via a communication protocol used by the video

display device, wherein the infrared signal comprises an internet protocol (IP) address and port associated with a computer (110);

a video display device for receiving the infrared signal and for communicating with the computer via an Ethernet network (130), wherein the video display device comprises an infrared receiver for receiving the infrared signal and an Ethernet connector for connecting to the Ethernet network; and

a computer for performing a desired function on the video display device, wherein the computer comprises an Ethernet connector for connecting to the Ethernet network and an input means for inputting the desired function to be performed on the video display device.

35. A method for receiving a media object corresponding to a display technology used for a display device comprising the steps of:

determining a device display parameter (120a, b ...k) related to the display technology used for the display device;

communicating said parameter (130); and

receiving the media object (120a, b ...k), wherein the media object corresponds to the display technology used for the display device.

36. The method of claim 35, wherein said parameter indicates the display technology used is at least one of: a cathode ray tube, organic light emitting diode, liquid crystal display, liquid crystal on silicon, digital light project, and plasma.

37. The method of claim 36, wherein said media object is encoded in a format optimized for a display technology.

38. The method of claim 37, wherein the media object has a visual attribute modified for said display technology, wherein said visual attribute is changed when said media object is to be displayed on a display device using a different display technology.

39. The method of claim 38, wherein said media object is transmitted on a sub-channel of a digital television broadcast system and the changed media object is transmitted on a different sub-channel.

40. A method for transmitting a media object corresponding to a display technology used for a display device comprising the steps of:

determining a device display parameter related to the display technology used for the display device (120a, b ...k), wherein the parameter is received (170) as part of a request for the media object from the display device (120a, b ...k) ; and

transmitting the media object to the display device (170), wherein the media object corresponds to the display technology used for the display device (120a, b ...k).

41. The method of claim 40, wherein said parameter indicates the display technology used is at least one of: a cathode ray tube, organic light emitting diode, liquid crystal display, liquid crystal on silicon, digital light project, and plasma.

42. The method of claim 41, wherein said media object is encoded in a format optimized for a display technology.

43. The method of claim 42, wherein the media object has a visual attribute modified for said display technology, wherein said visual attribute is changed when said media object is to be displayed on a display device using a different display technology.

44. The method of claim 43, wherein said media object is transmitted on a sub-channel of a digital television broadcast system and said changed media object is transmitted on a different sub-channel.

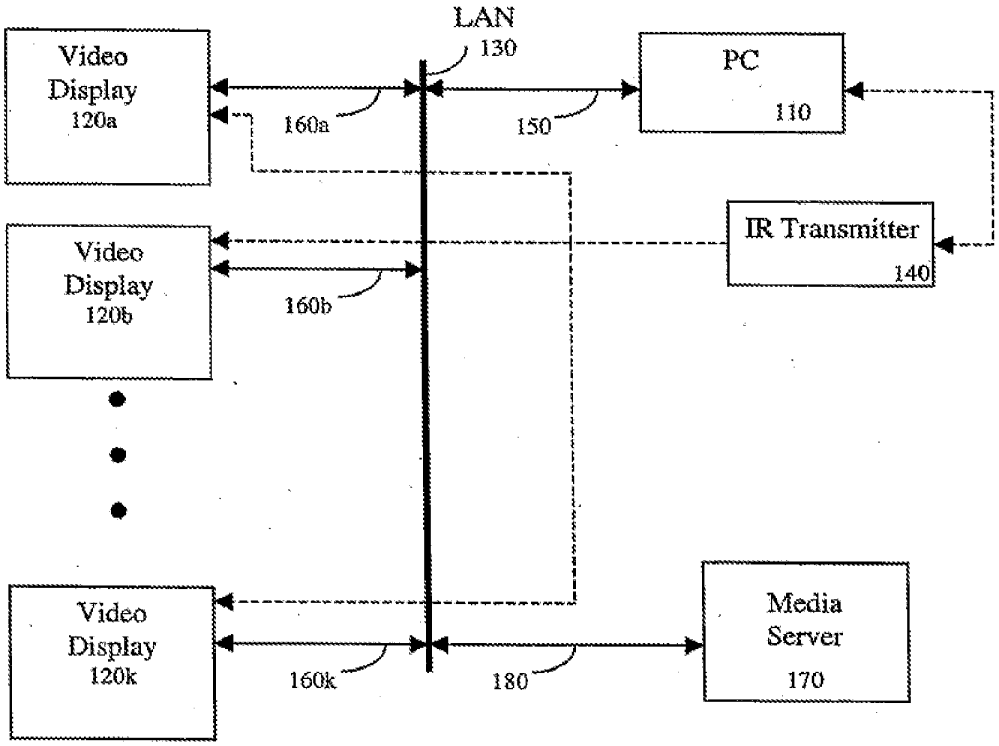

100
LAN
130
Video Display 120a
160a
150
PC
110
Video Display 120b
160b
IR Transmitter
140
Video Display 120k
160k
180
Media Server
170

FIG. 1

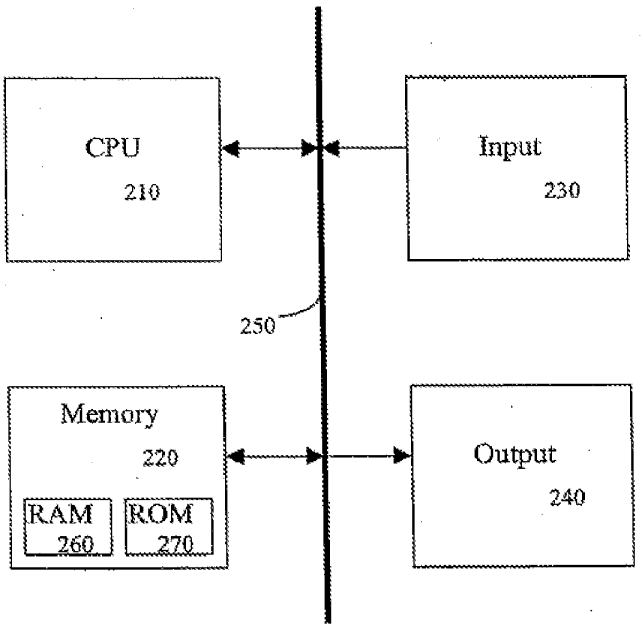

200
CPU
210
Input
230
250
Memory
220
RAM
260
ROM
270
Output
240

FIG. 2

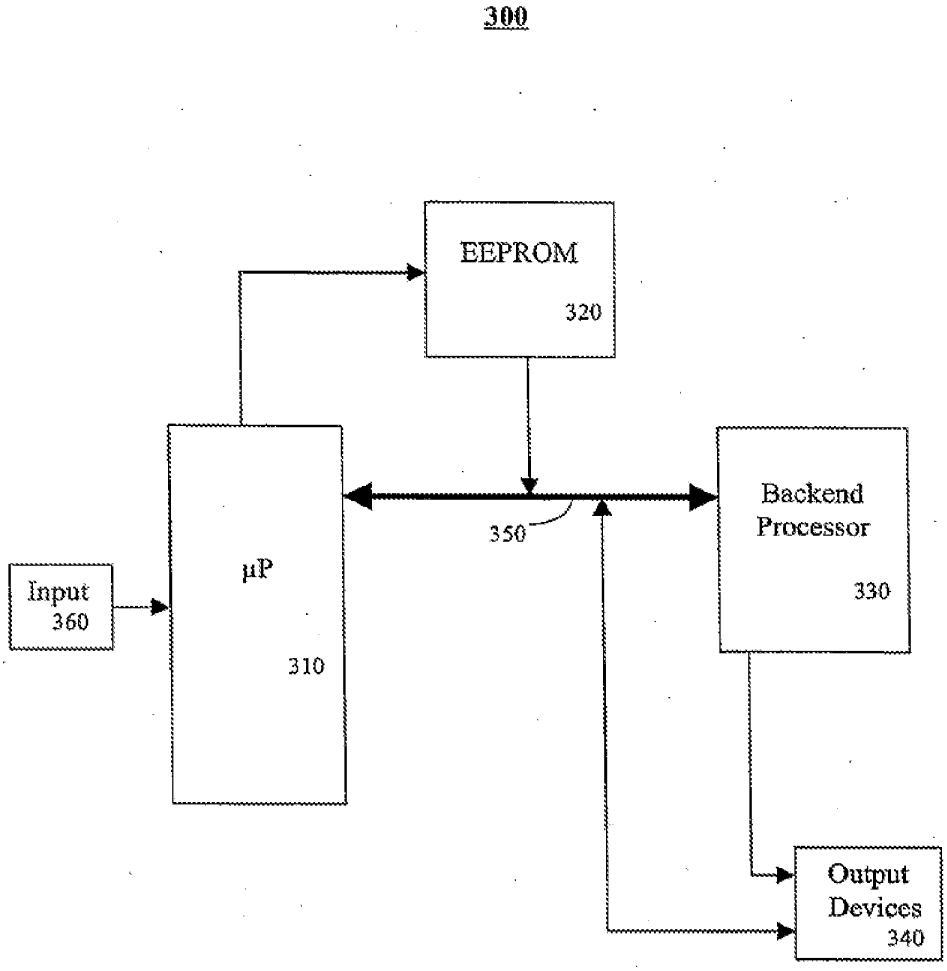

300
EEPROM
320
µP
310
Input
360
350
Backend
Processor
330
Output
Devices
340

FIG. 3

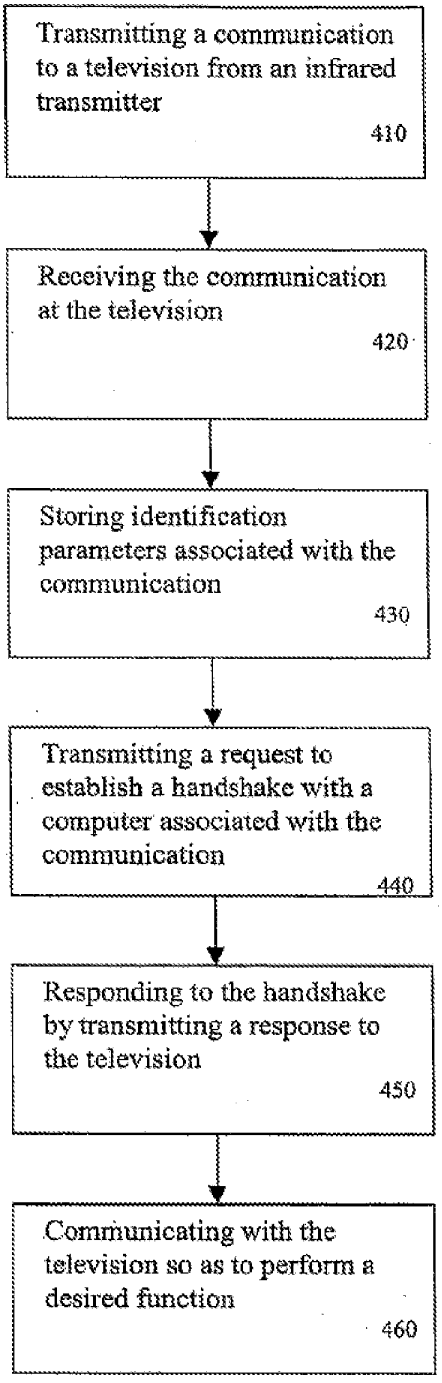

Transmitting a communication to a television from an infrared transmitter
410
Receiving the communication at the television
420
Storing identification parameters associated with the communication
430
Transmitting a request to establish a handshake with a computer associated with the communication
440
Responding to the handshake by transmitting a response to the television
450
Communicating with the television so as to perform a desired function
460

FIG. 4

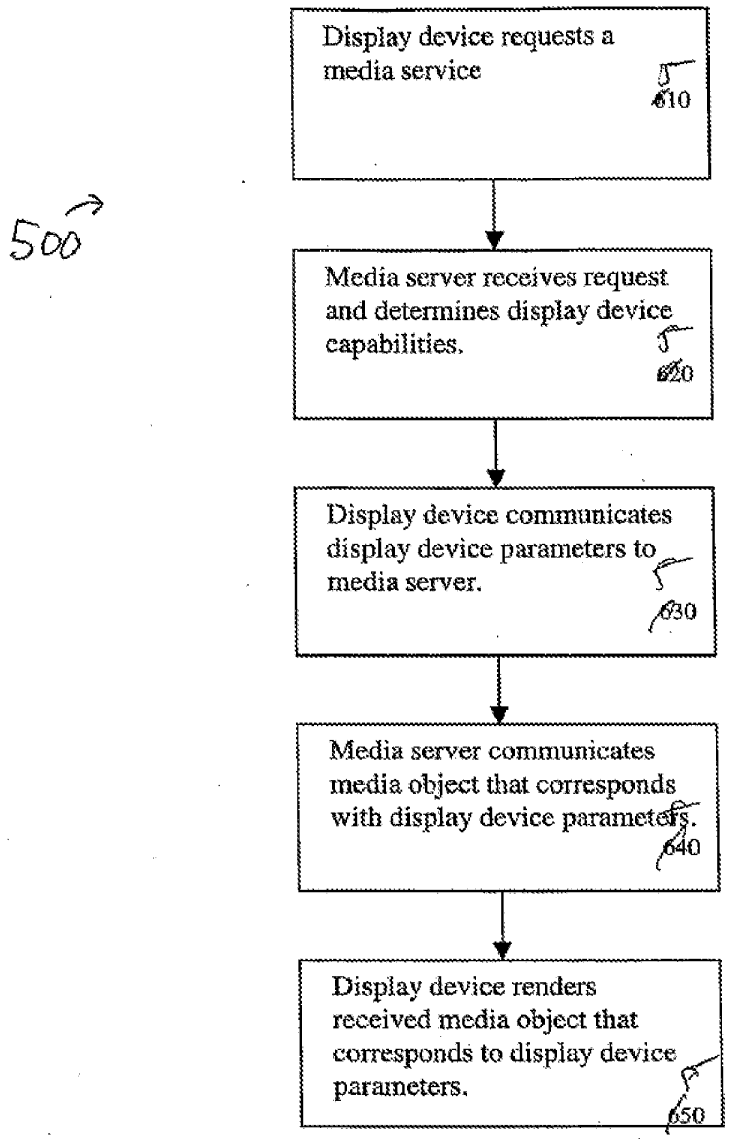

500
Display device requests a media service
610
Media server receives request and determines display device capabilities.
620
Display device communicates display device parameters to media server.
630
Media server communicates media object that corresponds with display device parameters.
640
Display device renders received media object that corresponds to display device parameters.
650

FIG. 5

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60/467,928 5 May 2003 (05.05.2003) US

(71) Applicant *(for all designated States except US)*: **THOMSON LICENSING S.A.** [FR/FR]; 46, Quai A. Le Gallo, F-92648 Boulogne (FR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **GRIMES, Kevin, Lloyd** [US/US]; 12427 Haydon Court, Fishers, IN 46038 (US). **BURNETT, Angela, Renee** [US/US]; 6821 Bretton Wood Drive, Indianapolis, IN 46268 (US).

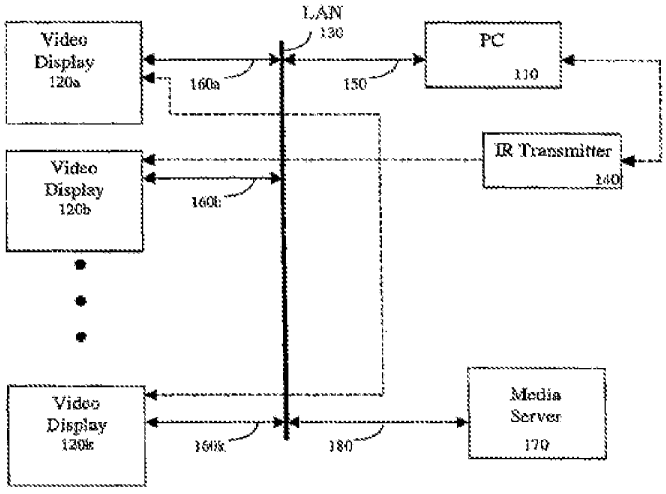
(74) Agents: **TRIPOLI, Joseph, S.** et al.; c/o Thomson Licensing Inc., 2 Independence Way, Suite 200, Princeton, NJ 08540 (US).

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(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR COMMUNICATING WITH A DISPLAY DEVICE VIA A NETWORK



(57) Abstract: A system (100) and corresponding methods are provided for enabling communication with an electronic apparatus via a network. The system comprises: a first device (140) for transmitting a communication comprising identification parameters associated with a second device (110), wherein the communication is compatible with a communication protocol of a first electronic apparatus (120a, b ...k); a first electronic apparatus for communicating with the second device, wherein first electronic apparatus comprises a first interface for wirelessly communicating with the first device and a second interface for communicating with the second device via a network (130); and a second device for communicating with the first electronic apparatus, with the second device communicating the first electronic apparatus via the network.

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Published:

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~~~ *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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28 April 2005

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INTERNATIONAL SEARCH REPORT

Inte onal Application No
PCT/US2004/013859

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/28 H04B1/20 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/18636 A (MIZUNO YOSHIRO ; WEBTRONICS INC (US)) 22 May 1997 (1997-05-22) the whole document	1-34
X	US 2003/043740 A1 (MARCH SEAN W ET AL) 6 March 2003 (2003-03-06)	1-18,32, 33
A	abstract; figures 3,8 paragraphs '0005!, '0006!, '0022!, '0028!, '0036! - '0091!, '0104!, '0106!	19-31,34
X	WO 97/40610 A (NORTHERN TELECOM LTD) 30 October 1997 (1997-10-30)	1-18,32, 33
A	page 5, line 18 - page 6, line 12	19-31,34

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 February 2005	21 02 2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lievens, K

Form PCT/ISA/210 (second sheet) (January 2004)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 109 222 A (WELTY JOHN) 28 April 1992 (1992-04-28)	19-31
A	abstract; figure 5 column 2, line 30 - column 4, line 55	1-18, 32-34
A	WO 00/39772 A (KONINKL PHILIPS ELECTRONICS NV) 6 July 2000 (2000-07-06) the whole document	1-34
A	WO 00/16531 A (SONY ELECTRONICS INC) 23 March 2000 (2000-03-23) the whole document	1-34
X	US 2003/046691 A1 (NAKAGAWA TOSHIYUKI) 6 March 2003 (2003-03-06) abstract paragraph '0002! - paragraph '0023! paragraph '0045! - paragraph '0048!	35-38, 40-43
Y	paragraph '0080! - paragraph '0123!	39,44
X	WO 02/097584 A2 (HYPERSPACE COMMUNICATIONS, INC) 5 December 2002 (2002-12-05) abstract paragraph '0017! - paragraph '0023! paragraph '0026! - paragraph '0036! paragraph '0043! - paragraph '0046!	35-38, 40-43
X	EP 1 263 233 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 4 December 2002 (2002-12-04) abstract paragraph '0003! - paragraph '0011! paragraph '0041!	35-38, 40-43
Y	US 2002/120931 A1 (HUBER THOMAS ET AL) 29 August 2002 (2002-08-29) abstract paragraph '0006! - paragraph '0020! paragraph '0035! - paragraph '0047! paragraph '0054! figures 1,5	39,44

INTERNATIONAL SEARCH REPORT

national application No.
PCT/US2004/013859

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2004)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-34

   Method and system for establish a communication

2. claims: 35-44

   Method for transmision of media objects based on the properties of a display device

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US2004/013859

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9718636 A	22-05-1997	AU 7706596 A	05-06-1997
		WO 9718636 A2	22-05-1997
US 2003043740 A1	06-03-2003	EP 1430682 A2	23-06-2004
		WO 02103982 A2	27-12-2002
WO 9740610 A	30-10-1997	AU 707905 B2	22-07-1999
		AU 2563297 A	12-11-1997
		CA 2248577 A1	30-10-1997
		WO 9740610 A2	30-10-1997
		CN 1216657 A	12-05-1999
		DE 69708281 D1	20-12-2001
		DE 69708281 T2	16-05-2002
		EP 0895684 A2	10-02-1999
		JP 11508753 T	27-07-1999
		KR 2000010612 A	25-02-2000
		US 6128298 A	03-10-2000
US 5109222 A	28-04-1992	NONE	
WO 0039772 A	06-07-2000	CN 1298530 T	06-06-2001
		WO 0039772 A1	06-07-2000
		EP 1058921 A1	13-12-2000
		JP 2002534038 T	08-10-2002
WO 0016531 A	23-03-2000	US 6237049 B1	22-05-2001
		AT 280463 T	15-11-2004
		AU 5579999 A	03-04-2000
		CA 2340902 A1	23-03-2000
		DE 69921342 D1	25-11-2004
		EP 1112650 A1	04-07-2001
		JP 2002525732 T	13-08-2002
		WO 0016531 A1	23-03-2000
US 2003046691 A1	06-03-2003	JP 2003153254 A	23-05-2003
WO 02097584 A2	05-12-2002	NONE	
EP 1263233 A	04-12-2002	CN 1389785 A	08-01-2003
		EP 1263233 A2	04-12-2002
		JP 2003091648 A	28-03-2003
		US 2002184223 A1	05-12-2002
US 2002120931 A1	29-08-2002	CA 2438620 A1	29-08-2002
		EP 1364533 A1	26-11-2003
		WO 02067587 A1	29-08-2002

NOTICE OF REASONS FOR REJECTION

Patent Application No.: 2014-506460
Drafting Date: June 28, 2016
Mailing Date: July 5, 2016
Examiner: Tatsuo UMEMOTO
Representative: Yusuke HIRAKI & Anor.
Sections Applied: 29(2), 36, 37

This application is rejected for the reason(s) set forth below. A written argument can be submitted in response to this notice within three months from the mailing date.

REASONS

1. (Unity of Invention) The present application does not comply with the requirements of Section 37 of the Patent Law as the claims are deficient in respect of the points mentioned below.
2. (Clarity) The present application does not comply with the requirements of Section 36(6)(ii) of the Patent Law as the claims are deficient in respect of the points mentioned below.
3. (Inventive steps) The invention according to the claim(s) of the present application indicated below is unpatentable under Section 29(2) of the Patent Law because it could readily have been made by a person skilled in the art prior to the filing of the application on the basis of the inventions disclosed in the herein-cited publication(s) distributed in Japan or abroad prior to the filing of the application.

Note (refer to THE LIST OF CITED REFERENCE about cited references)

●Regarding Reason 1 (Unity of Invention)

1. Determination for examination target according to special technical features

The invention according to claim 1 includes a special technical feature as :

"receiving, in a server system, one or more signals from a remote personal computing device, the one or more signals specifying a video file to be acted upon and identifying a media player for playing the video content, the one or more signals further including a universal playback control command for controlling playing of the

video content on the display device by the media player,

converting, by the server system, the universal playback control command into corresponding programming code to control playing of the video content on the display device by the media player, wherein converting the universal playback control command includes selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player;".

Therefore, the examination targets will be claim 1 and claims 2-10, 11-21, 27-38, and 67 including same or corresponding technical features as in claim 1.

2. Determination for examination target according to efficiency of examination

The inventions according to claims 22-26, 39-66, and 68-70 are not inventions including all subject matters of claim 1 in the same category as that of claim 1. In addition, it is not possible to examine claims 22-26, 39-66, and 68-70 without substantially searching or inspecting prior arts on the basis of the examination targets determined by the special technical feature. There is no other circumstance to facilitate examination for those claims along with the examination target.

Therefore, the inventions according to claims 22-26, 39-66, and 68-70 will not be examined other than unity of invention.

●Regarding Reason 2 (Clarity)

(1) Claims 5, 14, 15, 16

Claim 5 describes "the universal command . . . the video content . . .". However, "universal command" is not found before this description. Therefore, it is unclear what is meant by "the universal command".

It also applies to claims 14, 15, and 16 including similar descriptions.

Therefore, claims 5, 14, 15, and 16 are unclear.

(2) Claims 14, 15

Claim 14 describes "the look-up table stores . . . the universal command and a plurality of . . .". However, "look-up table" is not found before this description. Therefore, it is unclear what is meant by "the look-up table". (this may be a typographic error of the number of claim on which claim 14 depends ?)

It also applies to claim 15 depending on claim 14.

Therefore, claims 14 and 15 are unclear.

●Regarding Reason 3 (Inventive Steps)

•Claims 1, 11, 27, 31, 33, 67
•Cited References : 1, 2
•Remarks :

The cited reference 1 describes that "video display device" (paragraph 0012, corresponding to P. 4 L. 17 – P. 5 L. 2 of WO2004100500) are "capable of decoding received media objects using a media player application such as REALPLAYER or WINDOWS MEDIA PLAYER". Then it is understood that the cited reference 1 describes "A machine-implemented method of controlling presentation of video content on a display device by a media player", as in claim 1 of the present application.

Paragraph 0012 of the cited reference 1 also describes that "universal remote control" is used ; it is understood from paragraph 0028 (P. 8 L. 36 – P. 9 L. 5 of WO2004100500) and the like that "PC 110" may instruct to playback media objects ; it is obvious from TABLE 1, paragraph 0041 (P. 12 L. 12 – P. 12 L. 17 of WO2004100500), and the like that a media player is identified when performing the instruction. Therefore, when instructing playback, a media object is specified and a media player is identified in the cited reference 1.

On the other hand, the cited reference 1 does not describe that "universal playback control command" for controlling playback is converted into playback control command corresponding to a media player, thus different from the present invention.

However, it is a commonly known technique that a remote control command is converted into a playback-side command, as described in the cited reference 2 (paragraphs 0079-0080). Those skilled in the art could readily apply the commonly known technique into the cited reference 1 in which playback is assumed by various types of media players.

It also applies to claims 11, 27, 31, 33, and 67.

Therefore, those skilled in the art could readily achieve the inventions according to claims 1, 11, 27, 31, 33, and 67 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 2, 12
•Cited References : 1, 2

•Remarks :

The cited reference 1 uses various types of media players. When using media players, it is readily anticipated that IDs of the media players are inspected, and that necessary protocols or APIs are loaded. Javascript code is also commonly known as commands.

Therefore, those skilled in the art could readily achieve the inventions according to claims 2 and 12 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 3, 4, 13, 14, 15, 29, 30
•Cited References : 1, 2
•Remarks :

The conversion table in the cited reference 2 (paragraph 0080) is a look-up table.

Therefore, those skilled in the art could readily achieve the inventions according to claims 3, 4, 13, 14, 15, 29, and 30 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 5, 16, 32
•Cited References : 1, 2
•Remarks :

The cited reference 1 is concerned with playback control. Playback command, stop command, and suspend command are commonly known as playback control commands.

Therefore, those skilled in the art could readily achieve the inventions according to claims 5, 16, and 32 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 6, 17
•Cited References : 1, 2
•Remarks :

The cited reference 1 (paragraphs 0008-0009, corresponding to the two paragraphs before TABLE 1 in WO2004100500) describes various examples of media objects. Interactive video game is commonly known as media object.

Therefore, those skilled in the art could readily achieve the inventions according to claims 6 and 17 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 7, 18
•Cited References : 1, 2
•Remarks :

The cited reference 1 (paragraph 0008) describes about streaming.

Therefore, those skilled in the art could readily achieve the inventions according to claims 7 and 18 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 8, 19, 34
•Cited References : 1, 2
•Remarks :

The cited reference 1 (paragraph 0028 and the like) describes that video display devices are associated.

Therefore, those skilled in the art could readily achieve the inventions according to claims 8, 19, and 34 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 9, 10, 20, 21, 35, 36, 37
•Cited References : 1, 2
•Remarks :

Identifiers other than IP address or MAC address are commonly known for associating devices.

Therefore, those skilled in the art could readily achieve the inventions according to claims 9, 10, 20, 21, 35, 36, and 37 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 28
•Cited References : 1, 2
•Remarks :

It is a common technique to use a look-up table for association.

Therefore, those skilled in the art could readily achieve the inventions according to claim 28 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

•Claims 38

•Cited References : 1, 2

•Remarks :

It is a commonly known technique to remotely control over the Internet.

Therefore, those skilled in the art could readily achieve the inventions according to claim 38 on the basis of the cited references 1 and 2. Thus those claims cannot be patented under JP Patent Law Article 29 (2).

<THE LIST OF CITED REFERENCE>

1. JP Patent Publication (Kohyo) 2006-525771 A
2. JP Patent Publication (Kokai) 2004-356695 A (commonly known technique)

拒絶理由通知書

COPY

特許出願の番号	特願２０１４－５０６４６０
起案日	平成２８年　６月２８日
特許庁審査官	梅本　達雄　　９６４８　５Ｃ００
特許出願人代理人	平木　祐輔（外　４名）　様
適用条文	第２９条第２項、第３６条、第３７条

この出願は、次の理由によって拒絶をすべきものです。これについて意見がありましたら、この通知書の発送の日から３か月以内に意見書を提出してください。

理由

１．（発明の単一性）この出願は、下記の点で特許法第３７条に規定する要件を満たしていない。
２．（明確性）この出願は、特許請求の範囲の記載が下記の点で、特許法第３６条第６項第２号に規定する要件を満たしていない。
３．（進歩性）この出願の下記の請求項に係る発明は、その出願前に日本国内又は外国において、頒布された下記の刊行物に記載された発明又は電気通信回線を通じて公衆に利用可能となった発明に基いて、その出願前にその発明の属する技術の分野における通常の知識を有する者が容易に発明をすることができたものであるから、特許法第２９条第２項の規定により特許を受けることができない。

記　　（引用文献等については引用文献等一覧参照）

●理由１（発明の単一性）について

１．特別な技術的特徴に基づく審査対象の決定
請求項１に係る発明に、「サーバシステムにおいて、遠隔の個人コンピュータデバイスから１以上の信号を受信するステップであって、前記１以上の信号は、動作を実施すべきビデオファイルを指定するとともに前記ビデオコンテンツを再生するメディアプレイヤーを識別し、前記１以上の信号はさらに、前記メディアプレイヤーが前記ディスプレイデバイス上で前記ビデオコンテンツを再生する動作を制御するユニバーサル再生制御コマンドを含む、ステップ、前記サーバシステムが、前記ユニバーサル再生制御コマンドを、前記メディアプレイヤーが前記

ディスプレイデバイス上で前記ビデオコンテンツを再生する動作を制御するための対応するプログラムコードへ変換するステップであって、複数の特定コマンドのなかから個々のメディアプレイヤーに対応する再生制御コマンドに相当するものを選択するステップを含む、ステップ」を含むという特別な技術的特徴が発見された。

したがって、請求項１に係る発明と、当該特別な技術的特徴と同一の又は対応する特別な技術的特徴を有する、請求項２－１０、１１－２１、２７－３８、６７に係る発明とを、審査対象とする。

２．審査の効率性に基づく審査対象の決定

請求項２２－２６、３９－６６、６８－７０に係る発明は、請求項１に係る発明の発明特定事項を全て含む同一カテゴリーの発明ではない。そして、請求項２２－２６、３９－６６、６８－７０に係る発明は、審査対象とされた発明を審査した結果、実質的に追加的な先行技術調査や判断を必要とすることなく審査を行うことが可能である発明ではなく、当該発明とまとめて審査を行うことが効率的であるといえる他の事情も無い。

したがって、請求項２２－２６、３９－６６、６８－７０に係る発明は、特許法第３７条以外の要件についての審査対象としない。

●理由２（明確性）について

（１）請求項　５、１４、１５、１６

請求項５には「前記ユニバーサルコマンドは、前記ビデオコンテンツを再生する」との記載があるが、この記載よりも前に「ユニバーサルコマンド」の記載が無く、「前記ユニバーサルコマンド」が何を指し示しているのかが不明確である。

同様の記載のある請求項１４、１５、１６も同様である。

よって、請求項５、１４、１５、１６に係る発明は明確でない。

（２）請求項１４、１５

請求項１４には「前記ルックアップテーブルは、前記ユニバーサルコマンドと、複数の」との記載があるが、この記載よりも前に「ルックアップテーブル」の記載が無く、「前記ルックアップテーブル」が何を指し示しているのかが不明確である。（引用請求項の誤記か？）

また、請求項１４を引用する請求項１５にも同様の点が指摘される。

よって、請求項１４、１５に係る発明は明確でない。

●理由３（進歩性）について

・請求項　　１、１１、２７、３１、３３、６７
・引用文献等　１、２
・備考
引用文献１には、「ビデオ表示装置」（段落［００１２］）が「ＲＥＡＬ　ＰＬＡＹＥＲ又はＷＩＮＤＯＷＳ　ＭＥＤＩＡ　ＰＬＡＹＥＲのようなメディアプレイヤアプリケーションを使用して受信したメディアオブジェクトをデコード可能」とすることが記載されており、引用文献１には本願請求項１に係る発明と同様に、「メディアプレイヤーによるディスプレイデバイス上のビデオコンテンツの提示を制御する、機械実装した方法」が記載されていると認められる。
また、引用文献１の段落［００１２］には「ユニバーサルリモコン」を用いることが記載され、段落［００２８］等から、「ＰＣ１１０」においてもメディアオブジェクトの再生が指示できると認められ、さらに、表１、段落［００４１］等の記載から、その指示の際に、メディアプレイヤを識別するものであることは明らかであるから、再生を指示する際は、メディアオブジェクトを指定するとともに、メディアプレイヤを識別し、再生を指示することを行っていると認められる。
もっとも、引用文献１においては、再生する動作を制御するための「ユニバーサル再生制御コマンド」を、メディアプレイヤに対応する再生制御コマンドに相当するコマンドに変換し、格納することが記載されていない点で相違している。
しかしながら、リモコンのコマンドを再生側に対応するように変換することは例えば引用文献２（段落［００７９］－［００８０］）記載のように周知技術に過ぎず、各種メディアプレイヤでの再生を想定する引用文献１記載のものにおいて、当該周知技術を適用することは当業者が容易に想到し得たことである。
請求項１１、２７、３１、３３、６７についても同様である。
よって、請求項１、１１、２７、３１、３３、６７に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　２、１２
・引用文献等　１、２
・備考
引用文献１は、各種メディアプレイヤを用いるものであり、その際に、そのＩＤをチェックして必要なプロトコルやＡＰＩを読み出すことは普通に想定されることであり、コマンドとしてJavaScriptコードも周知である。

よって、請求項２、１２に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　３、４、１３、１４、１５、２９、３０
・引用文献等　１、２
・備考
引用文献２（段落［００８０］）の変換テーブルは、ルックアップテーブルといえる。
よって、請求項３、４、１３、１４、１５、２９、３０に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　５、１６、３２
・引用文献等　１、２
・備考
引用文献１は、再生制御するものであり、再生制御のコマンドとして再生命令、停止命令、一時停止命令は周知である。
よって、請求項５、１６、３２に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　６、１７
・引用文献等　１、２
・備考
引用文献１（段落［０００８］－［０００９］）には、メディアオブジェクトについて様々な例が記載されており、メディアオブジェクトとして、インタラクティブビデオゲームは周知である。
よって、請求項６、１７に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　７、１８
・引用文献等　１、２

・備考

引用文献１（段落［０００８］）には、ストリーミングについて記載されている。

よって、請求項７、１８に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　８、１９、３４
・引用文献等　１、２
・備考

引用文献１（段落［００２８］等）には、ビデオ表示装置を対応付けることが記載されている。

よって、請求項８、１９、３４に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　９、１０、２０、２１、３５、３６、３７
・引用文献等　１、２
・備考

機器を対応付けるものとして、ＩＰアドレス及びＭＡＣアドレス以外の識別子も周知である。

よって、請求項９、１０、２０、２１、３５、３６、３７に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　２８
・引用文献等　１、２
・備考

対応付けの際にルックアップテーブルを設けることは常套手段に過ぎない。

よって、請求項２８に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

・請求項　　３８

・引用文献等　１、２

・備考

遠隔制御をインターネットを介して行うことは周知慣用の事項に過ぎない。

よって、請求項３８に係る発明は、引用文献１、２記載のものに基づいて、当業者であれば容易に発明をすることができたものであるから、特許法第２９条第２項の規定により、特許を受けることができない。

＜引用文献等一覧＞

１.特表２００６－５２５７７１号公報

２.特開２００４－３５６６９５号公報（周知技術を示す文献）

－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－－

＜先行技術文献調査結果の記録＞

・調査した分野　　ＩＰＣ　Ｈ０４Ｎ　２１／００　－　２１／８５８
　　Ｇ０６Ｆ　１３／００

この先行技術文献調査結果の記録は、拒絶理由を構成するものではありません。

＜補正をする際の注意＞

（１）明細書、特許請求の範囲について補正をする場合は、補正により記載を変更した個所に下線を引いてください（特許法施行規則様式第１３備考６、７）。

（２）補正は、この出願の出願当初の明細書、特許請求の範囲又は図面に記載した事項の範囲内で行わなければなりません。また、意見書で、各補正事項について補正が適法なものである理由を、根拠となる出願当初の明細書等の記載箇所を明確に示したうえで主張してください。

（３）特許請求の範囲について補正をする際には、特許法第１７条の２第４項に違反する補正とならないよう、注意してください。

この拒絶理由通知の内容に関するお問い合わせ又は面接のご希望がありましたら次の連絡先までご連絡ください。

審査第四部　映像システム　梅本　達雄
ＴＥＬ．０３－３５８１－１１０１　内線３５４０
ＦＡＸ．０３－３５０１－０７１５

Espacenet

Bibliographic data: JP2006525771 (A) - 2006-11-09

SYSTEM AND METHOD FOR COMMUNICATING WITH A DISPLAY DEVICE VIA A NETWORK

Inventor(s):

Applicant(s):

Classification:
- **international:** ***G06F3/14; H04L12/28; H04L29/06; H04N7/173;*** *G09G3/00*
- **cooperative:** G06F3/14; H04L12/2803; H04L12/282; H04L29/06027; H04L65/1043; H04N21/4122; H04N21/4143; H04N21/42204; H04N21/43615; H04N21/44231; H04N21/485; G09G2320/0693; G09G3/006; H04L2012/2849

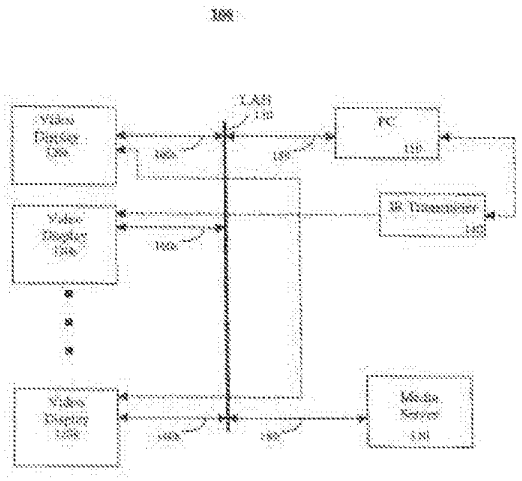
Application number: JP20060514279 20040504

Priority number(s): US20030467928P 20030505 ; WO2004US13859 20040504

Also published as: WO2004100500 (A2) WO2004100500 (A3) US2006288373 (A1) KR20060038924 (A) KR101021132 (B1) more

Abstract not available for JP2006525771 (A)
Abstract of corresponding document: WO2004100500 (A2)

A system (100) and corresponding methods are provided for enabling communication with an electronic apparatus via a network. The system comprises: a first device (140) for transmitting a communication comprising identification parameters associated with a second device (110), wherein the communication is compatible with a communication protocol of a first electronic apparatus (120a, b ...k); a first electronic apparatus for communicating with the second device, wherein first electronic apparatus comprises a first



interface for wirelessly communicating with the first device and a second interface for communicating with the second device via a network (130); and a second device for communicating with the first electronic apparatus, with the second device communicating the first electronic apparatus via the network.

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審査請求 未請求　予備審査請求 未請求　（全 25 頁）

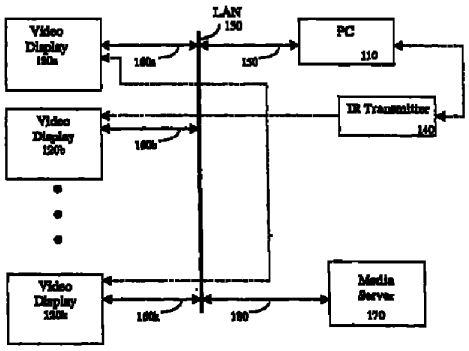
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(71)出願人　501263810
トムソン　ライセンシング
Ｔｈｏｍｓｏｎ　Ｌｉｃｅｎｓｉｎｇ
フランス国，　エフ－９２１００　ブローニュ　ビヤンクール，　ケ　アルフォンス　ル　ガロ，　４６番地
４６　Ｑｕａｉ　Ａ．　Ｌｅ　Ｇａｌｌｏ，　Ｆ－９２１００　Ｂｏｕｌｏｇｎｅ－Ｂｉｌｌａｎｃｏｕｒｔ，　Ｆｒａｎｃｅ
(74)代理人　100070150
弁理士　伊東　忠彦
(74)代理人　100091214
弁理士　大貫　進介
(74)代理人　100107766
弁理士　伊東　忠重

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(54)【発明の名称】ネットワークを介して表示装置と通信するシステム及び方法

(57)【要約】
ネットワークを介して電子装置と通信することを可能にするシステム（１００）及び対応の方法が提供される。そのシステムは、第２の装置（１１０）に関連する識別パラメータを有する通信を送信し、通信は第１の電子装置（１２０ａ，ｂ・・・ｋ）の通信プロトコルと互換性がある第１の装置（１４０）と、第１の装置と無線通信する第１のインタフェースと、ネットワーク（１３０）を介して第２の装置と通信する第２のインタフェースとを有し、第２の装置と通信する第１の電子装置と、ネットワークを介して第１の電子装置と通信し、第１の電子装置と通信する第２の装置とを有する。



【特許請求の範囲】
【請求項１】
ネットワークを介して電子装置と通信する方法であって、
コンピュータに関連する識別パラメータを有する通信を受信し、前記通信は第１の電子装置の通信プロトコルと互換性があるステップと、
受信した識別パラメータに関連するコンピュータと通信を確立する要求を送信し、前記要求はネットワークを介して送信されるステップと、
前記要求に対する応答を受信し、前記応答は、前記コンピュータと前記第１の電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信されるステップと、
前記要求に対する応答を確認し、通信を確立する要求が送信されたコンピュータが、前記受信した識別パラメータに関連するコンピュータであることを確保するステップと
を有する方法。
【請求項２】
請求項１に記載の方法であって、
前記コンピュータと前記第１の電子装置との間で通信を確立する要求は、前記通信が望まれる前記第１の装置から送信される方法。
【請求項３】
請求項１に記載の方法であって、
前記第１の電子装置は、工場定義の通信プロトコルを使用する方法。
【請求項４】
請求項１に記載の方法であって、
前記コンピュータに関連する識別パラメータは、前記コンピュータのＩＰアドレス及びポートを有する方法。
【請求項５】
請求項１に記載の方法であって、
前記コンピュータに関連する識別パラメータを前記第１の装置のメモリに格納することを更に有する方法。
【請求項６】
請求項１に記載の方法であって、
前記コンピュータからコマンドを受信し、前記コマンドは、前記第１の電子装置で所望の機能を実行することに関連することを更に有する方法。
【請求項７】
請求項６に記載の方法であって、
前記所望の機能は、前記第１の装置のサービス、テスト及び制御のうちの１つに関連する方法。
【請求項８】
請求項１に記載の方法であって、
前記ネットワークはＥｔｈｅｒｎｅｔネットワークである方法。
【請求項９】
請求項１に記載の方法であって、
前記コンピュータに関連する識別パラメータを有する通信を受信し、前記通信は、第２の電子装置の通信プロトコルと互換性があり、
受信した識別パラメータに関連するコンピュータと通信を確立する要求を送信し、前記要求は前記ネットワークを介して送信され、
前記要求に対する応答を受信し、前記応答は、前記コンピュータと前記第２の電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信され、
前記要求に対する応答を確認し、通信を確立する要求が送信されたコンピュータが、前記受信した識別パラメータに関連するコンピュータであることを確保することを更に有する方法。

【請求項１０】
請求項９に記載の方法であって、
前記コンピュータからコマンドを受信し、前記コマンドは、前記第２の電子装置で所望の機能を実行することに関連することを更に有する方法。
【請求項１１】
ネットワークを介して電子装置と通信する方法であって、
コンピュータに関連する識別パラメータを有する通信を第１の電子装置に送信し、前記通信は前記第１の電子装置の通信プロトコルと互換性があり、
前記第１の電子装置と通信を確立する要求を受信し、前記要求はネットワークを介して送信され、
前記要求に対する応答を送信し、前記応答は、前記コンピュータと前記第１の電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信されることを有する方法。
【請求項１２】
請求項１１に記載の方法であって、
前記コンピュータに関連する識別パラメータを有する通信は、前記第１の電子装置により使用される独自仕様のプロトコルを使用する方法。
【請求項１３】
請求項１１に記載の方法であって、
前記識別パラメータは、前記コンピュータのＩＰアドレス及びポートを有する方法。
【請求項１４】
請求項１１に記載の方法であって、
前記第１の電子装置にコマンドを送信し、前記コマンドは、前記第１の電子装置で所望の機能を実行することに関連することを更に有する方法。
【請求項１５】
請求項１４に記載の方法であって、
前記所望の機能は、前記第１の装置のサービス、テスト及び制御のうちの１つに関連する方法。
【請求項１６】
請求項１１に記載の方法であって、
前記ネットワークはＥｔｈｅｒｎｅｔネットワークである方法。
【請求項１７】
請求項１１に記載の方法であって、
前記コンピュータに関連する識別パラメータを有する通信を第２の電子装置に送信し、前記通信は、前記第２の電子装置の通信プロトコルと互換性があり、
前記第２の電子装置と通信を確立する要求を受信し、前記要求は前記ネットワークを介して送信され、
前記要求に対する応答を送信し、前記応答は、前記コンピュータと前記第２の電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信されることを更に有する方法。
【請求項１８】
請求項１７に記載の方法であって、
前記第２の電子装置にコマンドを受信し、前記コマンドは、前記第２の電子装置で所望の機能を実行することに関連することを更に有する方法。
【請求項１９】
ネットワークを介して電子装置と通信するシステムであって、
第２の装置に関連する識別パラメータを有する通信を送信し、前記通信は第１の電子装置の通信プロトコルと互換性がある第１の装置と、
前記第１の装置と無線通信する第１のインタフェースと、ネットワークを介して前記第２の装置と通信する第２のインタフェースとを有し、前記第２の装置と通信する第１の電

子装置と、
前記ネットワークを介して前記第１の電子装置と通信し、前記第１の電子装置と通信する第２の装置と
を有するシステム。
【請求項２０】
請求項１９に記載のシステムであって、
前記第１の装置は、赤外線送信機であるシステム。
【請求項２１】
請求項１９に記載のシステムであって、
前記第１の装置により送信される識別パラメータは、前記第２の装置に関連するインターネットプロトコルアドレス及びポートを有するシステム。
【請求項２２】
請求項１９に記載のシステムであって、
前記第２の装置はコンピュータであるシステム。
【請求項２３】
請求項１９に記載のシステムであって、
前記第１の電子装置は、ビデオ表示装置であるシステム。
【請求項２４】
請求項１９に記載のシステムであって、
前記ネットワークはＥｔｈｅｒｎｅｔネットワークであるシステム。
【請求項２５】
請求項１９に記載のシステムであって、
前記第１の電子装置の前記第１のインタフェースは、赤外線信号をデコードするシステム。
【請求項２６】
請求項１９に記載のシステムであって、
前記第１の電子装置は、前記第２の装置に関連する識別パラメータを格納するメモリを更に有するシステム。
【請求項２７】
請求項１９に記載のシステムであって、
前記第２のインタフェースはＥｔｈｅｒｎｅｔコネクタであるシステム。
【請求項２８】
請求項１９に記載のシステムであって、
前記第１の電子装置は、前記第１の電子装置で所望の機能を実行することに関連する前記第２の装置により送信されたコマンドを実行するシステム。
【請求項２９】
請求項１９に記載のシステムであって、
前記第１及び第２の装置は、前記第１の電子装置と互換性のある独自仕様のプロトコルを使用するシステム。
【請求項３０】
請求項１９に記載のシステムであって、
前記第１の電子装置が前記第２の装置と通信を確立した後に、前記ネットワークを介して前記第２の装置と通信する第２の電子装置を更に有するシステム。
【請求項３１】
請求項３０に記載のシステムであって、
前記第２の電子装置はビデオ表示装置であるシステム。
【請求項３２】
ネットワークを介して電子装置と通信するために記録されたコンピュータプログラムロジックを有するコンピュータ使用可能媒体を有するコンピュータプログラムプロダクトであって、

前記コンピュータプログラムロジックは、
コンピュータに関連する識別パラメータを有する通信を受信し、前記通信は電子装置の通信プロトコルと互換性があるプログラムコードと、
受信した識別パラメータに関連するコンピュータと通信を確立する要求を送信し、前記要求はネットワークを介して送信されるプログラムコードと、
前記要求に対する応答を受信し、前記応答は、前記コンピュータと前記電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信されるプログラムコードと、
前記要求に対する応答を確認し、通信を確立する要求が送信されたコンピュータが、前記受信した識別パラメータに関連するコンピュータであることを確保するプログラムコードと
を有するコンピュータプログラムプロダクト。

【請求項３３】
ネットワークを介して電子装置と通信するために記録されたコンピュータプログラムロジックを有するコンピュータ使用可能媒体を有するコンピュータプログラムプロダクトであって、
前記コンピュータプログラムロジックは、
コンピュータに関連する識別パラメータを有する通信を電子装置に送信し、前記通信は前記電子装置の通信プロトコルと互換性があるプログラムコードと、
前記電子装置と通信を確立する要求を受信し、前記要求はネットワークを介して送信されるプログラムコードと、
前記要求に対する応答を送信し、前記応答は、前記コンピュータと前記電子装置との間で通信を確立しようとし、前記応答は前記ネットワークを介して送信されるプログラムコードと
を有するコンピュータプログラムプロダクト。

【請求項３４】
Ｅｔｈｅｒｎｅｔネットワークを介してビデオ表示装置と通信するシステムであって、
前記ビデオ表示装置により使用される通信プロトコルを介してビデオ表示装置に赤外線信号を無線送信し、前記赤外線信号は、コンピュータに関連するインターネットプロトコルアドレス及びポートを有する赤外線送信機と、
前記赤外線信号を受信し、Ｅｔｈｅｒｎｅｔネットワークを介して前記コンピュータと通信し、前記赤外線信号を受信する赤外線受信機と、前記Ｅｔｈｅｒｎｅｔネットワークに接続するＥｔｈｅｒｎｅｔコネクタとを有するビデオ表示装置と、
前記ビデオ表示装置で所望の機能を実行し、前記Ｅｔｈｅｒｎｅｔネットワークに接続するＥｔｈｅｒｎｅｔコネクタと、前記ビデオ表示装置で実行される所望の機能を入力する入力手段を有するコンピュータと
を有するシステム。

【請求項３５】
表示装置で使用される表示技術に対応するメディアオブジェクトを受信する方法であって、
前記表示装置で使用される表示技術に関連する表示装置パラメータを決定するステップと、
前記パラメータを通信するステップと、
前記メディアオブジェクトを受信し、前記メディアオブジェクトは前記表示装置で使用される表示技術に対応するステップと
を有する方法。

【請求項３６】
請求項３５に記載の方法であって、
使用される表示技術を示す前記パラメータは、陰極線管、有機発光ダイオード、液晶ディスプレイ、シリコン上液晶、デジタル光プロジェクト及びプラズマのうち少なくとも１

つである方法。
【請求項３７】
請求項３６に記載の方法であって、
前記メディアオブジェクトは、表示技術に適したフォーマットでエンコードされる方法。
【請求項３８】
請求項３７に記載の方法であって、
前記メディアオブジェクトは、前記表示技術用に変更された視覚属性を有し、
前記視覚属性は、前記メディアオブジェクトが異なる表示技術を使用した表示装置に表示されるときに変更される方法。
【請求項３９】
請求項３８に記載の方法であって、
前記メディアオブジェクトは、デジタルテレビ放送システムのサブチャネルで送信され、前記変更されたメディアオブジェクトは、異なるサブチャネルで送信される方法。
【請求項４０】
表示装置に使用される表示技術に対応したメディアオブジェクトを送信する方法であって、
前記表示装置に使用される表示技術に関係する表示装置パラメータを決定し、前記パラメータは、前記表示装置からの前記メディアオブジェクトの要求の一部として受信されるステップと、
前記表示装置に前記メディアオブジェクトを送信し、前記メディアオブジェクトは、前記表示装置に使用される表示技術に対応するステップと、
を有する方法。
【請求項４１】
請求項４０に記載の方法であって、
使用される表示技術を示す前記パラメータは、陰極線管、有機発光ダイオード、液晶ディスプレイ、シリコン上液晶、デジタル光プロジェクト及びプラズマのうち少なくとも１つである方法。
【請求項４２】
請求項４１に記載の方法であって、
前記メディアオブジェクトは、表示技術に適したフォーマットでエンコードされる方法。
【請求項４３】
請求項４２に記載の方法であって、
前記メディアオブジェクトは、前記表示技術用に変更された視覚属性を有し、
前記視覚属性は、前記メディアオブジェクトが異なる表示技術を使用した表示装置に表示されるときに変更される方法。
【請求項４４】
請求項４３に記載の方法であって、
前記メディアオブジェクトは、デジタルテレビ放送システムのサブチャネルで送信され、前記変更されたメディアオブジェクトは、異なるサブチャネルで送信される方法。
【発明の詳細な説明】
【技術分野】
【０００１】
本発明は、電子装置との通信に関し、特にネットワークを介してビデオ表示装置と通信するシステム及び方法に関する。
【背景技術】
【０００２】
ビデオ表示装置のような電子装置は、ネットワーク接続を通じてコンピュータを介して制御され得る。音量又は色調節の変更のような調整は、テレビのようなビデオ表示装置の

ノブを調整することにより実行されるのではなく、ビデオ表示装置のスクリーンのメニューとインタフェースすることにより、又は赤外線リモコンを介して実行される。コンピュータ制御のビデオ表示装置の採用は、現代の表示装置の特徴及び機能を拡張してきた。例えば、コンピュータ制御のビデオ表示装置は、サービス又は修理について電子的に診断され、自動テストを受け、様々な機能を実行するように制御され得る。更に、これらのビデオ表示装置は、Ｅｔｈｅｒｎｅｔ、トークンリング、非同期転送モード（ＡＴＭ）等のようなネットワークプロトコルを使用してローカルエリアネットワーク（ＬＡＮ）を介して相互に接続され得る。

【０００３】

コンピュータ制御可能ビデオ表示装置のサービス又はテストのような所望の機能を実行するために、ビデオ表示装置製造者及びサービスプロバイダにより複数の通信技術が開発され、このような動作を実現している。これらの技術は、一般的にコンピュータと赤外線送信機とを必要とし、これらはコンピュータ制御のビデオ表示装置と通信するためにサービス技術者により使用される。コンピュータとビデオ表示装置との間の通信チャネルは、場合によってはＥｔｈｅｒｎｅｔ接続で行われる。しかし、セキュリティの目的で、コンピュータ制御のビデオ表示装置は、一般的にビデオ表示装置と互換性のあるコンピュータへのアクセスのみを認め、それによって、無許可のユーザがビデオ表示装置へのアクセスを得ることを回避する。

【０００４】

コンピュータを介してビデオ表示装置と通信するために、ビデオ表示装置のＩＰアドレスとポートとを認識しているサービス技術者は、そのコンピュータのＩＰアドレスとポートとを再構成する。サービス技術者によるネットワーク知識の欠如により、及びコンピュータのＩＰアドレスの構成及び復旧を自動化する機能を除外するオペレーティングシステムの増加により、この処理はいくらか禁じられ得る。更に、現在の通信技術は、サービス技術者がネットワークで同時に１つより多いビデオ表示装置と通信することを妨げている。

【発明の開示】

【発明が解決しようとする課題】

【０００５】

従って、サービス技術者がネットワーク環境の広範囲の知識を必要としないネットワークを介して、ビデオ表示装置のような１つ以上の電子装置と通信するシステム及び方法の必要性が存在する。

【課題を解決するための手段】

【０００６】

本発明の一実施例では、ネットワークを介して電子装置と通信する方法が提示される。その方法は、コンピュータに関連する識別パラメータを有する通信を受信し、通信は第１の電子装置の通信プロトコルと互換性があるステップと、受信した識別パラメータに関連するコンピュータと通信を確立する要求を送信し、要求はネットワークを介して送信されるステップと、要求に対する応答を受信し、応答は、コンピュータと第１の電子装置との間で通信を確立しようとし、応答はネットワークを介して送信されるステップと、要求に対する応答を確認し、通信を確立する要求が送信されたコンピュータが、受信した識別パラメータに関連するコンピュータであることを確保するステップとを有する。前記の方法を実装するシステムも開示される。

【０００７】

本発明の他の実施例では、表示装置の特性に基づいてメディアオブジェクトを受信するメディアサーバと通信する方法が提示される。その方法は、表示装置に使用される表示技術の形式を決定し、それにより、表示装置は、その表示装置用の視覚的再生に適したメディアオブジェクトを受信する。異なる表示技術を備えた表示装置は、同じ源素材から生成された異なるメディアオブジェクトを受信する。

【発明を実施するための最良の形態】

【０００８】
ここで使用される“メディアオブジェクト”という用語は、オーディオ、ビデオ、テキスト、マルチメディアデータファイル及びストリーミングメディアファイルを含む。マルチメディアオブジェクトは、テキスト、画像、ビデオ及びオーディオデータの何らかの組み合わせを有する。ストリーミングメディアは、インターネット、衛星又は他の通信ネットワークを介してユーザに配信され、全体ファイルの配信が完了する前にユーザのコンピュータ／装置で再生し始めるオーディオ、ビデオ、マルチメディア、テキスト及びインタラクティブデータファイルを有する。メディアオブジェクトは、インターネット、衛星（デジタル衛星システム、デジタルビデオシステム－衛星）、ケーブル、デジタル加入者線、Ｔ１回線、無線ネットワーク、又はメディアオブジェクトを配信可能な他の配信システムを含み、如何なる通信ネットワークで送信されてもよい。

【０００９】
メディアオブジェクトの内容の例は、歌曲、政治演説、ニュース放送、映画予告、映画、テレビショーの放送、ラジオ放送、金融の電話会議、生のコンサート、ウェブカメラの映像、及び他の特別のイベントを含む。メディアオブジェクトは、ＲＥＡＬＡＵＩＤＯ（登録商標）、ＲＥＡＬＶＩＤＥＯ（登録商標）、ＲＥＡＬＭＥＤＩＡ（登録商標）、ＡＰＰＬＥ　ＱＵＩＣＫＴＩＭＥ（登録商標）、ＭＩＣＲＯＳＯＦＴ　ＷＩＮＤＯＷＳ（登録商標）のＭＥＤＩＡ　ＦＯＲＭＡＴ、ＱＵＩＣＫＴＩＭＥ（登録商標）、ＭＰＥＧ－２（ＭＯＴＩＯＮ　ＰＩＣＴＵＲＥＳ　ＥＸＰＥＲＴＳ　ＧＲＯＵＰ）　ＶＩＤＥＯ　ＣＯＭＰＲＥＳＳＩＯＮ、ＭＰＥＧ－４　ＶＩＤＥＯ　ＡＮＤ／ＯＲ　ＡＵＩＤＩＯ　ＣＯＭＰＲＥＳＳＩＯＮ、ＪＯＩＮＴ　ＶＩＤＥＯ　ＴＥＡＭ　ＣＯＭＰＲＥＳＳＩＯＮ　ＦＯＲＭＡＴ（ＭＰＥＧ－４　ｐａｒｔ　１０　ＡＶＣ、Ｈ・２６４）、ＭＰＥＧ－２　ＬＡＹＥＲ　ＩＩＩ　ＡＵＤＩＯ、ＭＰ３（登録商標）を含み、様々なフォーマットにエンコードされる。一般的に、メディアオブジェクトは、特定のフィーマットでの互換性を示す拡張子（サフィックス）で示される。例えば、拡張子・ｒａｍ、・ｒｍ、・ｒｐｍのうち１つで終わるメディアオブジェクト（例えばオーディオ及びビデオファイル）は、ＲＥＡＬＭＥＤＩＡ（登録商標）のフォーマットと互換性がある。ファイル拡張子及びその互換フォーマットのいくつかの例が図１に記載されている。メディア形式、拡張子及び互換フォーマットの更に包括的なリストは、ｈｔｔｐ：／／ｗｗｗ・ｂｏｗｅｒｓ・ｃｃ／ｅｘｔｅｎｓｉｏｎｓ２・ｈｔｍに見出され得る。

【００１０】

【表１】

フォーマット	拡張子
REALMEDIA®	.ram, .rm, .rpm
APPLE QUICKTIME®	.mov, .qif
MICROSOFT WINDOWS® MEDIA PLAYER	.wma, .cmr, .avi
MACROMEDIA FLASH	.swf, .swl
MPEG	.mpg, .mpa, .mp1, .mp2
MPEG-2 LAYER III Audio	.mp3, .m3a, .m3u

本発明の図示の実施例は、“ほぼ動画品質”のビデオ提示を表すビデオデータを有するメディアオブジェクトで動作する。このようなメディアオブジェクトは、ＭＰＥＧ－２（Ｍｏｔｉｏｎ　Ｐｉｃｔｕｒｅ　Ｓｔａｎｄａｒｄｓ　Ｇｒｏｕｐ　Ｓｔａｎｄａｒｄ　ＩＳＯ／ＩＥＣ　１３８１８－１：２０００）及びＩＴＵ－Ｔ　Ｈ・２６４／ＭＰＥＧ　ＡＶＣ（ＩＳＯ／ＩＥＣ　１４４９６－１０）のような様々なフォーマットでエンコードされてもよく、非圧縮のビデオでもよい。本発明はまた、Ａｄｖａｎｃｅｄ　Ｔｅｌｅｖｉｓｉｏｎ　Ｓｙｓｔｅｍ（ＡＴＳＣ）又はＤｉｇｉｔａｌ　Ｖｉｄｅｏ　Ｂｒｏａｄｃａｓｔｓ（ＤＶＢ）互換のビデオ信号で使用されるような電波放送プログラムで動作する点に留意すべきである。

【００１１】

図１は、本発明の例示的な実施例による電子装置と通信するシステム１００のブロック図である。図１に示すように、システム１００は、とりわけ、パーソナルコンピュータ（ＰＣ）１１０と、電子装置（例えばビデオ表示装置１２０ａ，ｂ・・・ｋ）と、赤外線（ＩＲ）送信機１４０と、メディアサーバ１７０とを有する。ＰＣ１１０及びビデオ表示装置１２０ａ，ｂ・・・ｋは、接続手段１５０、１６０ａ，ｂ，・・・ｋ及び接続手段１８０の対を介してローカルエリアネットワーク（ＬＡＮ）１３０で相互に接続されている。

【００１２】

ＰＣ１１０は、ポータブル又はラップトップコンピュータ、携帯情報端末（ＰＤＡ）等でもよく、ビデオ表示装置１２０ａ，ｂ・・・ｋのうち１つの機能セットをサポートすることができる工場定義又は独自仕様のプロトコルのような通信プロトコルを使用してビデオ表示装置１２０ａ，ｂ・・・ｋと通信することができる。ビデオ表示装置１２０ａ，ｂ・・・ｋは、高解像度テレビ（ＥＤＴＶ：ｅｎｈａｎｃｅｄ－ｄｅｆｉｎｉｔｉｏｎ　ｔｅｌｅｖｉｓｉｏｎ）及び高品位テレビ（ＨＤＴＶ：ｈｉｇｈ－ｄｅｆｉｎｉｔｉｏｎ　ｖｉｄｅｏ　ｔｅｌｅｖｉｓｉｏｎ）機能を有するデジタルビデオ表示装置でもよく、プラズマ、液晶、有機発光、又は陰極線管（ＣＲＴ）ディスプレイ等でもよい。ビデオ表示装置１２０ａ，ｂ・・・ｋはまた、ビデオ表示装置１２０ａ，ｂ・・・ｋのインタフェースメニューのような外部インタフェース、接続手段１５０、１６０ａ，ｂ・・・ｋ又は赤外線受信機を介して、ＰＣ１１０及びＩＲ送信機１４０のような装置と通信可能である。ＩＲ送信機１４０は、赤外線送信機能を有するユニバーサルリモコンのような一般のビデオ表示装置のリモコンでもよい。ビデオ表示装置１２０ａ，ｂ・・・ｋはまた、ＲＥＡＬ

ＰＬＡＹＥＲ又はＷＩＮＤＯＷＳ　ＭＥＤＩＡ　ＰＬＡＹＥＲのようなメディアプレイヤアプリケーションを使用して受信したメディアオブジェクトをデコード可能であることが好ましい。

【００１３】

図１の電子装置は、複数のビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つとして図示されているが、電子装置は、衛星受信機、デジタルビデオディスク（ＤＶＤ）プレイヤ、ステレオ装置等、他のパーソナルコンピュータ、セットトップボックスのような如何なる数のネットワーク装置でもよく、ネットワークで接続されてクライアント・サーバ型又はピア・ツー・ピア型アーキテクチャを介してアクセスされてもよい。

【００１４】

ＬＡＮ１３０は、１０ＢａｓｅＴ、１００ＢａｓｅＴ若しくは１０００ＢａｓｅＴ標準、トークンリング、非同期転送モード（ＡＴＭ）等、又はビデオ表示装置のインターネットプロトコル（ＩＰ）アドレスの自動構成及び復旧を可能にする如何なるネットワークプロトコルを使用したＥｔｈｅｒｎｅｔのようなネットワークプロトコルを使用してもよい。接続手段１５０、１６０ａ，ｂ・・・ｋ及び接続手段１８０は、例えばＥｔｈｅｒｎｅｔネットワークで、ＰＣ１１０とビデオ表示装置１２０ａ，ｂ・・・ｋとを接続可能なツイストペアケーブルでもよい。接続手段１５０、１６０ａ，ｂ・・・ｋ及び接続手段１８０はまた、ＲＪ－４５形式のＥｔｈｅｒｎｅｔコネクタで終端処理されてもよいが、他の接続も使用可能である。

【００１５】

接続手段１５０及び１８０は、インターネットのようなネットワーク構造の使用を通じてＬＡＮ１３０に接続されてもよいことも考えられる。ネットワーク構造の使用は、当該技術分野において既知の如何なる形式のネットワークでもよい。このようなネットワークは、サーバのサーバ側のリソースとクライアントのクライアント側のリソースとの間で複数の接続に適合できることが好ましく、このような接続は、ＵＤＰ型、ＴＣＰ／ＩＰ型又はその混合である。ネットワーク１５０により適合された帯域は、Ｔ１接続（１・５メガビット／秒（Ｍｂｐｓ））、Ｔ３接続（４５Ｍｂｐｓ）、ＤＳ３接続（４５Ｍｂｐｓ）、ＯＣ３接続（１５５Ｍｂｐｓ）、ＯＣ１２（２４８０００Ｍｂｐｓ）等のような広帯域接続であることが好ましい。

【００１６】

メディアサーバ１７０は、複数のメディアオブジェクトを格納可能なテラバイト及び／又はギガバイトの容量を有するハードドライブのマトリクスのような記憶装置である。メディアサーバ１７０はまた、ＬＡＮ１３０を介して接続手段１８０を通じて表示装置１２０ａ・・・ｋにこのようなメディアオブジェクトを配信することができる。

【００１７】

図２は、本発明で使用されるＰＣ２００のブロック図である。ＰＣ２００は、図１のＰＣ１１０の代わりに又はそれと共に使用されてもよい。ＰＣ２００は、中央処理装置（ＣＰＵ）２１０とメモリ２２０とを有し、データバス２５０を介して出力２３０及び出力２４０に接続されている。メモリ２２０は、ランダムアクセスメモリ（ＲＡＭ）２６０と読み取り専用メモリ（ＲＯＭ）２７０とを有する。メモリ２２０はまた、データベース、ディスクドライブ、テープドライブ等、又はその組み合わせを有し得る。ＲＡＭ２６０は、ＣＰＵ２１０のプログラムの実行中に使用されるデータを格納するデータメモリとして機能し、作業領域として使用される。ＲＯＭ２７０は、ＣＰＵ２１０で実行されるプログラムを格納するプログラムメモリとして機能する。入力２３０は、キーボード、マウス、接続手段、入力装置等により構成され、出力２４０は、液晶ディスプレイ（ＬＣＤ）、ＣＲＴディスプレイ、プリンタ、接続手段等により構成される。

【００１８】

ＣＰＵ２１０及びメモリ２２０は、電子装置（例えば図１のビデオ表示装置１２０ａ，ｂ・・・ｋ）で使用される複数の通信プロトコルを介して通信することに関連するデータを有することがわかる。ビデオ表示装置１２０ａ，ｂ・・・ｋと通信することに関連する

データは、とりわけ、ＰＣ２００のＩＰアドレス、ポート及びパスワードのような識別パラメータを有する。更に、ＰＣ２００は、そのメモリ２２０に格納されたソフトウェアを有し、ビデオ表示装置１２０ａ，ｂ，・・・ｋを診断して修理する方法をサービス技術者に提供する。このソフトウェアは、ビデオ表示装置の問題のサービス及び診断を行うために、Ｔｈｏｍｓｏｎから入手可能なＣＨＩＰＰＥＲ　ＣＨＥＣＫ（登録商標）のようなビデオ表示装置のサービス技術者により一般的に使用される形式のものでもよい。

【００１９】

図３は、本発明で使用されるビデオ表示装置の制御システム３００のブロック図である。制御システム３００は、とりわけ、マイクロプロセッサ（μＰ）３１０と、電気消去可能読み取り専用メモリ（ＥＥＰＲＯＭ）３２０と、出力装置３４０とを有する。マイクロプロセッサ３１０、ＥＥＰＲＯＭ３２０及び出力装置３４０は、データバス３５０を介して相互に通信する。入力３６０はマイクロプロセッサ３１０に接続されており、バックエンドプロセッサ３３０はデータバス３５０に接続されている。

【００２０】

マイクロプロセッサ３１０は、発光ダイオード（ＬＥＤ）、デジタルビデオインタフェース（例えば高解像度マルチメディアインタフェース（ＨＤＭＩ：ｈｉｇｈ　ｄｅｆｉｎｉｔｉｏｎ　ｍｕｌｔｉｍｅｄｉａ　ｉｎｔｅｒｆａｃｅ）１３９４）、赤外線送信機等のような出力装置３４０と、バックエンドプロセッサ３３０と通信し、図１のビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つのようなデジタルビデオ表示装置を制御する。マイクロプロセッサ３１０はまた、バックエンドプロセッサ３３０と通信し、ビデオ処理のようなバックエンド処理を実行する。バックエンドプロセッサ３３０はまた、出力装置３４０に結合されており、例えばディスプレイパラメータを制御し、ビデオ品質を改善する。マイクロプロセッサ３１０はまた、ビデオ表示装置のフロントパネル、リモコン、ＥＥＰＲＯＭ３２０及びデータバス３５０に接続されている何らかの装置から入力３２０を受信する。ＥＥＰＲＯＭ３２０は、ビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つを制御するためにマイクロプロセッサにより使用される値を格納する。これらの値は、例えば調節情報と初期化信号と顧客情報とを含んでもよい。例示的な顧客情報は、チャネル走査リストと色と輝度と音量レベルとを含んでもよい。

【００２１】

ＥＥＰＲＯＭ３２０は、ビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つが作られたときにＥＥＰＲＯＭ３２０に格納されたビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つに関連する値のような情報を有する。ＥＥＰＲＯＭ３２０はまた、ＰＣ１１０又はＩＲ送信機１４０のような外部装置からそれに書き込まれた情報を有する機能を有する。従って、例えば、ＥＥＰＲＯＭ３２０は、ＰＣ１１０からそれに書き込まれた識別パラメータを格納することができる。これらのパラメータは、ＰＣ１１０のＩＰアドレス及びポートを有してもよく、それにより、ＰＣ１１０がビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つと通信することが可能になる。ＰＣ１１０がビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つと通信すると、ＰＣ１１０のサービス及びテストソフトウェアは、ビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つにコマンドを送信し、ビデオ表示装置１２０ａ，ｂ・・・ｋのうちの１つで複数の動作を実行する。

【００２２】

図４は、本発明の例示的な実施例によるビデオ表示装置と通信するシステムの動作４００を示したフローチャートである。図４に示す通り、サービス技術者は、例えば図１のビデオ表示装置１２０ａに通信を送信する（ステップ４１０）。通信は、例えば図１のＩＲ送信機１４０により送信される。通信はまた、ビデオ表示装置１２０ａのスクリーンのインタフェースメニューにアクセスして通信を入力することにより、ビデオ表示装置１２０ａにも送信され得ることがわかる。通信は、ビデオ表示装置１２０ａに対してＰＣ（例えば図１のＰＣ１１０）を特定することに関連するパラメータを有する。これらのパラメータは、とりわけ、ＰＣ１１０のＩＰアドレス及びポートを有する。通信は、ビデオ表示装置１２０ａと互換性のある工場定義のプロトコル又は独自仕様のプロトコルを介して送信

されることがわかる。

【００２３】

通信が送信された後に、それはビデオ表示装置１２０ａにより受信される（ステップ４２０）。ビデオ表示装置１２０ａに配置された赤外線受信機がこの通信を受信する。通信の受信時に、ビデオ表示装置１２０ａは、通信に関連する識別パラメータを図３のＥＥＰＲＯＭ３２０のようなメモリに格納する（ステップ４３０）。通信に安全であると考えられるビデオ表示装置１２０により使用されるプロトコルを介して通信が送信されるため、このことが生じ、それによって通信に関連するデータが格納されることが可能になる。ＰＣ１１０のＩＰアドレス及びポートを有する識別パラメータがビデオ表示装置１２０ａのメモリに格納されると、ビデオ表示装置１２０ａは、ビデオ表示装置１２０ａとＰＣ１１０との間の通信を確立しようとして、（ステップ４１０の通信で指定されたポートで）ＰＣ１１０に信号を送信する（ステップ４４０）。換言すると、ビデオ表示装置１２０ａは、ＰＣ１１０の識別情報を受信してＰＣ１１０から更なる通信を受信する用意ができていることをＰＣ１１０に通知するハンドシェイクプロトコルを介してメッセージを送信することにより、ＰＣ１１０とハンドシェイクを完了しようとする。

【００２４】

更なる通信を確立するためのビデオ表示装置１２０ａの要求を受信すると、ＰＣ１１０は、ビデオ表示装置１２０ａが通信するべき装置であることを示す通信を送信することにより、要求に応答する（ステップ４５０）。それによってハンドシェイクを完了する。ステップ４１０においてＰＣ１１０のＩＰアドレス及びポートがサービス技術者によりビデオ表示装置１２０ａのメモリにプログラムされているため、このハンドシェイクは、ビデオ表示装置１２０ａ及びＰＣ１１０が相互に接続されており、詐称者又は無許可のユーザでないことを確保する。この構成では、ビデオ表示装置１２０ａはクライアント・サーバ型アーキテクチャのクライアントとして機能し、ＰＣ１１０はリモートサーバとして機能することがわかる。

【００２５】

ビデオ表示装置１２０ａとＰＣ１１０との間の安全な通信チャネルが確立された後に、ＰＣ１１０は、ビデオ表示装置１２０ａと通信し、例えばサービス又はテストに関して、ビデオ表示装置で所望の機能を実行してもよい（ステップ４６０）。実行される機能は、色、外形、ビデオ、ステレオ若しくはピクチャ・イン・ピクチャ（ＰＩＰ）の調節、又は画質に関連する様々な較正値に対する調整等のうちの１つでもよい。

【００２６】

本発明の代替実施例では、図１のＰＣ１１０は、ビデオ表示装置１２０ａ，ｂ・・・ｋのような１つより多い電子装置と通信することができる。このことは、（図４のステップ４１０－４５０で前述したものと同じ又は類似の処理を実行することにより）ＰＣ１１０がビデオ表示装置１２０ａと既に通信しているときに、例えばビデオ表示装置１２０ｂにＰＣ１１０のＩＰアドレス及びポートを送信することにより実現される。これを実現するために、ＰＣ１１０は、ビデオ表示装置１２０ｂに異なるポートを割り当てる。ステップ４１０－４５０が完了すると、ＰＣ１１０はビデオ表示装置１２０ａで所望の機能を依然として実行する一方で、ビデオ表示装置１２０ｂで所望の機能を実行し始める。１つより多いビデオ表示装置で機能を実行しているときに、ＰＣ１１０は、ＬＣＤディスプレイのような出力にビデオ表示装置毎に異なるウィンドウを有することができる。

【００２７】

（ビデオ表示装置１２０ａ用の）ＰＣ１１０のＩＰアドレス及びポートがビデオ表示装置１２０ａに送信されるのと同時に、（ビデオ表示装置１２０ｂ用の）ＰＣ１１０のＩＰアドレス及びポートはビデオ表示装置１２０ｂに送信され得ることが更にわかる。それによって、サービス技術者が同時に１つより多いビデオ表示装置と接続して通信することが可能になる。

【００２８】

１つより多いビデオ表示装置と通信することにより、同時に１つのビデオ表示装置で機

能を実行することに限定されないため、ＰＣ１１０はサービス技術者に柔軟性を提供する。更に、１つより多いビデオ表示装置又は電子装置の制御を有することにより、本発明のサービス技術者及び／又は許可されたユーザは、例えば複数のビデオ表示装置を同時にオフ又はオンしてもよく、チャネルや音量等を変更してもよく、また、例えば複数のＤＶＤプレイヤで同じ映画を視聴してもよい。

【００２９】

本発明の代替の変形では、コンピュータの識別情報は、Ｂｌｕｅｔｏｏｔｈ、Ｉｎｓｔｉｔｕｔｅ ｏｆ Ｅｌｅｃｔｒｉｃａｌ ａｎｄ Ｅｌｅｃｔｒｏｎｉｃｓ Ｅｎｇｉｎｅｅｒｓ（ＩＥＥＥ）８０２・１１又は赤外線通信（ＩｒＤＡ）無線伝送技術を使用して、送信機から無線で送信されてもよい。

【００３０】

図５は、ビデオ表示装置の特性に応じてビデオ表示装置と通信し、メディアオブジェクトを受信する方法５００を開示したフローチャートである。特に、ＯＬＥＤ、プラズマ、ＬＣＤ等のようなビデオ表示装置の技術の発達と共に、表示装置でメディアサービスを処理する際に変更が存在してもよいことがわかる。例えば、ＭＰＥＧ－２ビデオコーデックでエンコードされたメディアサービスは、陰極線管（ＣＲＴ）表示装置で表示されたときには動画品質でもよいが、ＯＬＥＤ表示装置で処理されたときには不鮮明でもよい。

【００３１】

前述の問題の原因は、メディアサービスをエンコードするために使用されるエンコード方法に関係する。一般的に、エンコーダは、元の源素材からエンコード後のメディアオブジェクトのサイズを減少させる圧縮技術を使用する。例えば、ＭＰＥＧ－２型のエンコーダは、ビデオ形式の源素材をエンコードするために使用されると、４０～５０：１の圧縮を実現する。一部の圧縮は、人間がメディアオブジェクトをどのように視覚的及び聴覚的に認識するかに関係する精神測定関数として知られる技術を利用する。その技術では、人間がデータの一部の損失を認識することなく、データの一部が源素材から除去され得る。ＭＰＥＧ－２及び他のエンコード技術の発達は、どの視覚又はオーディオ情報が保持される必要があり、どれが源素材から除去され得るかを決定するために人間がテストすることで発達した。人間の視覚認識のテストについての背景には、ＩＴＵ Ｒｅｃｏｍｍｅｎｄａｔｉｏｎ ＢＴ・５００－８、“Ｍｅｔｈｏｄｏｌｏｇｙ ｆｏｒ Ｓｕｂｊｅｃｔｉｖｅ Ａｓｓｅｓｓｍｅｎｔ ｏｆ ｔｈｅ Ｑｕａｌｉｔｙ ｏｆ Ｔｅｌｅｖｉｓｉｏｎ Ｐｉｃｔｕｒｅｓ”、１９９８を参照のこと。

【００３２】

新しいディスプレイ技術の発達と共に、第２の表示装置（ＣＲＴディスプレイ）で明らかでないように（例えばＯＬＥＤ表示装置で）選択されたエンコード技術による加工物を人間が気付かないことがある。この例を続けると、人間は、ＣＲＴで人間に明らかでない、ＯＬＥＤ表示装置でＭＰＥＧ－２エンコードのビデオに使用されたマクロブロックの加工物に気付く場合がある。これは、ビデオ画像を処理するために使用される表示装置技術の基礎の物理特性によることがある。従って、ＣＲＴのスクリーンリフレッシュ技術は、ＯＬＥＤ表示装置のスクリーンリフレッシュ技術よりＭＰＥＧ－２のそのような加工物を隠すのに優れていることがある。

【００３３】

人間の認識のこのような欠如を認識して、本発明は、そのようなメディアオブジェクトを処理するために使用される表示装置に適したエンコードフォーマットで、メディアオブジェクトを配信するアーキテクチャを開示する。図１を参照することによる本発明の例示的な実施例では、ビデオ表示装置１２０ａはＣＲＴ型のビデオ表示装置を表し、ビデオ表示装置１２０ｂはＯＬＥＤ表示装置を表す。双方の表示装置は、接続手段１８０を通じてメディアサーバ１７０に接続されている。

【００３４】

ステップ５１０において、表示装置１２０ａは、メディアサーバ１７０からメディアオブジェクトを要求する。例えば、メディアオブジェクトの要求は、ビデオオンデマンドシ

ステムのビデオを通じて配信された映画用のもの、又はインターネットを通じてストリーミングメディアとして配信されたメディアオブジェクトである。ステップ５２０において、メディアサーバ１７０はこの要求を受信し、表示装置１２０ａの機能を決定する。本発明の好ましい実施例では、表示装置１２０ａは、メディアサービスを処理するときにその装置で使用される表示装置の技術を識別する装置パラメータの一部としての識別パラメータを送信する。例えば、表示装置１２０ａは、表示装置をＣＲＴ型のテレビとして識別するメタデータを送信する。表２は、拡張マークアップ言語フォーマットを使用して表示装置の技術を識別するために使用され得るメタデータフィールドＤＩＳＰＬＡＹＤＥＶＩＣＥ及び対応の値の実施例を表している。例えば、＜ＤＩＳＰＬＡＹＤＥＶＩＣＥ＞ＣＲＴ＜／ＤＩＳＰＬＡＹＤＥＶＩＣＥ＞として受信したメタデータは、ＣＲＴ型の表示装置の技術を表す。本発明の原理に従って他のメタデータのフォーマットも使用され得る。

【００３５】

【表２】

ディスプレイ技術	値
陰極線管	CRT
有機発光ダイオード	OLE
液晶ディスプレイ	LCD
シリコン上液晶	LCO
デジタル光プロジェクタ	DLP
プラズマ	PLA

代替として、メディアオブジェクトについての表示装置１２０ａによる要求に基づいて、表示装置１２０ａのＩＰ及び／又はポートアドレスは、要求の一部として送信される。メディアサーバ１７０は、要求の一部であるＩＰアドレス及び／又はポートアドレス情報により表示装置を識別するために使用される技術を識別する情報を含むデータベースを有することが好ましい。この情報は、ネットワーク接続を通じて表示装置を登録したときに、ユーザにより入力され、メディアサーバ１７０により格納される。

【００３６】

ステップ５３０は、表示装置１２０ａが識別パラメータをメディアサーバ１７０に通信する任意選択のステップを表す。一般的に、この通信は、メディアサーバ１７０が表示装置に使用される表示技術を要求することにより行われるクエリに応じるものである。識別パラメータのこの通信は、表２に示すメタデータと類似することが好ましいが、識別パラメータの他のフォーマットが使用されてもよい。

【００３７】

メディアサーバ１７０により受信された識別パラメータに応じて、ステップ５４０において、メディアサーバは、表示装置に使用される表示技術に対応したビデオ装置１２０ａにメディアオブジェクトを通信する。好ましい実施例では、メディアサーバ１７０は、表示装置の技術について最適なビデオ画像を作るものとして予め定められたエンコード技術に対して表示技術を指定する参照テーブル又はデータベースエントリーを利用する。例えば、Ｗｉｎｄｏｗｓ　Ｍｅｄｉａ　９エンコードのメディアオブジェクトが最適なビデオ提示を作ることがあるＯＬＥＤディスプレイに対して、ＣＲＴでは、ＭＰＥＧ－２エンコードのメディアオブジェクトが最適のビデオ提示を作ると決定されてもよい。メディアサーバ１７０のオペレータにより行われた決定に従って、如何なるエンコードフォーマットが選択されてもよい。表示装置の技術における更なる改善と共に新しいエンコード技術が作られると、これらの決定が変化してもよい。

【００３８】

好ましい実施例では、メディアサーバ１７０は、異なるフォーマットでエンコードされたメディアオブジェクトと同じ源素材の複数のバージョンを格納する。この例では、メデ

ィアサーバ１７０は、ＭＰＥＧ－２フォーマットでエンコードされたメディアオブジェクト及びＷｉｎｄｏｗｓ　Ｍｅｄｉａ　９フォーマットでエンコードされたメディアオブジェクトとして映画の源素材を格納する。代替として、メディアサーバ１７０は、前述の表示技術についての指定のエンコードフォーマットに従って、エンコーダを使用してリアルタイム又はほぼリアルタイムに、メディアオブジェクトの源素材を適切なフォーマットにエンコードする。

【００３９】

次に、メディアサーバ１７０は、この例ではＣＲＴとして指定された表示装置１２０ａにＭＰＥＧ－２エンコードのメディアオブジェクトを送信する。メディアオブジェクトは、接続手段１８０及びＬＡＮ１３０を通じて表示装置１２０ａに送信される。表示装置１２０ｂが同じ映画を要求する場合には、メディアサーバ１７０は、前述のように、Ｗｉｎｄｏｗｓ　Ｍｅｄｉａ　９エンコードのメディアオブジェクトをＯＬＥＤ型の表示装置に送信する。他のエンコードフォーマット及び表示装置も、本発明の原理に従って考えられる。

【００４０】

更に、メディアオブジェクトのフォーマット毎に、メディアオブジェクトを生成するために使用された源素材の視覚属性は、特定の表示技術に最適のビデオ品質を作るために変更される。変更される視覚属性は、色、色合い、コントラスト、色相、彩度、輝度、フレームレート、フィールド毎のライン、画素等を含む。視覚属性は、特定の技術の表示装置での最適な視覚ビデオを提供するために実験的に決定されたパラメータに従って選択及び変更される。

【００４１】

ステップ５５０において、メディアオブジェクトを受信した表示装置は、ビデオとしてオブジェクトを処理する。この例では、各表示装置は、受信したメディアサービスをデコード可能なデコーダを有する。従って、表示装置１２０ａはＭＰＥＧ－２ビデオデコーダを有し、表示装置１２０ｂはＷｉｎｄｏｗｓ　Ｍｅｄｉａ　９ビデオデコーダを有する。表示装置のデコーダは、表示装置によりデコードされるメディアオブジェクトのフォーマットに従って選択される。

【００４２】

本発明の代替実施例では、マルチキャストされたデジタル放送のサブチャネル又は“マイナー”チャネルが、ＡＴＳＣ又はＤＶＢ型のテレビシステムに使用されるメディアオブジェクトの複数のバージョンを送信するために使用されてもよい。特に、デジタル放送システムのサブチャネルは、第１の技術の表示装置用のプログラムを運ぶように指定され、第２の技術の表示装置用のプログラムを運ぶために第２のサブチャネルを利用してもよい。この場合、メディアオブジェクトは同じ源素材から生成される。例えば、プログラムがＬＣＤスクリーンでの表示用に色補正された第２のサブチャネルで運ばれるプログラムに対して、第１のサブチャネルで送信されるプログラムは、プラズマ装置での表示用に変更されたプログラムの色のガンマ値を有してもよい。プログラムの他の属性も、本発明の原理に従って変更されてもよい。

【００４３】

本発明は、様々な形式のハードウェア、ソフトウェア、ファームウェア、特殊目的プロセッサ、又はその組み合わせで実装されてもよいことがわかる。一実施例では、本発明は、プログラム記憶装置に明白に具現されたアプリケーションプログラムとしてソフトウェアに実装され得る。アプリケーションプログラムは、何らかの適切なアーキテクチャを有する機械にアップロードされ、それにより実行されてもよい。

【００４４】

添付図面に示した構成システムの構成要素及び方法のステップのうちいくつかはソフトウェアに実装されてもよいため、システム構成要素（又は処理のステップ）の間の実際の接続は、本発明がプログラムされる方法に応じて異なってもよいことが更にわかる。ここに提示された本発明の教示により、当業者は本発明の前記及び類似の実装又は構成を検討

することができる。

【図面の簡単な説明】

【００４５】

【図１】本発明の例示的な実施例による電子装置と通信するシステムのブロック図

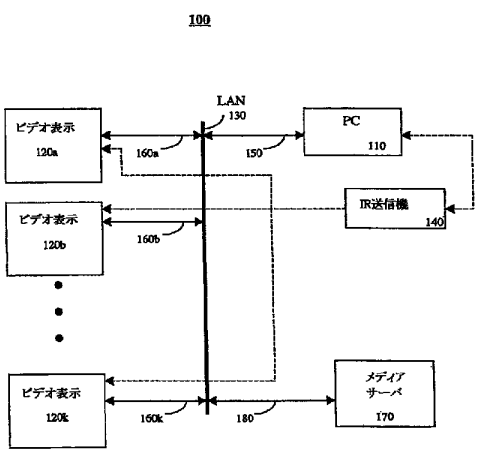
【図２】本発明で使用されるパーソナルコンピュータ（ＰＣ）のブロック図

【図３】本発明で使用されるビデオ表示装置の制御システムのブロック図

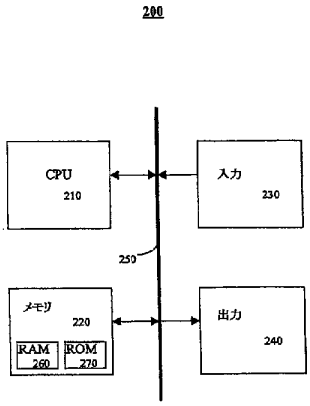
【図４】本発明の例示的な実施例によるビデオ表示装置と通信するシステムの動作を示したフローチャート

【図５】本発明の例示的な実施例によるビデオ表示装置の特性に応じてビデオ表示装置と通信するシステムの動作を示したフローチャート

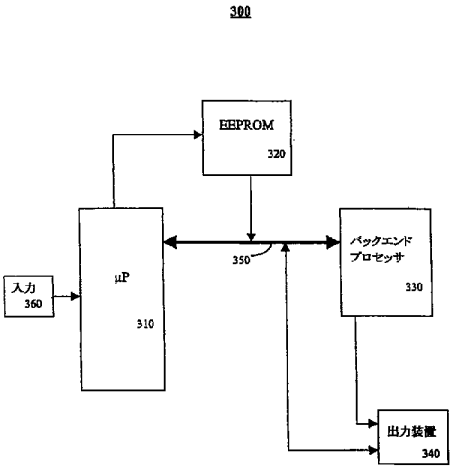
【図１】



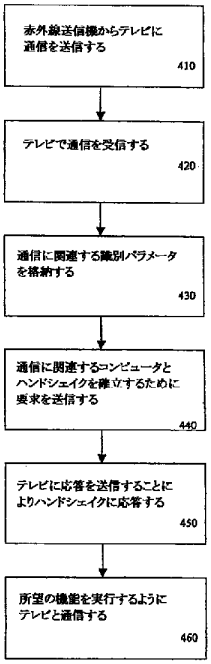
【図２】



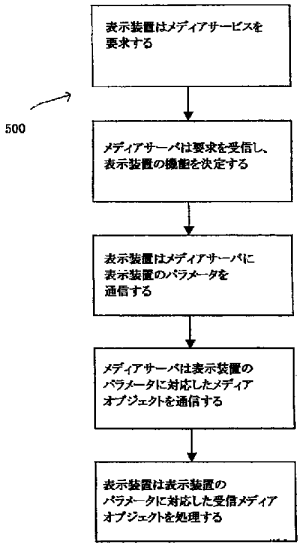
【図３】


300
EEPROM
320
μP
310
入力
360
350
バックエンド
プロセッサ
330
出力装置
340

【図４】


赤外線送信機からテレビに
通信を送信する
410
テレビで通信を受信する
420
通信に関連する識別パラメータ
を格納する
430
通信に関連するコンピュータと
ハンドシェイクを確立するために
要求を送信する
440
テレビに応答を送信することに
よりハンドシェイクに応答する
450
所望の機能を実行するように
テレビと通信する
460

【図５】


500
表示装置はメディアサービスを
要求する
メディアサーバは要求を受信し、
表示装置の機能を決定する
表示装置はメディアサーバに
表示装置のパラメータを
通信する
メディアサーバは表示装置の
パラメータに対応したメディア
オブジェクトを通信する
表示装置は表示装置の
パラメータに対応した受信メディア
オブジェクトを処理する

【手続補正書】
【提出日】平成17年12月15日(2005.12.15)
【手続補正１】
【補正対象書類名】特許請求の範囲
【補正対象項目名】全文
【補正方法】変更
【補正の内容】
【特許請求の範囲】
【請求項１】
メディアオブジェクトを作る方法であって、
表示装置で使用される表示技術に関連する表示パラメータを決定するステップと、
前記パラメータに応じて表示技術に対応するメディアオブジェクトを生成するステップと
を有する方法。
【請求項２】
請求項１に記載の方法であって、
前記表示パラメータは、前記表示パラメータに応じて前記メディアオブジェクトとして生成されたデータを返信するサーバに通信される方法。
【請求項３】
請求項１に記載の方法であって、
使用される表示技術を示す前記表示パラメータは、陰極線管、有機発光ダイオード、液晶ディスプレイ、シリコン上液晶、デジタル光プロジェクト及びプラズマのうち少なくとも１つである方法。
【請求項４】
請求項３に記載の方法であって、
前記メディアオブジェクトは、前記表示技術に適したフォーマットでエンコードされる方法。
【請求項５】
請求項４に記載の方法であって、
前記メディアオブジェクトは、前記表示技術用に変更された視覚属性を有し、
前記視覚属性は、前記メディアオブジェクトが異なる表示技術を使用した表示装置に表示されるときに変更される方法。
【請求項６】
請求項２に記載の方法であって、
前記メディアオブジェクトは、デジタルテレビ放送システムのサブチャネルで送信され、前記変更されたメディアオブジェクトは、異なるサブチャネルで送信される方法。
【請求項７】
メディアオブジェクトを送信する方法であって、
表示装置に使用される表示技術に関係する表示装置パラメータを決定し、前記パラメータは、メディアオブジェクトの要求の一部として受信されるステップと、
前記表示装置に前記メディアオブジェクトを送信し、前記メディアオブジェクトは、前記表示装置に使用される表示技術に対応するステップと、
を有する方法。
【請求項８】
請求項７に記載の方法であって、
使用される表示技術を示す前記パラメータは、陰極線管、有機発光ダイオード、液晶ディスプレイ、シリコン上液晶、デジタル光プロジェクト及びプラズマのうち少なくとも１つである方法。
【請求項９】
請求項８に記載の方法であって、

前記メディアオブジェクトは、表示技術に適したフォーマットでエンコードされる方法。

【請求項１０】

請求項９に記載の方法であって、

前記メディアオブジェクトは、前記表示技術用に変更された視覚属性を有し、

前記視覚属性は、前記メディアオブジェクトが異なる表示技術を使用した表示装置に表示されるときに変更される方法。

【請求項１１】

請求項１０に記載の方法であって、

前記メディアオブジェクトは、デジタルテレビ放送システムのサブチャネルで送信され、前記変更されたメディアオブジェクトは、異なるサブチャネルで送信される方法。

【国際調査報告】

INTERNATIONAL SEARCH REPORT

Intl oral Application No
PCT/US2004/013859

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/28 H04B1/20 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97/18636 A (MIZUNO YOSHIRO ; WEBTRONICS INC (US)) 22 May 1997 (1997-05-22) the whole document	1-34
X A	US 2003/043740 A1 (MARCH SEAN W ET AL) 6 March 2003 (2003-03-06) abstract; figures 3,8 paragraphs '0005!, '0006!, '0022!, '0028!, '0036! - '0091!, '0104!, '0106!	1-18,32, 33 19-31,34
X A	WO 97/40610 A (NORTHERN TELECOM LTD) 30 October 1997 (1997-10-30) page 5, line 18 - page 6, line 12	1-18,32, 33 19-31,34

-/---

X Further documents are listed in the continuation of box C.

X Patent family members are listed in annex.

* Special categories of cited documents :

'A' document defining the general state of the art which is not considered to be of particular relevance
'E' earlier document but published on or after the international filing date
'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
'O' document referring to an oral disclosure, use, exhibition or other means
'P' document published prior to the international filing date but later than the priority date claimed

'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
'&' document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 February 2005	21 02 2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Lievens, K

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Inte ernal Application No
PCT/US2004/013859

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 109 222 A (WELTY JOHN) 28 April 1992 (1992-04-28) abstract; figure 5 column 2, line 30 - column 4, line 55	19-31
A		1-18, 32-34
A	WO 00/39772 A (KONINKL PHILIPS ELECTRONICS NV) 6 July 2000 (2000-07-06) the whole document	1-34
A	WO 00/16531 A (SONY ELECTRONICS INC) 23 March 2000 (2000-03-23) the whole document	1-34
X	US 2003/046691 A1 (NAKAGAWA TOSHIYUKI) 6 March 2003 (2003-03-06) abstract paragraph '0002! - paragraph '0023! paragraph '0045! - paragraph '0048!	35-38, 40-43
Y	paragraph '0080! - paragraph '0123!	39,44
X	WO 02/097584 A2 (HYPERSPACE COMMUNICATIONS, INC) 5 December 2002 (2002-12-05) abstract paragraph '0017! - paragraph '0023! paragraph '0026! - paragraph '0036! paragraph '0043! - paragraph '0046!	35-38, 40-43
X	EP 1 263 233 A (MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD) 4 December 2002 (2002-12-04) abstract paragraph '0003! - paragraph '0011! paragraph '0041!	35-38, 40-43
Y	US 2002/120931 A1 (HUBER THOMAS ET AL) 29 August 2002 (2002-08-29) abstract paragraph '0006! - paragraph '0020! paragraph '0035! - paragraph '0047! paragraph '0054! figures 1,5	39,44

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

national application No.
PCT/US2004/013859

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2004)

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US2004/013859

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-34

Method and system for establish a communication

2. claims: 35-44

Method for transmision of media objects based on the properties of a display device

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte onal Application No
PCT/US2004/013859

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9718636	A	22-05-1997	AU	7706596 A	05-06-1997
			WO	9718636 A2	22-05-1997
US 2003043740	A1	06-03-2003	EP	1430682 A2	23-06-2004
			WO	02103982 A2	27-12-2002
WO 9740610	A	30-10-1997	AU	707905 B2	22-07-1999
			AU	2563297 A	12-11-1997
			CA	2248577 A1	30-10-1997
			WO	9740610 A2	30-10-1997
			CN	1216657 A	12-05-1999
			DE	69708281 D1	20-12-2001
			DE	69708281 T2	16-05-2002
			EP	0895684 A2	10-02-1999
			JP	11508753 T	27-07-1999
			KR	2000010612 A	25-02-2000
			US	6128298 A	03-10-2000
US 5109222	A	28-04-1992	NONE		
WO 0039772	A	06-07-2000	CN	1298530 T	06-06-2001
			WO	0039772 A1	06-07-2000
			EP	1058921 A1	13-12-2000
			JP	2002534038 T	08-10-2002
WO 0016531	A	23-03-2000	US	6237049 B1	22-05-2001
			AT	280463 T	15-11-2004
			AU	5579999 A	03-04-2000
			CA	2340902 A1	23-03-2000
			DE	69921342 D1	25-11-2004
			EP	1112650 A1	04-07-2001
			JP	2002525732 T	13-08-2002
			WO	0016531 A1	23-03-2000
US 2003046691	A1	06-03-2003	JP	2003153254 A	23-05-2003
WO 02097584	A2	05-12-2002	NONE		
EP 1263233	A	04-12-2002	CN	1389785 A	08-01-2003
			EP	1263233 A2	04-12-2002
			JP	2003091648 A	28-03-2003
			US	2002184223 A1	05-12-2002
US 2002120931	A1	29-08-2002	CA	2438620 A1	29-08-2002
			EP	1364533 A1	26-11-2003
			WO	02067587 A1	29-08-2002

Form PCT/ISA/210 (patent family annex) (January 2004)

フロントページの続き

(81)指定国 AP(BW,GH,GM,KE,LS,MW,MZ,NA,SD,SL,SZ,TZ,UG,ZM,ZW),EA(AM,AZ,BY,KG,KZ,MD,RU,TJ,TM),EP(AT,BE,BG,CH,CY,CZ,DE,DK,EE,ES,FI,FR,GB,GR,HU,IE,IT,LU,MC,NL,PL,PT,RO,SE,SI,SK,TR),OA(BF,BJ,CF,CG,CI,CM,GA,GN,GQ,GW,ML,MR,NE,SN,TD,TG),AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BW,BY,BZ,CA,CH,CN,CO,CR,CU,CZ,DE,DK,DM,DZ,EC,EE,EG,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KP,KR,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX,MZ,NA,NI,NO,NZ,OM,PG,PH,PL,PT,RO,RU,SC,SD,SE,SG,SK,SL,SY,TJ,TM,TN,TR,TT,TZ,UA,UG,US,UZ,VC,VN,YU,ZA,ZM,ZW

（特許庁注：以下のものは登録商標）
ＥＴＨＥＲＮＥＴ
Ｂｌｕｅｔｏｏｔｈ

(74)代理人 100135105
弁理士 渡邊 直満
(72)発明者 グライムス，ケヴィン，ロイド
アメリカ合衆国，インディアナ州 ４６０３８，フィッシャーズ，ハイドン・コート １２４２７
(72)発明者 バーネット，アンジェラ，レニー
アメリカ合衆国，インディアナ州 ４６２６８，インディアナポリス，ブレトン・ウッド・ドライヴ ６８２１

Ｆターム(参考) 5C164 UB41P UD01P UD61S YA21

Espacenet

Bibliographic data: JP2004356695 (A) - 2004-12-16

SYSTEM AND METHOD FOR DATA DISTRIBUTION AND DATA RECEIVING APPARATUS AND METHOD FOR DATA RECEIVING

Inventor(s): KASAHARA YOICHI + (KASAHARA YOICHI)

Applicant(s): SONY CORP + (SONY CORP)

Classification: - **international:** ***G06F13/00; H04N21/433; H04N21/442; H04N7/173;*** (IPC1-7): H04N7/173

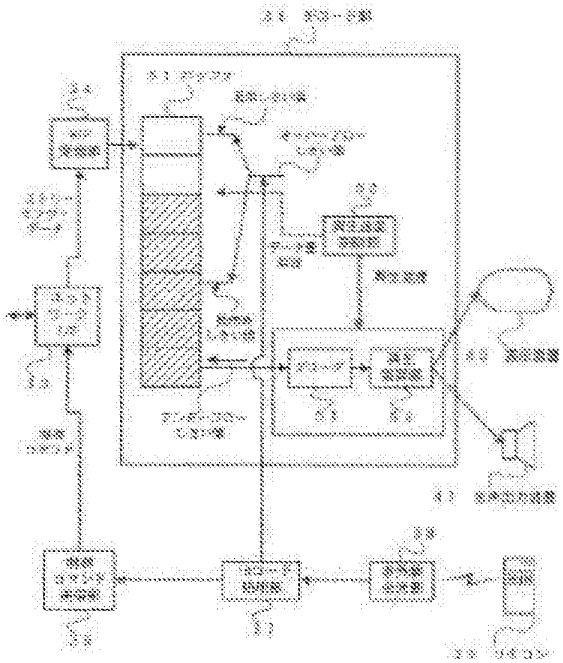
- **cooperative:**

Application number: JP20030148697 20030527

Priority number (s): JP20030148697 20030527

Abstract of JP2004356695 (A)

PROBLEM TO BE SOLVED: To reproduce streaming data without generating underflow and overflow even in a small buffer, and to shorten a time for providing content at the time of operating a remote controller. ;SOLUTION: When a user controls a remote controller 39 for a content providing device 21, an IR code processor 37 receives a signal of the remote controller 39, and changes an overflow threshold from a normal threshold to an operation threshold smaller than the normal threshold. When judging that the amount of data streaming in a buffer 51 exceeds the operation threshold, a reproduction speed control unit 52 controls a decoder 53 and a reproduction control unit 54 to speed the reproduction processing. ;COPYRIGHT: (C) 2005,JPO&NCIPI



(19)日本国特許庁(JP)　(12)公開特許公報(A)　(11)特許出願公開番号
特開2004-356695
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(43)公開日　平成16年12月16日(2004.12.16)

(51)Int.Cl.[7]	F I			テーマコード（参考）
H04N 7/173	H04N	7/173	610Z	5C064
	H04N	7/173	630	

審査請求 未請求　請求項の数 28　ＯＬ　（全 23 頁）

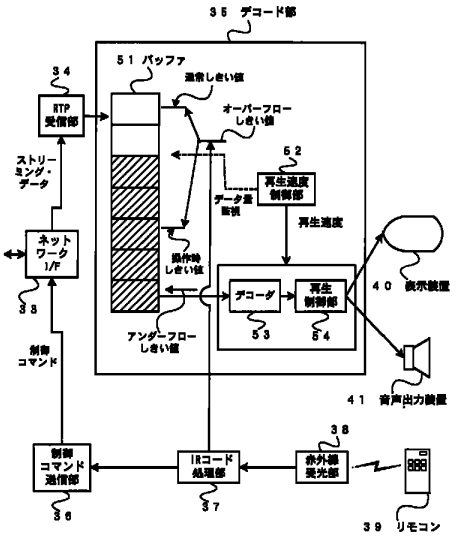
(21)出願番号　特願2003-148697(P2003-148697)
(22)出願日　平成15年5月27日(2003.5.27)

(71)出願人　000002185
ソニー株式会社
東京都品川区北品川６丁目７番３５号
(74)代理人　100082762
弁理士　杉浦　正知
(74)代理人　100120640
弁理士　森　幸一
(72)発明者　笠原　洋一
東京都品川区北品川６丁目７番３５号　ソニー株式会社内

Ｆターム(参考)　5C064 BA01 BB05 BC16 BC23 BD02 BD08 BD09

(54)【発明の名称】データ配信システムおよびデータ配信方法、ならびにデータ受信装置およびデータ受信方法

(57)【要約】
【課題】小さなバッファでもアンダーフロー、およびオーバーフローを発生させずにストリーミング・データを再生するとともに、リモコン操作時のコンテンツ提供に係る遅延時間を短縮する。
【解決手段】ユーザが、コンテンツ提供装置２１に対してリモコン３９の操作をした場合に、ＩＲコード処理部３７が上記リモコン３９の信号を受信し、オーバーフローしきい値を通常しきい値から、通常しきい値より小さい操作時しきい値に変更する。再生速度制御部５２は、バッファ５１内のストリーミング・データの量が、上記操作時しきい値を越えたと判断した場合に、デコーダ５３および再生制御部５４に対して再生処理を速くするよう制御し、これによって、リモコン操作時に、コンテンツがコンテンツ提供装置２１から提供されてから表示装置４０等に出力されるまでの時間を短縮する。
【選択図】　図５



【特許請求の範囲】
【請求項１】
映像データを含むコンテンツを出力するコンテンツ提供装置と、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、
前記ストリーミング・データを、前記ネットワークを介して受信する受信装置とを有し、
前記受信装置は、前記受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値以下である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコード手段が前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システム。
【請求項２】
映像データを含むコンテンツを出力するコンテンツ提供装置と、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、
前記ストリーミング・データを、前記ネットワークを介して受信する受信装置とを有し、
前記受信装置は、前記受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第２のしきい値以上である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が前記第２のしきい値を下回った場合は、前記デコード手段が前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システム。
【請求項３】
映像データを含むコンテンツを出力するコンテンツ提供装置と、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、
前記ストリーミング・データを、前記ネットワークを介して受信する受信装置とを有し、
前記受信装置は、前記受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値と前記第１のしきい値より小さい第２のしきい値の間である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコード手段が前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御し、前記データ量が第２のしきい値を下回った場合は、前記デコード手段が前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システム。
【請求項４】

請求項１，２または３に記載のデータ配信システムにおいて、
前記受信装置は、前記コンテンツ提供装置を制御するための制御信号を出力する信号入力装置からの前記制御信号を受信する信号処理手段を更に有し、
前記制御信号が、前記信号処理手段から、前記ネットワークおよび前記送信装置を介して前記コンテンツ提供装置に送信され、
前記信号処理手段が、前記制御信号を受信した場合に、前記第１のしきい値を、前記第１のしきい値より小さい所定の値に変更することを特徴とするデータ配信システム。
【請求項５】
請求項４に記載のデータ配信システムにおいて、
前記信号処理手段は、前記制御信号を一定期間受信しない場合は、前記変更された第１のしきい値を、元の第１のしきい値に戻すことを特徴とするデータ配信システム。
【請求項６】
請求項１，２または３に記載のデータ配信システムにおいて、
前記デコード手段によりデコードされたストリーミング・データを受信し、前記映像データを表示する表示装置を更に有することを特徴とするデータ配信システム。
【請求項７】
請求項１，２または３に記載のデータ配信システムにおいて、
前記デコード手段は、前記再生速度制御手段から再生処理の速度を変更するよう制御された場合に、前記映像データから所定のフィールドまたはフレームを除去することにより、または前記映像データに所定のフィールドまたはフレームを挿入することによって再生速度を変更することを特徴とするデータ配信システム。
【請求項８】
映像データを含むコンテンツを出力するコンテンツ提供ステップと、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、
前記ストリーミング・データを前記ネットワークを介して受信し、前記ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値以下である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコードステップが前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法。
【請求項９】
映像データを含むコンテンツを出力するコンテンツ提供ステップと、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、
前記ストリーミング・データを前記ネットワークを介して受信し、前記ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第２のしきい値以上である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が前記第２のしきい値を下回った場合は、前記デコードステップが前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法。
【請求項１０】

映像データを含むコンテンツを出力するコンテンツ提供ステップと、
前記コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、
前記ストリーミング・データを前記ネットワークを介して受信し、前記ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値と前記第１のしきい値より小さい第２のしきい値の間である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコードステップが前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が前記第２のしきい値を下回った場合は、前記デコードステップが前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法。

【請求項１１】
請求項８，９または１０に記載のデータ配信方法において、
前記映像データを含むコンテンツからなるストリーミング・データの提供を制御するための制御信号を受信する信号処理ステップを更に有し、
前記信号処理ステップが、前記制御信号を受信した場合に、前記第１のしきい値を、前記第１のしきい値より小さい所定の値に変更することを特徴とするデータ配信方法。

【請求項１２】
請求項１１に記載のデータ配信方法において、
前記信号処理ステップは、前記制御信号を一定期間受信しない場合は、前記変更された第１のしきい値を、元の第１のしきい値に戻すことを特徴とするデータ配信方法。

【請求項１３】
請求項８，９または１０に記載のデータ配信方法において、
前記デコードステップによりデコードされたストリーミング・データを受信し、前記映像データを表示する表示ステップを更に有することを特徴とするデータ配信方法。

【請求項１４】
請求項８，９または１０に記載のデータ配信方法において、
前記デコードステップは、前記再生速度制御ステップにより再生処理の速度を変更するよう制御された場合に、前記映像データから所定のフィールドまたはフレームを除去することにより、または前記映像データに所定のフィールドまたはフレームを挿入することによって再生速度を変更することを特徴とするデータ配信方法。

【請求項１５】
映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値以下である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコード手段が前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置。

【請求項１６】
映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、

前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、
デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第２のしきい値以上である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第２のしきい値を下回った場合は、前記デコード手段が前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置。

【請求項１７】

映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、
デコード出力の再生速度を制御可能なデコード手段と、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値と前記第１のしきい値より小さい第２のしきい値の間である場合は、前記デコード手段が通常の速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が第１のしきい値を上回った場合は、前記デコード手段が前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御し、
前記データ量が前記第２のしきい値を下回った場合は、前記デコード手段が前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置。

【請求項１８】

請求項１５，１６または１７に記載のデータ受信装置において、
前記映像データを含むコンテンツからなるストリーミング・データの提供を制御するための制御信号を受信する信号処理手段を更に有し、
前記信号処理手段が、前記制御信号を受信した場合に、前記第１のしきい値を、前記第１のしきい値より小さい所定の値に変更することを特徴とするデータ受信装置。

【請求項１９】

請求項１８に記載のデータ受信装置において、
前記信号処理手段は、前記制御信号を一定期間受信しない場合は、前記変更された第１のしきい値を、元の第１のしきい値に戻すことを特徴とするデータ受信装置。

【請求項２０】

請求項１５，１６または１７に記載のデータ受信装置において、
前記デコード手段によりデコードされた前記ストリーミング・データを受信し、前記映像データを表示する表示手段を更に有することを特徴とするデータ受信装置。

【請求項２１】

請求項１５，１６または１７に記載のデータ受信装置において、
前記デコード手段は、前記再生速度制御手段から再生処理の速度を変更するよう制御された場合に、前記映像データから所定のフィールドまたはフレームを除去することにより、または前記映像データに所定のフィールドまたはフレームを挿入することによって再生速度を変更することを特徴とするデータ受信装置。

【請求項２２】

映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、
前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、
デコード出力の再生速度を制御可能なデコードステップと、
前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値以下である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、

前記データ量が第１のしきい値を上回った場合は、前記デコードステップが前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法。

【請求項２３】

映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、

前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、

前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第２のしきい値以上である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、

前記データ量が前記第２のしきい値を下回った場合は、前記デコードステップが前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法。

【請求項２４】

映像データを含むコンテンツからなるストリーミング・データを受信し、前記ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、

前記バッファ手段内の前記ストリーミング・データに前記デコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、

前記バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、前記データ量が第１のしきい値と前記第１のしきい値より小さい第２のしきい値の間である場合は、前記デコードステップが通常の速度で前記ストリーミング・データの再生を行うよう制御し、

前記データ量が第１のしきい値を上回った場合は、前記デコードステップが前記通常の速度より速い速度で前記ストリーミング・データの再生を行うよう制御し、

前記データ量が前記第２のしきい値を下回った場合は、前記デコードステップが前記通常の速度より低い速度で前記ストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法。

【請求項２５】

請求項２２，２３または２４に記載のデータ受信方法において、

前記映像データを含むコンテンツからなるストリーミング・データの提供を制御するための制御信号を受信する信号処理ステップを更に有し、

前記信号処理ステップが、前記制御信号を受信した場合に、前記第１のしきい値を、前記第１のしきい値より小さい所定の値に変更することを特徴とするデータ受信方法。

【請求項２６】

請求項２５に記載のデータ受信方法において、

前記信号処理ステップは、前記制御信号を一定期間受信しない場合は、前記変更された第１のしきい値を、元の第１のしきい値に戻すことを特徴とするデータ受信方法。

【請求項２７】

請求項２２，２３または２４に記載のデータ受信方法において、

前記デコードステップによりデコードされた前記ストリーミング・データを受信し、前記映像データを表示する表示ステップを更に有することを特徴とするデータ受信方法。

【請求項２８】

請求項２２，２３または２４に記載のデータ受信方法において、

前記デコードステップは、前記再生速度制御ステップにより再生処理の速度を変更するよう制御された場合に、前記映像データから所定のフィールドまたはフレームを除去することにより、または前記映像データに所定のフィールドまたはフレームを挿入することによって再生速度を変更することを特徴とするデータ受信方法。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】
この発明は、映像・音声データを、ネットワークを介して配信するデータ配信システムおよび方法、ならびに映像・音声データを、ネットワークを介して受信するデータ受信装置およびデータ受信方法に関する。

【０００２】
【従来の技術】
ここ数年の間で、ＤＶＤ（Ｄｉｇｉｔａｌ　Ｖｅｒｓａｔｉｌｅ　Ｄｉｓｋ）の利用が広く浸透してきており、映画や音楽のコンテンツを記録したＤＶＤも多く販売されるようになってきた。またディジタルハイビジョン放送も開始され、各家庭には、今までにない高画質、高音質なコンテンツが多く提供されるようになってきている。これらのメディアの普及に伴って、ＤＶＤを再生するＤＶＤ再生装置、ディジタルハイビジョン放送を受信、表示するディジタルテレビジョン受信装置、およびディジタルハイビジョン放送等を録画して随時再生することができるホームビデオサーバといったコンテンツを提供する装置が次々と商品化され店頭に並んでいる。

【０００３】
また、これらの装置は、ユーザのリモコン等の操作に応じて所定の動作をする。例えば、ＤＶＤ再生装置は、映画のＤＶＤの再生に際して、ユーザのリモコン操作に応じて特定のチャプターを選択して再生することができる。また、ディジタルテレビジョン受信装置は、ユーザのリモコン操作に応じて、データ放送のプログラムによる双方向サービスを提供することができる。

【０００４】
このような状況の中、高画質かつ高音質な映画やテレビジョン放送の番組を、より容易に家庭内で楽しむことができる「ホームネットワーク」が世間の注目を集め、これを実現するシステムも市販され始めている。このシステムの特徴の１つは、ＤＶＤ再生装置やハードディスクドライブ等のコンテンツ提供装置からの映像・音声データが、ネットワークを介して伝送され、異なる部屋にあるテレビジョンモニタおよびスピーカ等で再生されることである。

【０００５】
コンテンツ提供装置から映像・音声データを受け取った送信装置は、そのデータを圧縮符号化して、例えば、家庭内ＬＡＮ（Ｌｏｃａｌ　Ａｒｅａ　Ｎｅｔｗｏｒｋ）等のネットワークに送信する。圧縮符号化されたデータをネットワークを介して受信する受信装置は、このデータをデコードしてテレビジョンモニタやスピーカに出力する。ここで利用される家庭内ＬＡＮは、例えば、１００ＢＡＳＥ－ＴＸのネットワーク接続を使用したイーサネット（登録商標）ＬＡＮや、ＩＥＥＥ８０２・１１ｂ、ＩＥＥＥ８０２・１１ｇといった規格に従う無線ＬＡＮ等である。

【０００６】
また、このシステムでは、高画質、高音質を実現するために大きなサイズとなっている映像・音声データを含むストリーミング・データを、上記ＬＡＮのような比較的帯域の狭いネットワークを利用して送信すること、および高データレートで当該ストリーミング・データを転送すると、送信装置および受信装置それぞれのＣＰＵ負荷を増大させてしまうこと等の理由により、当該ストリーミング・データを、例えば、ＭＰＥＧ－２（Ｍｏｖｉｎｇ　Ｐｉｃｔｕｒｅ　Ｅｘｐｅｒｔｓ　Ｇｒｏｕｐ－２）等の圧縮技術で圧縮する方法が用いられている。すなわち、送信装置側でそのストリーミング・データをＭＰＥＧ－２形式にエンコードし、受信装置側では、その圧縮されたストリーミング・データをデコードし、出力する。

【０００７】
このようなシステムにおいては、通常時のストリーミング・データの再生が滑らかに行われることが重要であるため、上記ストリーミング・データをデコードする受信装置内のデコーダの前段にストリーミング・データ受信用の大容量バッファが設けられる。このバッファ容量は、ネットワーク伝送遅延や、送信装置および受信装置の処理能力等を考慮して

、ある程度の余裕を持つように定められる。バッファ容量が小さいと、送信装置からのストリーミング・データの転送が遅延した場合に、デコーダが処理すべきデータがすぐになくなって、所定のタイミングで出力すべき映像および音声を提供することができず、結果的に滑らかなストリーミング・データの再生が行えないことになる。

【０００８】

こうしたストリーミング・データの遅延の原因として代表的なものは、ネットワークの帯域幅が減少することである。同一のネットワーク上で、他の送信装置から他のストリーミング・データが送出されたり、他の受信装置に同一のストリーミング・データが送出されたりすると、利用可能なネットワークの帯域幅が急激に減少する。また、無線ＬＡＮ利用時には、間に障害物が入ったり、他の機器と混信したりすることによって通信速度が低下する。

【０００９】

また、ストリーミング・データの転送プロトコルには、パケットロス対策や伝送時間の保証を行わない、例えば、ＲＴＰ（Ｒｅａｌ－ｔｉｍｅ　Ｔｒａｎｓｐｏｒｔ　Ｐｒｏｔｏｃｏｌ）のようなプロトコルが利用される。ストリーミング・データの再生においては、１フレームの映像データの到着を待つことによってストリーミング再生が遅れるよりも、その１フレームの映像・音声データが欠落する方が好ましい。その方が、ユーザにとっては自然なストリーム再生と感じられるからである。

【００１０】

同様のシステムとして、コンテンツ再生方法および装置が提案されている（特許文献１）。この方法および装置では、コンテンツの再生中に、シーン記述情報に基づいて後続のコンテンツデータの先行取得が行われる。

【００１１】

【特許文献１】

特開２００２－２６８９９９号公報

【００１２】

【発明が解決しようとする課題】

しかしながら、上述した大容量バッファを使用すると、コンテンツ提供装置によってコンテンツ（映像・音声データ）が送信されてから、その映像・音声データがユーザに視聴可能となるまでの時間（遅延時間）が長くなってしまう。これにより、例えば、ネットワーク上に障害が発生した後でコンテンツの再生が再開されるときに安定再生状態に復帰するのに長い時間がかかることになる。

【００１３】

また、このような遅延時間の長さは、ユーザがリモコン等を操作してコンテンツ提供装置に指示を送っても、その指示が表示に反映されるのに非常に長い時間がかかり、リモコン操作におけるリアルタイム性を損なうことになる。

【００１４】

例えば、ＤＶＤに記録された映画のストリーミング・データが、ＤＶＤ再生装置（コンテンツ提供装置）から、送信装置、ネットワーク、および受信装置を介してテレビジョンモニタ等に出力されているときに、ユーザが映画の言語を変更したり、視聴チャプターの変更をしたりするためにメニューを表示するように指示をした場合、そのＤＶＤ再生装置は、ユーザの指示を受け取るとすぐに対応するメニューの映像データを受信装置に向けて送信する。

【００１５】

しかしながら、バッファには、依然として映画のシーンに対応する残りのストリーミング・データが格納されているので、上記メニューの表示は、それらのシーンが全て表示された後でテレビジョンモニタに表示される。従って、ユーザは、ＤＶＤ再生装置に指示をしてから、その指示結果を見るまで非常に長い間待つ必要がある。特に、階層化された複数のメニューを表示させて、順次リモコンで指示をしていくような場合は、それぞれのメニュー表示に長い間待がかかるので、最終的な指示を行うまでに膨大な時間を要する。また

、このような遅延によって、ユーザがリモコン操作を誤る確率も増大する。
【００１６】
また、ユーザが、テレビジョンモニタ等の表示装置に表示されている映像等を観てリモコンを操作しても、そのリモコンの指示を受け取ったコンテンツ提供装置は、全く異なる先行する映像を提供しているので、その指示を受け付けることができない場合もある。
【００１７】
また更に、コンテンツ提供装置がＤＶＤ再生装置やビデオテープレコーダである場合には、リモコンによる再生や停止等の指示が、上述した遅延時間のためにユーザの期待する位置で行われないという問題もある。
【００１８】
従って、この発明の目的は、ＤＶＤ再生装置などのコンテンツ提供装置からコンテンツ（映像・音声データ）を配信する際に、小さなサイズのバッファを用いても、バッファ内にストリーミング・データが存在しない状態（アンダーフロー）や、バッファがストリーミング・データで一杯になる状態（オーバーフロー）の発生を抑止し、滑らかなストリーミング・データの再生を維持するように、上記ストリーミング・データのデコード処理の速度を調整するデータ配信システムおよび方法、ならびにデータ受信装置および方法を提供することにある。
【００１９】
また、この発明の更なる目的は、ユーザがコンテンツ提供装置に対してリモコンの操作をした場合に、バッファ内のストリーミング・データの量を判定するしきい値を動的に変更することによって、そのコンテンツがコンテンツ提供装置より配信されてから表示装置に表示されるまでの時間を短縮するように制御するデータ配信システムおよび方法、ならびにデータ受信装置および方法を提供することにある。
【００２０】
【課題を解決するための手段】
請求項１の発明は、映像データを含むコンテンツを出力するコンテンツ提供装置と、コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、ストリーミング・データを、ネットワークを介して受信する受信装置とを有し、受信装置は、受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値以下である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコード手段が通常の速度より速い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システムである。
【００２１】
請求項２の発明は、映像データを含むコンテンツを出力するコンテンツ提供装置と、コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、ストリーミング・データを、ネットワークを介して受信する受信装置とを有し、受信装置は、受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第２のしきい値以上である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコード手段が通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システムである。
【００２２】
請求項３の発明は、映像データを含むコンテンツを出力するコンテンツ提供装置と、コン

テンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信装置と、ストリーミング・データを、ネットワークを介して受信する受信装置とを有し、受信装置は、受信されたストリーミング・データをデコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値と第１のしきい値より小さい第２のしきい値の間である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコード手段が通常の速度より速い速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコード手段が通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを備えることを特徴とするデータ配信システムである。

【００２３】

請求項８の発明は、映像データを含むコンテンツを出力するコンテンツ提供ステップと、コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、ストリーミング・データをネットワークを介して受信し、ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値以下である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコードステップが通常の速度より速い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法である。

【００２４】

請求項９の発明は、映像データを含むコンテンツを出力するコンテンツ提供ステップと、コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、ストリーミング・データをネットワークを介して受信し、ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第２のしきい値以上である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコードステップが通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法である。

【００２５】

請求項１０の発明は、映像データを含むコンテンツを出力するコンテンツ提供ステップと、コンテンツを必要に応じてエンコードし、ストリーミング・データとしてネットワーク上に送信する送信ステップと、ストリーミング・データをネットワークを介して受信し、ストリーミング・データをデコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値と第１のしきい値より小さい第２のしきい値の間である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコードステップが通常の速度より速い速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコードステップが通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ配信方法である。

【００２６】
請求項１５の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値以下である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコード手段が通常の速度より速い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置である。

【００２７】
請求項１６の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第２のしきい値以上である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコード手段が通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置である。

【００２８】
請求項１７の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまで記憶するバッファ手段と、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコード手段と、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値と第１のしきい値より小さい第２のしきい値の間である場合は、デコード手段が通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコード手段が通常の速度より速い速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコード手段が通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御手段とを有することを特徴とするデータ受信装置である。

【００２９】
請求項２２の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値以下である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコードステップが通常の速度より速い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法である。

【００３０】
請求項２３の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第２のしきい値以上である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコードステッ

プが通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法である。

【００３１】

請求項２４の発明は、映像データを含むコンテンツからなるストリーミング・データを受信し、ストリーミング・データを、デコード処理がされるまでバッファ手段に記憶する記憶ステップと、バッファ手段内のストリーミング・データにデコード処理を施すとともに、デコード出力の再生速度を制御可能なデコードステップと、バッファ手段内に記憶されているストリーミング・データのデータ量を所定のタイミングで取得し、データ量が第１のしきい値と第１のしきい値より小さい第２のしきい値の間である場合は、デコードステップが通常の速度でストリーミング・データの再生を行うよう制御し、データ量が第１のしきい値を上回った場合は、デコードステップが通常の速度より速い速度でストリーミング・データの再生を行うよう制御し、データ量が第２のしきい値を下回った場合は、デコードステップが通常の速度より低い速度でストリーミング・データの再生を行うよう制御する再生速度制御ステップとを有することを特徴とするデータ受信方法である。

【００３２】

この発明によれば、ＤＶＤ再生装置などのコンテンツ提供装置からコンテンツ（映像・音声データ）を配信する際に、小さなサイズのバッファを用いても、バッファ内にストリーミング・データが存在しない状態（アンダーフロー）や、バッファがストリーミング・データで一杯になる状態（オーバーフロー）の発生を抑止し、滑らかなストリーミング・データの再生を維持するように、上記ストリーミング・データのデコード処理の速度が調整される。

【００３３】

また、この発明によれば、ユーザがコンテンツ提供装置に対してリモコンの操作をした場合に、バッファ内のストリーミング・データの量を判定するしきい値を動的に変更することによって、そのコンテンツがコンテンツ提供装置より配信されてから表示装置に表示されるまでの時間を短縮するように制御される。

【００３４】

【発明の実施の形態】

以下、この発明の実施の形態について、図面を用いて説明する。また、各図にわたり、同一の構成要素には同一の符号が付されている。図１は、この発明の第１の実施の形態に係るデータ配信システム１の構成要素を示すブロック図である。

【００３５】

データ配信システム１は、コンテンツ提供装置２、送信装置４、受信装置９、表示装置１３、音声出力装置１４、およびネットワーク１５を含む。ここで、後述する受信装置９内のバッファ１６、再生速度制御部１７はそれぞれ、バッファ手段、再生速度制御手段に対応し、デコーダ１８および再生制御部１９は、デコード手段に対応する。また、コンテンツ提供装置２と送信装置４は、１つの装置として一体的に構成されてもよい。

【００３６】

コンテンツ提供装置２は、映像データおよび音声データを含むコンテンツを提供する装置であり、ＤＶＤ再生装置（ＤＶＤプレイヤー）、ビデオテープレコーダ、ビデオサーバ、アナログテレビジョン受信機、およびディジタルテレビジョン受信機等がこれに相当する。

【００３７】

また、コンテンツ提供装置２は、ＤＶＤ、ビデオカセットテープ、ハードディスク等の記録媒体からコンテンツ（映像・音声データ）を読み取り、またはディジタルテレビジョン放送やアナログテレビジョン放送を受信し、Ａ／Ｖ（Ａｕｄｉｏ／Ｖｉｓｕａｌ）データ生成部３で、そのコンテンツやテレビジョン放送を所定のフォーマットに変換し、Ａ／Ｖデータとして出力する。こうしたコンテンツ提供装置２は、通常、テレビジョンモニタ等の表示装置１３やスピーカ等の音声出力装置１４に直接接続して映像および音声を出力できる市販の装置であってもよい。また、この例では、Ａ／Ｖデータは、アナログデータと

して出力されているが、メディアの種類とコンテンツ提供装置２の機能の組み合わせによっては、ディジタルデータで出力することも可能である。

【００３８】

送信装置４は、Ａ／Ｄ変換部５、エンコーダ６、ＲＴＰ送信部７、およびネットワーク・インタフェース８を有し、受信した映像・音声データをディジタル化して圧縮し、ネットワーク１５上に送信する。

【００３９】

Ａ／Ｄ変換部５は、コンテンツ提供装置２から受信したアナログの映像・音声データをディジタルに変換する。前述したように、コンテンツ提供装置２からの出力がディジタルデータとして提供される場合、このＡ／Ｄ変換部５における処理は不要となる。

【００４０】

エンコーダ６は、Ａ／Ｄ変換部５から受信したディジタルの映像・音声データを所定の圧縮方法で圧縮する。これらのデータは、後述するように、帯域に制限のあるネットワークを介して受信装置９に送信されるので、できるだけ帯域を占有しないように圧縮されることが好ましい。また、圧縮することによって高データレートでの転送を回避し、送信装置４および受信装置９のＣＰＵ負荷を低減することも可能である。

【００４１】

こうした映像・音声データの圧縮方法としては、ＭＰＥＧ－２（Ｍｏｖｉｎｇ　Ｐｉｃｔｕｒｅ　Ｅｘｐｅｒｔｓ　Ｇｒｏｕｐ－２）が一般的に用いられている。本実施の形態では、映像データ、音声データともにＭＰＥＧ－２で圧縮符号化が行われるものとして説明を行うが、この圧縮方法に限定される必要はなく、他の圧縮方法を用いてシステムを構築することもできる。

【００４２】

次に、ＭＰＥＧ－２形式にエンコードされた映像・音声データは、ネットワーク１５上で送信を行うために、ＲＴＰ送信部７でプロトコルに応じた変調処理がされ、その後、ネットワーク・インタフェース８、ネットワーク１５、および受信装置９のネットワーク・インタフェース１０を介して受信装置９のＲＴＰ受信部１１に送信される。この例では、送信装置４と受信装置９を接続するネットワーク１５として１００ＢＡＳＥ－ＴＸのネットワーク接続からなるイーサネットＬＡＮが使用され、プロトコルはＲＴＰ（Ｒｅａｌ－ｔｉｍｅ　Ｔｒａｎｓｐｏｒｔ　Ｐｒｏｔｏｃｏｌ）が利用される。送信装置４と受信装置９との間は、その他のネットワークで接続することができ、更に、ＲＴＰ以外のプロトコルを使用することができる。例えば、ＩＥＥＥ８０２・１１ａ等の規格に基づく無線ＬＡＮでこれらの装置間でデータの転送を行うこともできる。また、これらのネットワーク接続は家庭内に限られるものと解すべきではなく、ＬＡＮ以外にも、ＷＡＮ（Ｗｉｄｅ　Ａｒｅａ　Ｎｅｔｗｏｒｋ）やＭＡＮ（Ｍｅｔｒｏｐｏｌｉｔａｎ　Ａｒｅａ　Ｎｅｔｗｏｒｋ）に適用することができる。更に、特定のネットワーク・トポロジーに限定されるものでもない。

【００４３】

コンテンツ提供装置２のなかには、ＤＶＤメディアやハードディスク内に、既にＭＰＥＧ－２のＴＳ（Ｔｒａｎｓｐｏｒｔ　Ｓｔｒｅａｍ：トランスポート・ストリーム）の形式で映像・音声データを記憶しているものもある。従って、そのような形式のデータを送信する場合、Ａ／Ｄ変換部５およびエンコーダ６を使用する必要はない。

【００４４】

本実施の形態に係るデータ配信システム１が、家庭内でホームシアターを構成するために用いられる場合は、コンテンツ提供装置２や送信装置４は、通常、リビング等の同じ部屋に配置される。受信装置９は、コンテンツ提供装置２等と同じ部屋に置かれることもあるが、離れた別の部屋に置かれることもある。

【００４５】

また、図１に示すデータ配信システム１をクライアント・サーバ型のシステムと考えれば、送信装置４がサーバであり、受信装置９がクライアントという関係になる。また、前述

したように、受信装置９が表示装置１３および音声出力装置１４と一体的に形成され、例えば、１つのテレビジョン受信機として構成される場合は、このテレビジョン受信機がクライアントとなる。

【００４６】

受信装置９は、ネットワーク・インタフェース１０、ＲＴＰ受信部１１、およびデコード部１２を有する。ネットワーク・インタフェース１０は、送信装置４のネットワーク・インタフェース８から送信されたストリーミング・データをネットワーク１５を介して受信する。ＲＴＰ受信部１１は、ネットワーク・インタフェース１０からのストリーミング・データを復調し、ＭＰＥＧ－２のＴＳを生成する。

【００４７】

デコード部１２は、上記ＴＳから映像データ、音声データを個別にデコードし、それぞれの出力装置に（すなわち、映像データはテレビジョンモニタ等の表示装置１３に、音声データはスピーカ等の音声出力装置１４に）再生タイミングを調整した上で出力する。

【００４８】

この例では、受信装置９、表示装置１３、および音声出力装置１４は、それぞれ別の装置として表されているが、受信装置９に、表示装置１３と音声出力装置１４の両方、またはどちらか一方を組み込んで単一の装置として構成することもできる。例えば、受信装置９の構成要素を全て含んだディジタルテレビジョン受信機を構成することができる。

【００４９】

このようなシステムでは、ネットワーク環境などにより多少のデータが欠落しても後続のデータが影響なく再生できるために、（ＯＳＩ参照モデルにおける）トランスポートレイヤのプロトコルとして、再送制御を行わないＵＤＰが利用されることが多い。本実施の形態で使用するＲＴＰもトランスポートレイヤにＵＤＰを利用するプロトコルである。

【００５０】

ＲＴＰ送信部７では、映像・音声データの圧縮符号化がエンコーダ６によって行われた段階で、受信装置９の状態に関係なく圧縮符号化されたストリーミング・データを受信装置９のネットワーク・インタフェース１０に送出する。従って、受信装置９では、デコード部１２の処理状態に関係なく当該ストリーミング・データを受け取ることになる。ストリーミング・データの受信間隔は一定でなく、また一回に受信するストリーミング・データのサイズもコンテンツの内容等によって変化する。デコード部１２が、ストリーミング・データのデコード処理をしている間に後続のストリーミング・データを受信しても、そのストリーミング・データをすぐに処理することはできない。

【００５１】

そのため、デコード部１２は、受信したストリーミング・データを蓄積するバッファを備え、デコード処理中に受信したストリーミング・データを後で処理できるようにしている。以下に、デコード部１２によるバッファの利用態様を、図２を参照して説明する。また、ここで説明するバッファは、例えば、ＭＰＥＧ－２のＴＳ（トランスポート・ストリーム）を記憶するものであり、ＴＳは、ビデオ・ストリームとオーディオ・ストリームを含むデータ・ストリームである。従ってこの場合は、バッファを１つ設ければよいが、映像データと音声データを別のデータ・ストリームで転送するような場合は、映像データと音声データそれぞれにバッファを設けるように構成してもよい。

【００５２】

図２は、デコード部１２が、ＲＴＰ受信部１１からストリーミング・データを受信してバッファ１６に記憶し、それを順次処理する態様が概念的に示されている。また、この図に示す例では、デコード部１２は、バッファ１６、再生速度制御部１７、デコーダ１８、および再生制御部１９を備えている。

【００５３】

最初に、ＲＴＰ受信部１１は、ネットワーク・インタフェース１０から送信装置４により送信されたストリーミング・データ（ＭＰＥＧ－２形式に圧縮符号化された映像・音声データ）を受信すると、そのデータをバッファ１６に送信する。バッファ１６は、例えば、

リングバッファ構成をとるＦＩＦＯ（Ｆｉｒｓｔ－Ｉｎ　Ｆｉｒｓｔ－Ｏｕｔ）型のメモリであり、当該ストリーミング・データを受信してそれらを蓄積する。バッファ１６内のストリーミング・データは、最初に受信したものから順に、デコーダ１８および再生制御部１９に提供され、そこでストリーミング・データのデコード処理を含む再生処理が行われる。デコーダ１８によるデコード処理では、ＭＰＥＧ－２形式のデータが、映像データ、音声データに分離され、出力装置が扱うデータ形式にそれぞれ変換され、変換されたデータが当該出力装置に送信される。映像データは、表示装置１３に出力するための形式に変換され、音声データは、音声出力装置１４に出力するための形式に変換される。

【００５４】

コンテンツの再生中に、バッファ１６に一定期間ストリーミング・データの受信がなく、デコーダ１８および再生制御部１９が、全てのストリーミング・データについて再生処理を終えた場合、デコーダ１８は次に処理すべきストリーミング・データを取得することができない。このような状態を「アンダーフロー」と言い、表示装置１３には同じフレームの映像が繰り返し表示されるフリーズ状態となる。

【００５５】

逆に、デコーダ１８および再生制御部１９でストリーミング・データの再生処理を行うペース以上にストリーミング・データを受信する場合、バッファ１６はストリーミング・データで一杯になり、新たに受信したストリーミング・データを消失するかまたは最新のデータを上書きする。これは「オーバーフロー」と呼ばれる状態で、表示装置１３には、上記消失したデータ、または上書きされたデータに対応するフレームがスキップされて表示される。

【００５６】

このような事象の発生を回避するためには、バッファ容量にマージンを加え、バッファ容量をある程度大きめに設定する必要がある。本実施の形態では、バッファ容量を、受信装置９におけるストリーミング・データの受信間隔、受信するストリーミング・データの平均サイズ、デコーダ１８および再生制御部１９の処理能力、コンテンツ提供装置２からＡ／Ｖデータが生成されてから受信装置９でストリーミング・データがデコード・再生されるまでの遅延時間等を考慮して設定する。

【００５７】

更に、本実施の形態では、例えば、図２に示すようなアンダーフローしきい値およびオーバーフローしきい値を設定するとともに、再生速度制御部１７が、バッファ１６内に記憶されたストリーミング・データの量を監視・取得する。再生速度制御部１７は、こうして取得されたストリーミング・データの量が上記アンダーフローしきい値を下回っていると判定した場合は、デコーダ１８および再生制御部１９による再生処理を低速にするよう制御し、オーバーフローしきい値を上回っていると判定した場合は、デコーダ１８および再生制御部１９による再生処理を高速にするよう制御する。

【００５８】

デコーダ１８および再生制御部１９による再生処理は、上記ＭＰＥＧ－２形式のデータをデコードしてから、当該データを表示装置１３や音声出力装置１４に再生出力するまでの処理を意味する。

【００５９】

オーバーフローしきい値は、バッファに蓄積されたストリーミング・データの量がこの値を超えた場合に、オーバーフローに近い状態であることを示すために設定されているので、バッファ１６の容量（最大容量）より小さい値で、かつこの容量の値にある程度近接する値である必要がある。同様に、アンダーフローしきい値は、バッファに蓄積されたストリーミング・データの量がこの値を下回った場合に、アンダーフローに近い状態であることを示すために設定されているので、ゼロより大きい値で、かつこのゼロの値にある程度近接する値である必要がある。例えば、図２では、オーバーフローしきい値は、バッファ１６の最大容量の位置から、バッファ１６の容量の１／７だけ下の位置（小さい値）に設定されている。一方、アンダーフローしきい値は、バッファ１６のゼロの位置から、バッ

ファ１６の容量の１／７だけ上の位置（大きい値）に設定されている。

【００６０】

デコーダ１８および再生制御部１９は協働して、再生速度制御部１７から指定された再生速度に基づきストリーミング・データの再生速度を調整するが、この速度調整には、様々な方法が考えられる。例えば、高速な再生処理を行う場合は、１秒間に６０フィールドの元の映像データを数フィールド減らして１秒より短い時間で再生する。逆に、低速な再生処理を行う場合は、上記６０フィールドに数フィールドを補間して１秒より長い時間で再生する。当該フィールドの補間は、２４コマの映画フィルムを３０コマのＤＶＤ用の映像に変換するテレシネ変換と同様の方法で行われる。こうした速度変更のための処理はフィールド単位で行われることが望ましいが、フレームなどのその他の単位で行うこともできる。

【００６１】

また、ＭＰＥＧ－２のＴＳが有するＰＴＳ（Ｐｒｅｓｅｎｔａｔｉｏｎ Ｔｉｍｅ Ｓｔａｍｐ）等の情報を元に、ストリーミング・データのデコード処理の開始時間を調整することもできる。

【００６２】

これらの方法を用いることによって、人間がその速度差にほとんど気づかない高速化および低速化を行うこともできる。

【００６３】

このようなデコーダ１８および再生制御部１９の再生速度の調整によって、バッファ１６内のストリーミング・データの量がアンダーフローしきい値を下回っている場合は、しだいにストリーミング・データがバッファ１６内に蓄積され、当該データの量がアンダーフローしきい値を上回る状態になる。一方、バッファ１６内のストリーミング・データの量がオーバーフローしきい値を上回っている場合は、しだいにストリーミング・データがバッファ１６内で減少し、当該データの量がオーバーフローしきい値を下回る状態になる。この結果、バッファ１６内に蓄積されたストリーミング・データの量が、アンダーフローしきい値とオーバーフローしきい値との間の値となった場合、再生速度制御部１７は、再生処理を通常の速度に戻すよう制御する。

【００６４】

次に、上述した再生速度制御部１７の動的な制御を、図３のフローチャートを用いて説明する。図３に示された処理は、所定のタイミングで繰り返し起動されるが、このタイミングは通常、再生速度制御部１７がバッファ１６を監視するタイミングと一致するものである。

【００６５】

最初に、ステップＳ１０で、再生速度制御部１７がバッファ１６内のストリーミング・データのデータ量を検出する。次に、ステップＳ１１で、この検出値と上記各しきい値との比較を行う。データ量の値がオーバーフローしきい値より大きい場合は、ステップＳ１２に進み、再生速度を高速にするよう制御する。データ量の値がアンダーフローしきい値より小さい場合は、ステップＳ１４に進み、再生速度を低速にするよう制御する。データ量の値がアンダーフローしきい値以上で、オーバーフローしきい値以下である場合は、ステップＳ１３に進み、再生速度を通常の速度にするよう制御する。

【００６６】

以上説明したように、それぞれのステップＳ１２、ステップＳ１３、ステップＳ１４で、再生速度が切り換えられるが、以前の制御によって、既に同じ速度に切り換えられている場合は、各ステップで速度切換制御を行う必要はない。また、本実施の形態の例では、２つのしきい値が用いられているが、より多くのしきい値を設定して、再生速度をより詳細なレベルで切り換えるように制御することもできる。

【００６７】

本実施の形態によって、結果的に、従来のものより小さいサイズのバッファを使用しても、バッファ内に処理すべきストリーミング・データが存在しない状態（アンダーフロー）

や、バッファがストリーミング・データで一杯になる状態（オーバーフロー）が発生する可能性を低減することができる。また、本実施の形態において従来のサイズのバッファを用いた場合は、上記オーバーフローおよびアンダーフローの発生確率がより一層低減される。

【００６８】

次に、図４ないし図７を参照して、この発明の第２の実施の形態に係るデータ配信システムについて説明する。図４は、第２の実施の形態に係るデータ配信システム２０の構成を表すブロック図である。

【００６９】

本実施の形態のデータ配信システム２０は、コンテンツ提供装置２１で生成されたＡ／Ｖデータが、送信装置２４でＭＰＥＧ－２等の好適な圧縮フォーマットにエンコードされ、ネットワーク４２を介して受信装置３２に送信され、最終的に表示装置４０および音声出力装置４１に映像や音声として出力されるという点で、前述の第１の実施の形態に係るデータ配信システム１と共通している。

【００７０】

すなわち、データ配信システム２０のＡ／Ｖデータ生成部２２、Ａ／Ｄ変換部２５、エンコーダ２６、ＲＴＰ送信部２７、およびＲＴＰ受信部３４は、データ配信システム１のＡ／Ｖデータ生成部３、Ａ／Ｄ変換部５、エンコーダ６、ＲＴＰ送信部７、およびＲＴＰ受信部１１と同様の機能を有している。従って、これらについては、詳細な説明を省略する。

【００７１】

データ配信システム２０は、データ配信システム１の機能に加え、ユーザがリモートコントロールコマンダ（以下、リモコンと称する）によって、コンテンツ提供装置２１に指示を送信する機能を有している。ユーザのリモコン操作の内容は、受信装置３２によって受信され、ネットワーク４２、および送信装置２４を介してコンテンツ提供装置２１に伝えられる。コンテンツ提供装置２１と表示装置４０は、遠く隔てて置かれたり、別の部屋の置かれたりする場合があり、このような状況では、リモコンによってコンテンツ提供装置２１を直接操作することはできない。従って、このように映像・音声データとは逆の経路でリモコンの指示をネットワークを介して伝えられることは、ユーザの操作性を向上するうえで好ましい構成であると言える。

【００７２】

また、この例では、コンテンツ提供装置２１に対する指示をリモコン３９によって行うこととしているが、受信装置３２に接続されたキーボード、マウス、タッチパネル等の他の入力装置を用いて当該指示を行うこともできる。

【００７３】

ここで、後述する受信装置９内のバッファ５１、再生速度制御部５２はそれぞれ、バッファ手段、再生速度制御手段に対応し、デコーダ５３および再生制御部５４は、デコード手段に対応する。また、リモコン３９は信号入力装置に対応し、後述するＩＲコード処理部３７は信号処理手段に対応し、表示装置４０は表示手段に対応する。更に、コンテンツ提供装置２１と送信装置２４は、前述した第１の実施の形態と同様に、１つの装置として一体的に構成され得る。

【００７４】

次に、図４のブロック図を参照して、リモコン３９による指示が伝えられる経路の順に、関連する構成要素を説明する。リモコン３９は、コンテンツ提供装置２１のリモコンであっても良いが、後で説明するコマンド変換部２９の機能により、別のリモコン３９を使用してコンテンツ提供装置に指示を送信することもできる。例えば、表示装置４０や受信装置３２に対する指令を送信することができ、更に異なるメーカからなる複数のコンテンツ提供装置２１にそれぞれ指示を送信することのできるようなものをリモコン３９として構成することができる。

【００７５】

コンテンツ提供装置２１に対するリモコン３９の指令は、例えば、コンテンツ提供装置２１がＤＶＤ再生装置であれば、ＤＶＤのコンテンツメニューの表示、コンテンツの再生、停止、チャプター一覧の表示等が考えられる。また、コンテンツ提供装置２１がディジタルテレビジョン受信装置であれば、チャンネルの変更や、データ放送を利用した双方向サービスに関する指示等が考えられる。

【００７６】

ユーザが、コンテンツ提供装置２１の操作を行うためにリモコン３９のボタンを押して指示を送信すると、その指示内容に対応する制御信号（赤外線信号）が発信される。リモコン３９は、所定のタイミングで所定のパルスを発信し、これらのタイミングの組み合わせによって、指示内容、指示対象機器、機器メーカ等を特定する。

【００７７】

こうして発信された赤外線信号は、受信装置３２の赤外線受光部３８によって受信され、ＩＲコードをＩＲコード処理部３７に送信する。ＩＲコード処理部３７は受信したＩＲコードを所定のルールに基づいて符号化し、制御コマンドを生成する。制御コマンドは次に、制御コマンド送信部３６に送信され、そこで、送信プロトコルに応じた変調処理が行われ、ネットワーク・インタフェース３３に送られる。

【００７８】

制御コマンド送信部３６によって変調された変調データは、ネットワーク・インタフェース３３から、ネットワーク４２および送信装置２４のネットワーク・インタフェース３１を介して制御コマンド受信部３０に送信される。この例では、上記変調データが、第１の実施の形態で説明したストリーミング・データの転送と同じ経路、すなわち、ネットワーク４２を介して転送されるが、別の経路を利用して転送することもできる。

【００７９】

ネットワーク・インタフェース３１によって受信された変調データは、制御コマンド受信部３０に送信され、そこで復調処理が行われ、制御コマンドが得られる。ここで得られた制御コマンドは、リモコン３９のメーカに依存したものである。従って、指示対象のコンテンツ提供装置２１が別のメーカである場合や、リモコン３９からの指示を想定していない場合には、そのリモコン３９からの制御コマンドを解釈することができない。そのような場合に、コマンド変換部２９は、受信した制御コマンドを、指示対象のコンテンツ提供装置２１の機種に対応した制御コマンドに変換する。

【００８０】

この変換は、例えば、事前に用意された変換テーブルを参照することによって行われる。変換テーブルは、例えば、各メーカ（機種）に対するそれぞれの制御コマンドが、何の操作を意味するかを対応付けて格納する。コマンド変換部２９は、変換テーブルを参照して、ネットワーク・インタフェース３１から受信した制御コマンドの内容とリモコン３９が対応するメーカ（機種）から、そのコマンドがどの操作を指示するものであるかを判定する。次に、コマンド変換部２９は、再び、変換テーブルを参照して、当該判定された操作をコンテンツ提供装置２１に指示するための制御コマンドを検索し、取得する。

【００８１】

こうして取得されたコンテンツ提供装置２１用の制御コマンドの内容は、赤外線の各パルスの発生タイミングを表すものであり、赤外線発光部２８は、この内容に沿って赤外線を出力する。

【００８２】

赤外線発光部２８から発信された赤外線は、コンテンツ提供装置２１の赤外線受光部２３によって受信され、これがコンテンツ提供装置２１によって解釈され、その解釈された内容に従って、所定の操作が行われる。

【００８３】

次に、図５を参照して本実施の形態の受信装置３２のデコード部３５の処理内容について説明する。本実施の形態のデコード部３５は、第１の実施の形態の受信装置９のデコード部１２と同様、バッファ５１および再生速度制御部５２を有し、再生速度制御部５２が、

バッファ５１内のストリーミング・データの量に応じてストリーミング・データの再生速度を変化させるよう制御して、滑らかな映像・音声データの再生を維持しようとする。

【００８４】

しかしながら、バッファ５１を有するために、コンテンツ提供装置２１のＡ／Ｖデータ生成部２２からＡ／Ｖデータが生成されてから、映像・音声データが表示装置４０、音声出力装置４１に出力されるまでに非常に大きな遅延時間が存在する。このことは、ユーザがリモコン３９を操作してコンテンツ提供装置２１に指示を送っても、その指示が反映されるのに非常に長い時間がかかることを意味する。特に、階層化されたメニューを表示させて、順次リモコンで指示をしていくような場合は、それぞれの表示を長い間待つ必要があるので、最終的に指示を完了するまでに膨大な時間がかかる。

【００８５】

また、ユーザが、表示装置４０に表示されている映像等を観てリモコン３９を操作しても、そのリモコン３９の指示を受け取ったコンテンツ提供装置２１は、後続の映像等を提供しているので、その指示を受け付けるモードにない場合もある。

【００８６】

また更に、コンテンツ提供装置２１がＤＶＤ再生装置やビデオテープレコーダである場合には、リモコン３９による指示が遅れるため、所望する再生位置や停止位置で表示が行われないなどの不都合もある。

【００８７】

このような問題を解決するために、本実施の形態のデコード部３５の再生速度制御部５２は、ユーザがリモコン３９の操作をした場合に、ＩＲコード処理部３７からの信号により、オーバーフローしきい値を小さくするように制御し、ユーザが、リモコン３９を一定時間使用しないと、通常のオーバーフローしきい値に戻すよう制御する。この制御によって、ユーザがリモコン３９を操作した場合は、バッファ５１内のストリーミング・データが通常の量であっても、オーバーフローしきい値を上回ることになり、デコーダ５３と再生制御部５４によって高速な再生処理が実現される。

【００８８】

従って、再生速度制御部５２は、バッファ５１内のストリーミング・データとしきい値を比較して、その結果に応じて再生速度を変化させるよう制御する点については、図３に関連して説明した第１の実施の形態における再生速度制御部１７と同様である。しかしながら、当該機能に加えて、オーバーフローしきい値を動的に変化させることによってリモコン３９が操作された際の応答速度を速めることができる。

【００８９】

すなわち、本実施の形態では、ユーザがリモコンを操作した場合は、コンテンツ提供装置２１からＡ／Ｖデータが提供されてから、表示装置４０等に実際に映像が表示されるまでの遅延時間を小さくすることができる。

【００９０】

図５は、このオーバーフローしきい値の変更を概念的に示す概略図である。バッファ５１内のうち、斜線で示されている部分にストリーミング・データが記憶されているものとする。オーバーフローしきい値として、通常しきい値と操作時しきい値のどちらかが選択される。図５に示されたストリーミング・データの量では、オーバーフローしきい値が通常しきい値に設定されている場合、デコーダ５３および再生制御部５４は、通常の速度でストリーミング・データの再生処理を行うが、ユーザがリモコン３９を操作して、オーバーフローしきい値が操作時しきい値に設定された場合、バッファ５１内のストリーミング・データのデータ量がオーバーフローしきい値を上回ることになり、デコーダ５３および再生制御部５４は、高速でストリーミング・データの再生処理を行う。

【００９１】

ここで、通常しきい値は、図２に示した第１の実施の形態のオーバーフローしきい値と同様のものである。操作時しきい値は、この通常しきい値とアンダーフローしきい値との間で任意に設定しうるが、通常しきい値に近い値をとると、高速な再生処理が長く継続され

ずに、実効があがらない可能性がある。図５の例では、バッファ５１の容量の中程よりやや下に設定されている。

【００９２】

デコーダ５３および再生制御部５４は、再生速度制御部５２から再生速度を受け取ると、その速度でストリーミング・データが表示装置４０等に出力されるようにデコード処理および再生制御を行う。再生速度の調整方法は、第１の実施の形態のデコーダ１８および再生制御部１９について説明したものと同様の方法が考えられる。

【００９３】

図６は、再生速度制御部５２の機能を詳細に説明するためのブロック図である。ユーザがリモコン３９を操作すると、受信装置３２の赤外線受光部３８からＩＲコード処理部３７にＩＲコードが送信される。ＩＲコード処理部３７は、ＩＲコードを受け取ると、それを制御コマンドに変換して制御コマンド送信部３６に送信するとともに、再生速度制御部５２にＩＲビジー信号を送信する。

【００９４】

再生速度制御部５２のタイマー６３は、一定期間内にＩＲコード処理部３７からＩＲビジー信号を受け取ると、セレクタ６２に、オーバーフローしきい値として操作時しきい値を設定するよう指示する。一定期間内にＩＲビジー信号を受け取らなかった場合は、セレクタ６２に、オーバーフローしきい値として、操作時しきい値より大きい通常しきい値を設定するよう指示する。

【００９５】

バッファ内データ量取得部６１は、バッファ５１内のストリーミング・データのデータ量を取得し、再生速度決定部６４に送信する。ここで、再生速度決定部６４は、図３に示すものと同様のプロセスで、バッファ内のデータ量と、オーバーフローしきい値およびアンダーフローしきい値を比較し、再生速度を決定する。再生速度決定部６４に入力されるオーバーフローしきい値は、前述のように、セレクタ６２によって適宜切り換えられたものである。

【００９６】

上述したしきい値の切り換えプロセスを図７のフローチャートを参照して説明する。最初に、タイマー６３が、ステップＳ２１でＩＲビジー信号を受信したかどうか判定する。受信したと判定された場合、ステップＳ２２に進み、そこでセレクタ６２に、オーバーフローしきい値として操作時しきい値を設定するよう指示する。

【００９７】

ステップＳ２１でＩＲビジー信号を受信していないと判定された場合、一定の周期でステップＳ２１の判定を繰り返し（ステップＳ２３のＮＯ）、一定時間が経過したら、ステップＳ２４に進む（ステップＳ２３のＹＥＳ）。ステップＳ２４では、セレクタ６２に、オーバーフローしきい値として通常しきい値を設定するよう指示する。

【００９８】

ここまで、この発明の第１および第２の実施の形態に係るデータ配信システム１、２０について、コンテンツが映像データおよび音声データを含むものとして説明してきたが、同様に、映像データのみを含むコンテンツを扱うことも可能である。映像データは、音声データに比べてサイズが大きいので、この発明による効果はより顕著である。

【００９９】

【発明の効果】

この発明によれば、ＤＶＤ再生装置などのコンテンツ提供装置からコンテンツ（映像・音声データ）を配信する際に、小さなサイズのバッファを用いても、バッファ内にストリーミング・データが存在しない状態や、バッファがストリーミング・データで一杯になる状態の発生をできるだけ抑止し、滑らかなストリーミング・データの再生を維持するように制御することができる。

【０１００】

また、この発明によれば、ユーザがコンテンツ提供装置に対してリモコンの操作をした場

合に、バッファ内のストリーミング・データの量を判定するしきい値を動的に変更することによって、そのコンテンツがコンテンツ提供装置より配信されてから表示装置に表示されるまでの時間を短縮するように制御することができる。

【図面の簡単な説明】

【図１】この発明の第１の実施の形態に係るデータ配信システムの構成を示すブロック図である。

【図２】図１に示すデータ配信システムのデコード部の構成を示すブロック図である。

【図３】図２に示すデータ配信システムの再生速度制御部が再生速度を決定するプロセスのフローチャートである。

【図４】この発明の第２の実施の形態に係るデータ配信システムの構成を示すブロック図である。

【図５】図４に示すデータ配信システムのデコード部の構成を示すブロック図である。

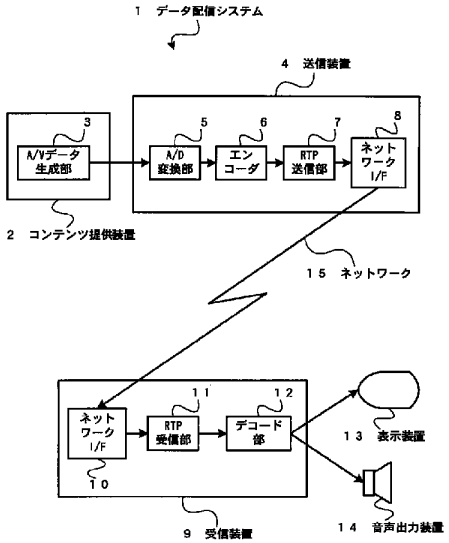
【図６】図５に示すデータ配信システムの再生速度制御部の構成を示すブロック図である。

【図７】図６に示すデータ配信システムの再生速度制御部がしきい値を切り換えるプロセスのフローチャートである。

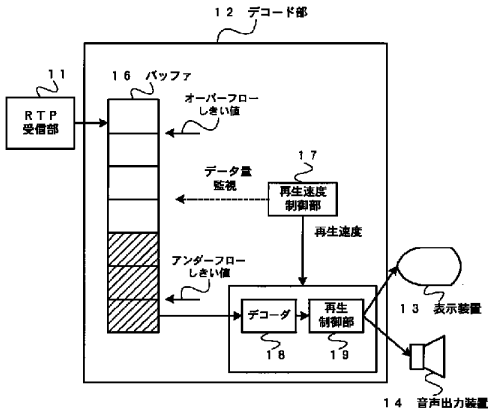
【符号の説明】

１，２０・・・データ配信システム、２，２１・・・コンテンツ提供装置、４，２４・・・送信装置、９，３２・・・受信装置、１２，３５・・・デコード部、１３，４０・・・表示装置、１４，４１・・・音声出力装置、１５，４２・・・ネットワーク、１６，５１・・・バッファ、１７，５２・・・再生速度制御部、１８，５３・・・デコーダ、３７・・・ＩＲコード処理部、３９・・・リモコン

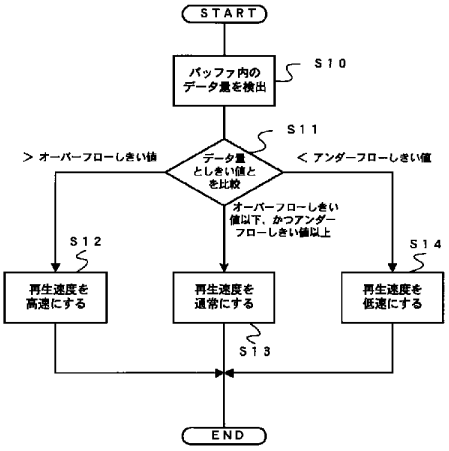
【図１】



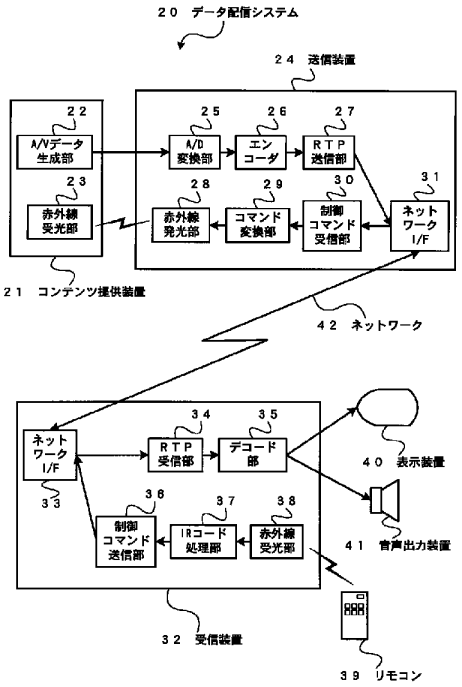
【図２】



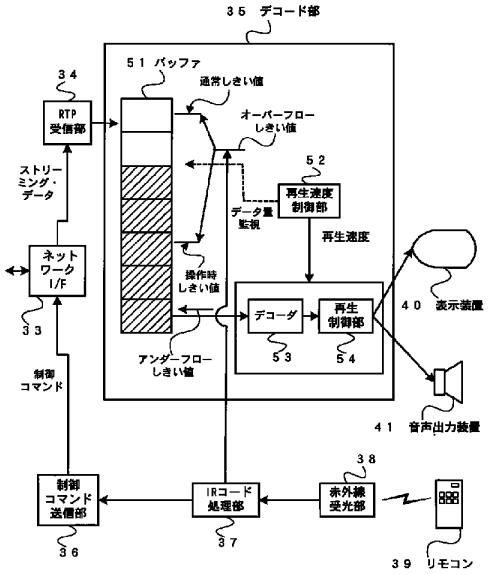
【図３】


START
バッファ内のデータ量を検出
S10
S11
データ量としきい値とを比較
＞オーバーフローしきい値
＜アンダーフローしきい値
オーバーフローしきい値以下，かつアンダーフローしきい値以上
S12
S13
S14
再生速度を高速にする
再生速度を通常にする
再生速度を低速にする
END

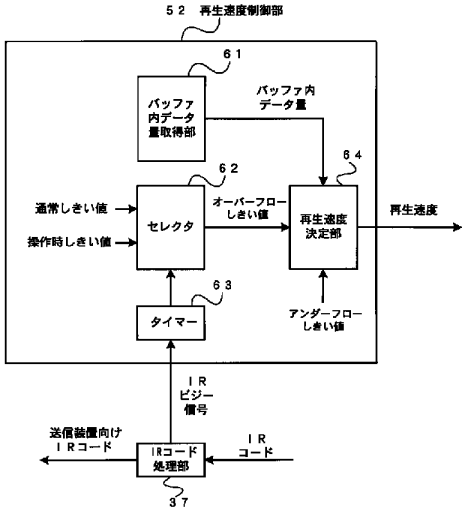
【図４】


20 データ配信システム
24 送信装置
22 A/Vデータ生成部
23 赤外線受光部
25 A/D変換部
26 エンコーダ
27 RTP送信部
28 赤外線発光部
29 コマンド変換部
30 制御コマンド受信部
31 ネットワークI/F
21 コンテンツ提供装置
42 ネットワーク
ネットワークI/F
33
34 RTP受信部
35 デコード部
36 制御コマンド送信部
37 IRコード処理部
38 赤外線受光部
40 表示装置
41 音声出力装置
32 受信装置
39 リモコン

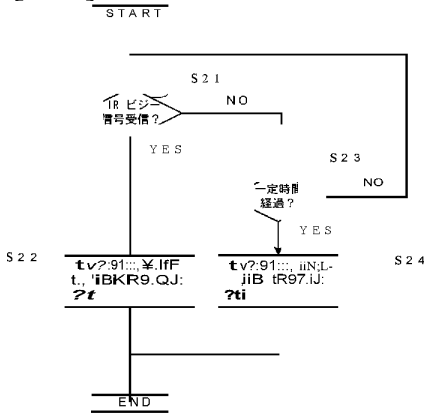
【図５】


35 デコード部
51 バッファ
通常しきい値
オーバーフローしきい値
34 RTP受信部
ストリーミング・データ
52 再生速度制御部
データ量監視
再生速度
ネットワークI/F
33
操作時しきい値
アンダーフローしきい値
制御コマンド
デコーダ
再生制御部
53
54
40 表示装置
41 音声出力装置
38 赤外線受光部
IRコード処理部
37
制御コマンド送信部
36
39 リモコン

【図６】


52 再生速度制御部
61 バッファ内データ量取得部
バッファ内データ量
64
62 セレクタ
通常しきい値
操作時しきい値
オーバーフローしきい値
再生速度決定部
再生速度
63 タイマー
アンダーフローしきい値
IRビジー信号
送信装置向けIRコード
IRコード
IRコード処理部
37

[7]


START
S21
IR ビジー
信号受信？
NO
YES
S23
NO
一定時間
経過？
YES
S22
tv?:91:::, ¥.IfF
t., 'iBKR9.QJ:
?t
tv?:91:::, iiN:t.-
jiB tR97.iJ:
?ti
S24
END

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Samuel Borodach/Maryann White
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt	
EFS ID:	26485305
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Samuel Borodach/Maryann White
Filer Authorized By:	Samuel Borodach
Attorney Docket Number:	30160-0005001
Receipt Date:	28-JUL-2016
Filing Date:	25-JUN-2012
Time Stamp:	15:58:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$90
RAM confirmation Number	072916INTEFSW00002608061050
Deposit Account	061050
Authorized User	Maryann White
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	30160-0005001IDS.pdf	180856 6f0ef34c0d32ce4f91a00b718795d21c1d2c2f7c	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
2	Foreign Reference	WO2004100500.pdf	3932377 3d42df2664029eb3fabe7240d74c6b34041df013	no	33
Warnings:					
Information:					
3	Other Reference-Patent/App/Search documents	JPOA.pdf	671058 b3bc4b8fce577c2e012a7f06cef5c303b3de1f96	no	12
Warnings:					
Information:					
4	Foreign Reference	JP2006525771.pdf	714193 0e4a3ea0191039f14a10527be1485cd230dd96bb	no	27
Warnings:					
Information:					
5	Foreign Reference	JP2004356695.pdf	607171 6e5d7abbd545f2cfa42b701bd8905925e2bfd124	no	25
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	30819 26280d0f6595afa24a989e4aa1dd498f77daf56e	no	2
Warnings:					

Information:	
Total Files Size (in bytes):	6136474

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	David Strober	Art Unit	:	2173
Serial No.	:	13/532,546	Examiner	:	Darrin Hope
Filed	:	June 25, 2012	Conf. No.	:	9012
Title	:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT IN REPLY TO OFFICE ACTION OF JULY 15, 2016

Please consider the following reply.

Amendments to the claims

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) The method of claim [[1]] 28, wherein the unique identifier comprises a QR code.

3. (Canceled)

4. (Currently Amended) The method of claim [[1]] 28, further including:

receiving, at the switchboard server system, ~~in the display host~~ a third message originating from the handheld Internet-enabled personal computing device, wherein the third message comprises the unique identifier and the first universal command ~~the switchboard server system~~ instructing that ~~particular~~ second content ~~is to~~ be played in the first session in the first session using a specified second media player of the media players;

converting, using the switchboard server system, the first universal command into a corresponding third converted code specific to the specified second media player to control playing of the second content on the specified second media player;

receiving, at the display host, the third converted code and the unique identifier from the switchboard server system;

in response to receiving the third converted code and the unique identifier ~~the third message~~, retrieving and loading, by the display host, the specified second media player using the first instance of the swappable media player;

playing, at the display host, the ~~particular~~ second content in the first session using the specified second media player by executing the third converted code; and

causing, by the display host, a presentation of the second content to be mirrored onto the virtual client residing on the display device.

5. (Currently Amended) The method of claim [[1]] 28 wherein the first content comprises video.

6. (Currently Amended) The method of claim [[1]] 28 wherein the first content comprises streaming media.

7. (Currently Amended) The method of claim [[1]] 28 wherein the first content comprises visual content.

8. (Currently Amended) The method of claim [[1]] 28, further including contacting the switchboard server system using the display host to check whether there is a message for the first session, wherein the first session is identified to the switchboard session using the ~~previously assigned~~ unique identifier.

9. (Canceled)

10. (Currently Amended) The method of claim [[9]] 4, further including:

establishing a third communications link between the display host and a second display device;

receiving, [[in]] at the display host, a ~~third~~ fourth message, wherein the fourth message comprises a second unique identifier associated with the second display device and a second session opened using a second instance of the swappable media player, and the first universal command instructing that ~~indicating that particular second~~ third content ~~is to~~ be played in the second session using a specified ~~second~~ third media player of the media players;

converting, using the switchboard server system, the first universal command into a corresponding fourth converted code specific to the specified third media player to control playing of the third content on the specified third media player;

receiving, at the display host, the fourth converted code and the second unique identifier from the switchboard server system;

in response to the ~~third message~~ fourth converted code and the second unique identifier, retrieving and loading, by the display host, the specified third ~~the second~~ media player using the second instance of the swappable media player;

playing, at the display host, the ~~particular second~~ third content in the second session using the specified second media player by executing the fourth converted code; and

causing, by the display host, a presentation of the ~~second~~ third content to be mirrored onto ~~the~~ a virtual client residing on the second display device.

11. (Currently Amended) The method of claim 10 wherein the first and second sessions at least partially overlap in time with one another.

12. (Currently Amended) The method of claim 3, wherein the display host retrieves the specified first media player from a content provider via the Internet.

13. (Currently Amended) A system for presenting content comprising:

a display host operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; and

a switchboard server system,

wherein the switchboard server system is operable to perform operations including:

receiving a first message originating from a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises a unique identifier associated with a display device and a first session opened using a first instance of the swappable media player, and a first

universal command instructing that first content be played in the first session using a specified first media player of the media players;

converting the first universal command into a corresponding first converted code specific to the specified first media player to control playing of the first content on the specified first media player; and

transmitting the first converted code and the unique identifier to the display host; and

wherein the display host is operable to perform operations including:

~~receiving a communication from a display device storing a virtual client;~~

~~in response to receiving the communication, opening a first session using a first instance of the swappable media player;~~

~~receiving a unique identifier for the first session from the switchboard server system;~~

~~displaying the unique identifier in the first session;~~

~~causing the image of the unique identifier to be mirrored onto the virtual client residing on the display device~~

receiving ~~a first message~~ the first converted code and the unique identifier from the display host ~~from the switchboard server system instructing that particular content be played in the first session using a specified one of the media players, wherein the first message is sent by the switchboard server system to the display host in response to a message originating in a handheld Internet-enabled personal computing device and containing the unique identifier~~;

in response to receiving the first message and the unique identifier, retrieving and loading the specified first media player using the first instance of the swappable media player;

playing the ~~particular~~ first content in the first session using the specified first media player by executing the first converted code; and

causing a presentation of the ~~particular~~ first content to be mirrored onto ~~the~~ a virtual client residing on the display device;

wherein the switchboard server system is further operable to perform operations including:

receiving a second message originating from the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second universal command identifying a particular play control to be performed with respect to the first content being played in the first session, wherein the second universal command is different than the first universal command;

converting the second universal command into a corresponding second converted code specific to the specified first media player to perform the particular play control; and

transmitting the second converted code and the unique identifier to the display host; and

wherein the display host is further operable to perform operations including

receiving a ~~second message~~ the second converted code and the unique identifier from the display host from the switchboard server ~~system instructing that a particular play control command be executed with respect to the particular content being played in the first session, wherein the second message is sent by the switchboard server system to the display host in response to another message originating in the handheld Internet-enabled personal computing device and containing the unique identifier~~; and

executing the second converted code to perform the particular play control ~~command~~ with respect to the ~~particular~~ first content being played in the first session that is mirrored onto the virtual client residing on the display device~~,~~

~~operations including converting the particular play control command contained in the second message into a corresponding code to control playing of the content on the particular media player~~.

14. (Canceled)

15. (Currently Amended) The system of claim 13,

wherein the switchboard server system is further operable to perform operations including:

receiving a third message originating from the handheld Internet-enabled personal computing device, wherein the third message comprises the unique identifier and the first universal command instructing that second content be played in the first session in the first session using a specified second media player of the media players;

converting, using the switchboard server system, the first universal command into a corresponding third converted code specific to the specified second media player to control playing of the second content on the specified second media player; and

transmitting the third converted code and the unique identifier to the display host; and

wherein the display host is further operable to perform operations including:

receiving the third converted code and the unique identifier from the switchboard server system ~~a third message from the switchboard server system indicating that particular second content is to be played in the first session using a specified second media player~~;

in response to receiving the third converted code and the unique identifier ~~message~~, retrieving the second media player from a content provider and loading the second media player using the first instance of the swappable media player;

playing the ~~particular~~ second content in the first session using the specified second media player by executing the third converted code; and

causing a presentation of the second content to be mirrored onto the virtual client residing on the display device.

16. (Currently Amended) The system of claim [[13]] 15, wherein the system further includes a second display device ~~storing a virtual client~~,

wherein the switchboard server system is further operable to perform operations including:

receiving, a fourth message, wherein the fourth message comprises a second unique identifier associated with a second display device and a second session opened using a second instance of the swappable media player, and the first universal command

instructing that third content be played in the second session using a specified third media player of the media players;

converting the first universal command into a corresponding fourth converted code specific to the specified third media player to control playing of the third content on the specified third media player; and

transmitting the fourth converted code and the second unique identifier to the display host; and

wherein the display host is further operable to perform operations including:

~~receiving a communication from the second display device;~~

~~in response to receiving the communication from the second display device, opening a second session using a second instance of the swappable media player;~~

~~requesting from the switchboard server system assignment of a second unique identifier for the second session;~~

~~receiving a second unique identifier for the second session from the switchboard server system;~~

~~displaying the second unique identifier in the second session;~~

~~causing the image of the second unique identifier to be mirrored onto the virtual client residing on the second display device.~~

~~receiving a fourth message from the switchboard server system indicating that particular second content is to be played in the second session using a specified second media player;~~

receiving the fourth converted code and the second unique identifier from the switchboard server system;

in response to the fourth converted code and the second unique identifier, retrieving the specified third ~~second~~ media player from a content provider and loading the ~~second~~ third media player using the second instance of the swappable media player;

playing the ~~particular second~~ third content in the second session using the specified second media player by executing the fourth converted code; and

causing a presentation of the ~~second~~ third content to be mirrored onto ~~the~~ a virtual client residing on the second display device.

17 - 25. (Canceled)

26. (Currently Amended) The method of claim [[1]] 28, wherein converting the first universal command ~~particular play control command~~ into the corresponding first converted code comprises selecting the corresponding first converted code from among a plurality of specific codes, each of which represents a corresponding playback control command for a respective media player.

27. (Currently Amended) The method of claim [[1]] 28, wherein converting the first universal command ~~particular play control command~~ into the corresponding first converted code comprises:

determining an identity of the ~~specific~~ specified first media player;

loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the ~~specific~~ specified first media player; and

converting the first universal command into the corresponding first converted code based on the set of protocols or application programming interfaces.

28. (Currently Amended) A machine-implemented method of presenting content on a display device, the method comprising:

establishing a first communications link between a display host and a switchboard server system, and a second communications link between the display host and a display device, ~~receiving, in a display host, a communication from a display device,~~ wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

~~in response to receiving the communication from the display device, opening a first session using a first instance of the swappable media player;~~

~~requesting assignment of a unique identifier for the first session from a switchboard server system;~~

~~receiving a unique identifier for the first session from the switchboard server system;~~

~~displaying the unique identifier in the first session;~~

~~causing the display of the unique identifier to be mirrored onto a virtual client residing on the display device;~~

receiving, [[in]] at the switchboard server system, a first message originating [[in]] from a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises ~~the~~ a unique identifier associated with the display device and a first session opened using a first instance of the swappable media player, and a first universal command instructing that ~~particular~~ first content be played in the first session using a specified first media player ~~one~~ of the media players,

converting, using the switchboard server system, the first universal command into a corresponding first converted code specific to the specified first media player to control playing of the ~~particular~~ first content on the specified first media player;

receiving, at [[in]] the display host, the first converted code and ~~information corresponding to~~ the unique identifier from the switchboard server system;

in response to receiving the first converted code and the unique identifier, retrieving and loading, by the display host, the specified first media player using the first instance of the swappable media player;

playing, at the display host, the ~~particular~~ first content in the first session using the specified first media player by executing the first converted code;

causing, by the display host, a presentation of the ~~particular~~ first content to be mirrored onto the virtual client residing on the display device;

receiving, [[in]] at the switchboard server system, a second message originating [[in]] from the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second universal command identifying a particular play control to be performed ~~and a second command instructing that a particular play control command be executed~~ with respect to the ~~particular~~ first content being played in the first session, wherein the second universal command is different than the first universal command;

converting, using the switchboard server system, the second universal ~~second~~ command into a corresponding second converted ~~second~~ code specific to the specified first media player to

perform the particular play control ~~to control playing of the particular content on the specified media player~~;

receiving, at [[in]] the display host, [[a]] the second converted ~~second~~ code and ~~information corresponding to~~ the unique identifier from the switchboard server system; ~~and~~

executing, by the display host, the second converted code to perform the particular play control ~~command~~ with respect to the ~~particular~~ first content being played in the first session that is mirrored onto the virtual client residing on the display device.

29. (New) The method of claim 28, wherein the first universal command and the second universal command are not specific to the first media player

30. (New) A method of presenting content, the method comprising:

executing, at a display host, a plurality of instances of a browser, wherein each instance of the browser is configured to retrieve and load any of a plurality of different media players to play specified content;

associating, at a switchboard server system, a first instance of the browser with a first handheld Internet-enabled personal computing device and a first display device;

receiving, at the switchboard server system from the first personal computing device, a first message comprising a unique identifier associated with the first instance of the browser and the first display device, and a universal command instructing that first content be played in the first instance of the browser using a first media player;

converting, using the switchboard server system, the universal command to a first portion of code specific to the first media player to control playing of the first content on the first media player;

transmitting, from the switchboard server system, the first portion of code and the unique identifier to the display host;

retrieving and loading, by the display host, the first media player using the first instance of the browser;

executing, at the display host, the first portion of code to play the first content in the first instance of the browser using the first media player; and

causing, by the display host, a presentation of the first content to be mirrored onto a virtual client residing on the first display device.

31. (New) The method of claim 30, further comprising:

receiving, at the switchboard server system from the first Internet-enabled personal computing device, a second message comprising the unique identifier and the universal command instructing that second content be played in the first instance of the browser using a second media player;

converting, using the switchboard server system, the universal command to a second portion of code specific to the second media player to control playing of the second content on the second media player;

transmitting, from the switchboard server system, the second portion of code and the unique identifier to the display host;

retrieving and loading, by the display host, the second media player using the first instance of the browser;

executing, at the display host, the second portion of code to play the second content in the first instance of the browser using the second media player; and

causing, by the display host, a presentation of the second content to be mirrored onto the virtual client residing on the first display device.

32. (New) The method of claim 31, further comprising:

associating, at a switchboard server system, a second instance of the browser with a second handheld Internet-enabled personal computing device and a second display device;

receiving, at the switchboard server system from the second personal computing device, a third message comprising a second unique identifier associated with the second display device and the second instance of the browser, and the universal command instructing that third content be played in the second instance of the browser using a third media player;

converting, using the switchboard server system, the universal command to a third portion of code specific to the third media player to control playing of the third content on the third media player;

transmitting, from the switchboard server system, the third portion of code and the second unique identifier to the display host;

retrieving and loading, by the display host, the third media player using the second instance of the browser;

executing, at the display host, the third portion of code to play the third content in the second instance of the browser using the third media player;

causing, by the display host, a presentation of the third content to be mirrored onto a virtual client residing on the second display device.

33. (New) The method of claim 32, wherein the universal command is not specific to the first, second, or third media players.

REMARKS

Claims 2, 4-8, 10-13, 15-16, 26-33 are presented for further examination.

Claim Rejections - 35 USC § 103

Claims 1, 4-8, 13, 15, 16, 26, 27, and 28 were rejected under pre-AIA 35 U.S.C. 103(a) as allegedly being unpatentable over Fok Ah Chuen et al. (US 2012/0102209 Al) (hereinafter "Fok Ah Chuen") in view of Malik (US 2007/0155506 Al), and further in view of Mahajan et al. (US 2009/0248802 Al) (hereinafter "Mahajan").

Claims 2 and 12 were rejected under pre-AIA 35 U.S.C. 103(a) as allegedly being unpatentable over Fok Ah Chuen, Malik, and Mahajan, and further in view of Sukeda et al. (US 2009/0172780 Al) (hereinafter "Sukeda").

Claims 9-11 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Fok Ah Chuen, Malik, and Mahajan, and further in view of Hu et al. (US 8,402,494 B1) (hereinafter "Hu").

Reconsideration is respectfully requested.

Without agreeing with the Office's positions and in an effort to compact prosecution, the Applicant has canceled independent claim 1 and amended dependent claims 2, 4-8, 10-12, and 26-27 to depend, either directly, or indirectly, from claim 28.

Further, the Applicant has amended claim 28 to recite:

> 28. A machine-implemented method of presenting content on a display device, the method comprising:
>
> establishing a first communications link between a display host and a switchboard server system, and a second communications link between the display host and a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content;

receiving, at the switchboard server system, a first message originating from a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises a unique identifier associated with the display device and a first session opened using a first instance of the swappable media player, and a first universal command instructing that first content be played in the first session using a specified first media player of the media players,

converting, using the switchboard server system, the first universal command into a corresponding first converted code specific to the specified first media player to control playing of the first content on the specified first media player;

receiving, at the display host, the first converted code and the unique identifier from the switchboard server system;

in response to receiving the first converted code and the unique identifier, retrieving and loading, by the display host, the specified first media player using the first instance of the swappable media player;

playing, at the display host, the first content in the first session using the specified first media player by executing the first converted code;

causing, by the display host, a presentation of the first content to be mirrored onto the virtual client residing on the display device;

receiving, at the switchboard server system, a second message originating from the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second universal command identifying a particular play control to be performed with respect to the first content being played in the first session, wherein the second universal command is different than the first universal command;

converting, using the switchboard server system, the second universal command into a corresponding second converted code specific to the specified first media player to perform the particular play control;

receiving, at the display host, the second converted code and the unique identifier from the switchboard server system;

executing, by the display host, the second converted code to perform the particular play control with respect to the first content being played in the first session that is mirrored onto the virtual client residing on the display device.

That is, a switchboard server system receives *universal commands* from a handheld Internet-enabled personal computing device, and converts those universal commands into *converted codes specific to a specified media player*. The converted codes are subsequently received by the display host for execution. Support for these amendments can be found, for example, in paras. [0026] – [0035] of the published application (US 2013/0031478 A1).

The cited references do not disclose or suggest the aforementioned features, either alone or in any combination. Fok Ah Chuen discloses a "method for establishing a Thin Client session between a Thin Client device … and a Thin Client server" (*see* Abstract). Malik discloses implementations that "enable an interactive game" (*see* Abstract). However, neither Fok Ah

Chuen nor Malik disclose or suggest converting a "*universal command*" to a "*converted code*" *specific to a specified media player* at all, much less receiving a "universal command" at a switchboard server from a handheld Internet-enabled personal computing device, converting the "universal command" to "converted code" specific to a specified media player at the switchboard server, and receiving the "converted code" at the display host for execution, as recited in claim 28. As such, Fok Ah Chuen and Malik do not disclose or suggest each of the features of amended claim 28, either alone or in combination.

Mahajan does not cure the foregoing deficiencies. Mahajan discloses "[t]echniques relating to managing multimedia transmissions in terminal services" (*see* Abstract). Although Mahajan generally discloses that a server can "intercept" a command from a "server media platform" to a "client media platform," Mahajan specifically teaches that the "server media platform ... translates[s] intercepted *platform specific media commands* ***into*** *generic or abstracted media commands*" (*see* para. [0036]). Subsequently, these "*generic or abstracted media commands*" are transmitted from the server media platform to the client media platform (*see* para. [0036]).

That is, Mahajan teaches a server system that performs essentially the *opposite* as the switchboard server system recited in claim 28 (*e.g.,* a server system that generates *converted code specific to a specified media player* ***from*** *universal commands*, and passes the specific *converted code* to a display host for execution).

Further, Mahajan does not disclose or suggest how to modify a server media platform to convert universal commands and send converted code in the specific manner claimed, nor does Manahan disclose or suggest any benefit that might be obtained from making such a modification. As such, the aforementioned subject matter also would not have been obvious in view of Mahajan, either alone or in any combination with Fok Ah Chuen and Malik.

Sukeda and Hu also do not cure the foregoing deficiencies. Sukeda discloses techniques "for displaying various contents such as moving images, still images, and texts" (*see* Abstract). Hu discloses techniques for "[d]isplaying video on a video display device" (*see* Abstract). However, neither Sukeda nor Hu disclose or suggest converting a "*universal command*" to a "*converted code*" *specific to a specified media player* at all, much less receiving a "universal command" at a switchboard server from a handheld Internet-enabled personal computing device,

converting the "universal command" to "converted code" specific to a specified media player at the switchboard server, and receiving the "converted code" at the display host for execution, as recited in claim 28. As such, the aforementioned subject matter also would not have been obvious in view of Sukeda or Hu, either alone or in any combination with Fok Ah Chuen, Malik, and Mahajan.

Therefore, in view of the foregoing amendments and remarks, the rejection of claim 28 should be withdrawn and the claim allowed. Claims 2, 4-8, 10-12, and 26-27 depend either directly or indirectly from claim 28, and for at least the same reasons, the rejection of claims 2, 4-8, 10-12, and 26-27 also should be withdrawn and the claims allowed.

Claim 13 has been amended to recite similar limitations as claim 28, and for at least the same reasons as discussed above, the rejection of claim 13 also should be withdrawn and the claim allowed. Claims 15 and 16 depend from claim 13 and for at least the same reasons, the rejection of claims 15 and 16 also should be withdrawn and the claims allowed.

New Claims

Newly presented claim 29 depends from claim 28, and should be allowable at least for the reasons discussed above. Furthermore, claim 29 recites additional language that renders it independently patentable. Support for the features recited in claim 29 can be found, for example, in para. [0029] of the published application.

Newly presented claims 30-33 also should be allowed. For example, claim 30 recites that a "switchboard server system" can receive a "universal command" from a "first personal computing device," and convert the "universal command" into a "first portion of code *specific to [a] first media player*" on a "first instance of [a] browser." Further, claim 31 recites that the "switchboard server system can receive the *same* "universal command" from the "first personal computing device," and convert that "universal command" into a *different* "second portion of code *specific to [a] second media player*" on the "first instance of the browser." Further, claim 32 recites that the "switchboard server system can receive the *same* "universal command" from a *different* "second personal computing device," and convert that "universal command" into a *different* "third portion of code *specific to [a] third media player*" on a *different* "second instance of the browser." That is, the same universal command can be converted into different portions of

code with respect to different media players and/or different instances of the browser. Support for the features recited in claims 30-33 can be found, for example, in paras. [0026] – [0035] of the published application.

Conclusion

The Applicant submits that all of the claims are in condition for allowance and request entry of the proposed amendments and confirmation of allowance by the Examiner. It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify applicants' agreement. In addition, because the arguments made above may not be exhaustive, there may be additional reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Further, the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The fees for excess claims and extension of time are being paid with this reply on the Electronic Filing System. Apply those fees and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: January 13, 2017

/Richard Wong/
Richard Wong
Reg. No. 73,259

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

30955513.doc

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Richard Wong/Maryannq White
Attorney Docket Number:	30160-0005001

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
			Total in USD ($)	**700**

Electronic Acknowledgement Receipt

EFS ID:	28058206
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Richard Wong/Maryannq White
Filer Authorized By:	Richard Wong
Attorney Docket Number:	30160-0005001
Receipt Date:	13-JAN-2017
Filing Date:	25-JUN-2012
Time Stamp:	13:09:26
Application Type:	Utility under 35 USC 111(a)

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Payment was successfully received in RAM	$700
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		30160-0005001Response.pdf	171109 e238859a09d5f825bc473254a16172e20536fae5	yes	18
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	13	
	Applicant Arguments/Remarks Made in an Amendment		14	18	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31155 2c653cb42ceb466c7a19cdd3955ab7cb450871dc	no	2
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/532,546	Filing Date 06/25/2012	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	01/13/2017	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 25	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***4	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

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This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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26211 7590 05/08/2017
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER
HOPE, DARRIN

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 05/08/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

TITLE OF INVENTION: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	08/08/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

TITLE OF INVENTION: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	08/08/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
HOPE, DARRIN	2173	715-716000

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- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	06/25/2012	David Strober	30160-0005001	9012

26211 7590 05/08/2017
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
HOPE, DARRIN	

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 05/08/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/532,546	Applicant(s) STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendments filed on 01/13/2017*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *2,4-8,10-13,15,16 and 26-33*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 07/28/2016
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/TADEESE HAILU/ Primary Examiner, Art Unit 2173	/DARRIN HOPE/ Examiner, Art Unit 2173

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions. This Office Action is responsive to the communications filed on 13 January 2017. Claims 2, 4-8, 10-13, 15-16, 26-33 are pending.

EXAMINER'S AMENDMENT

2. Authorization for this examiner's amendment was given in a telephone interview with Richard Wong (Reg. No. 73,259) on April 28, 2017.

3. Amend claims as follows:

12. (Currently Amended) The method of claim [[3]] 28, wherein the display host retrieves the specified first media player from a content provider via the Internet.

29. (Currently Amended) The method of claim 28, wherein the first universal command and the second universal command are not specific to the first media player.

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Examiner's Statement of reason of Allowance

5. Claims 2, 4-8, 10-13, 15-16, 26-33 are allowed.

6. The following is an examiner's statement of reasons for allowance:

The present invention is directed to a method and system for presenting content. The prior art made record fails to anticipate or make the claimed invention.

The prior art, with respect to claim 28, fails to teach or suggest, alone or combined, "establishing a first communications link between a display host and a switchboard server system, and a second communications link between the display host and a display device, wherein the display host is operable to execute multiple instances of a browser each of which operates as a swappable media player, wherein each instance of the swappable media player is operable to retrieve and load any of a plurality of different media players needed to play specified content; receiving, at the switchboard server system, a first message originating from a handheld Internet-enabled personal computing device distinct from the display host and the switchboard server system, wherein the first message comprises a unique identifier associated with the display device and a first session opened using a first instance of the swappable media player, and a first universal command instructing that first content be played in the first session using a specified first media player of the media players, converting, using the switchboard server system, the first universal command into a corresponding first converted code specific to the specified first media player to control playing of the first content on the specified first media player; receiving, at the display host, the first converted code and the unique identifier from the switchboard server system; in response to receiving the first converted code and the unique identifier, retrieving and loading, by the display host, the specified first media player using the first instance of the swappable media player; playing, at the display host, the first content in the first session using the specified first media player by executing the first converted code; causing, by the display host, a presentation of the first content to be mirrored onto the virtual client residing on the display device; receiving, at the switchboard server system, a second message originating from the handheld Internet-enabled personal computing device, wherein the second message comprises the unique identifier and a second universal command identifying a particular play control to be performed with respect to the first content

being played in the first session, wherein the second universal command is different than the first universal command; converting, using the switchboard server system, the second universal command into a corresponding second converted code specific to the specified first media player to perform the particular play control; receiving, at the display host the second converted code and the unique identifier from the switchboard server system; executing, by the display host, the second converted code to perform the particular play control with respect to the first content being played in the first session that is mirrored onto the virtual client residing on the display device" as recited in claim 28. Claims 2, 4-8, 10-12, 26-27, and 29 are dependent either directly or indirectly upon claim 28, and for at least the same reasons are allowed.

Claim 13 has been amended to recite similar limitations as claim 28, and for at least the same reasons as discussed above, claim 13 is allowed. Claims 15 and 16 depend from claim 13 and, for at least the same reasons, are allowed.

Independent claim 30 is allowable for at least the same reasons as discussed above with respect to claim 28. Additionally, the prior art fails to teach or suggest, alone or combined, a "switchboard server system" that can receive a "universal command" from a "first personal computing device," and convert the "universal command" into a "first portion of code *specific to first media player"* on a "first instance of [a] browser" as disclosed in claim 30. Claims 31-33 are dependent either directly or indirectly upon claim 30, and for at least the same reasons are allowed.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN HOPE whose telephone number is (571)270-5079. The examiner can normally be reached on M-TH - 7-4:30, F - 7-3:30, Alt. Friday Off.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kieu D. Vu can be reached on (571)272-4057. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DARRIN HOPE/
Examiner, Art Unit 2173

/TADEESE HAILU/
Primary Examiner, Art Unit 2173

Notice of References Cited	Application/Control No. 13/532,546	Applicant(s)/Patent Under Reexamination STROBER, DAVID	
	Examiner DARRIN HOPE	Art Unit 2173	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2012/0054616 A1	03-2012	Mittal; Millind	G06F17/30899	715/722
	B	US-				
	C	US-				
	D	US-				
	E	US-				
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	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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	P					
	Q					
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	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	200	("8595342" "20100138744" "20090106357" "20080256378" "20020161797" "20100115119" "20090275403" "20130165164" "20090061841" "8631407" "8622839" "8588824" "20090282245" "20090251409" "20100313135" "8909296" "20120084653" "20110296478" "20070294292" "7996566" "7716376" "7665115" "20120158511" "8876599" "20080168568" "20080175569" "8162753" "8918812" "20110125712" "8397266" "20090177966" "20120271688" "8755521" "7849160" "20080301189" "20100118200" "8026805" "20100121693" "20070294621" "20040268400" "8517829" "20040045040" "20090133067" "8910200" "7627808" "20040252400" "7975312" "8020185" "20080114861" "7632186" "8025572" "8556722" "20040239753" "20090228897" "20070011713" "20120222064" "8069414" "8352371" "7529831" "20060173974" "20080181575" "20100177122" "20070003224" "20120166950" "20110035466" "7809790" "8175638" "7984097" "8185625" "20110258623" "20080313402" "8028064" "20070033295" "20100281508" "8055781" "20050022127" "7962548" "8909740" "8122236" "20090109339" "8046672" "7565429" "20100228975" "20070276865" "9021370" "20100332983" "20120030726" "8806340" "20070078552" "20070169087" "20040015398" "8131993" "20080120652" "20060014585" "20050034151" "8909776" "20050019015" "20060250282" "20090190902" "20080319856" "6859838" "8060407" "7949333" "8566301" "20070265073" "20030061305" "7890599" "20070166683" "8244172" "20070100833" "8931105" "20060287021" "8752083" "20110307782" "20100325549" "8062134" "8374488" "20050091107" "8435115" "20110113354" "20130167027" "20110055026" "7787904" "20090204639" "8724696" "8949376" "20090093302" "20090176572" "7975021" "7975310" "20090285548" "7904628" "8016670" "20030182139" "20080118231" "8229856" "20100169509" "7934010" "8892988" "8209396" "7824268" "8702518" "8614625" "7460765" "20080194331" "20080180302" "8499241" "20110150432" "7739596" "20100325543" "8199718" "20110158606"	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:16

		"8435121" "7426537" "7761602" "20080281689" "20040051812" "8506405" "20120215646" "7892095" "20110158610" "7590752" "20130232420" "7574691" "20050210101" "8990673" "20100235741" "8756333" "7369752" "20060182421" "8463924" "20030079038" "20060068861" "8332529" "20100287308" "20100119215" "7460668" "20040133908" "8392452" "8190706" "20070117635" "20080195474" "20080148328" "7058284" "20100076578" "20060020825" "20100150520" "20040225564" "8379668" "20110282896" "20090249222" "20070239849" "20100131978" "20100180010" "20020129089" "20110022471" "20110307785" "20040064518" "6904566" "8392959").pn.				
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L28	2500	L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:17
L29	9	L28 and "QR code"	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:17
L30	265	(((display or gaming or tablet or personal or laptop)near2 (device or apparatus or terminal or console or computer)) or television) same (send$3 or transmi$9) same "unique identifier" same (host or stb or PC)	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:18
L34	4990	(715/716).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/04/28 17:21
L35	4	L30 and L34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/04/28 17:21
L36	34	google with cast	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/04/28 17:22
L37	4220	apple with tv	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/04/28 17:22

EAST Search History (Interference)

Ref	Hits	Search Query	DBs	Default	Plurals	Time

#				Operator		Stamp
L31	265	(((display or gaming or tablet or personal or laptop)near2 (device or apparatus or terminal or console or computer)) or television) same (send$3 or transmi$9) same "unique identifier" same (host or stb or PC)	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:18
L32	3375	(715/716).ccls.	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:19
L33	4	L31 and L32	US-PGPUB; USPAT	OR	OFF	2017/04/28 17:19

4/28/2017 5:23:51 PM
C:\Users\dhope\Documents\EAST\Workspaces\13532546amd.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	David Strober	Art Unit	:	2173
Serial No.	:	13/532,546	Examiner	:	Darrin Hope
Filed	:	June 25, 2012	Conf. No.	:	9012
Title	:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER			

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the references listed on the enclosed PTO 1449 Disclosure Form. Copies of the listed foreign patent documents are enclosed.

A copy of a communication from a foreign patent office in a related foreign application is also enclosed (listed as item 4) and indicates the relevance of the other listed foreign-language references.

This statement is being filed after a first action on the merits, but before receipt of a final action or a notice of allowance. A late submission fee in the amount of $90, specified by 37 CFR §1.17(p), is being paid with this statement. Apply any necessary charges or credits to deposit account 06-1050, referencing the above attorney docket number.

Please contact the undersigned if there are any questions regarding this Statement.

Respectfully submitted,

Date: July 28, 2016

/Samuel Borodach/
Samuel Borodach
Reg. No. 38,388

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

30956246.doc

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.H/

Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	30160-0005001	13/532,546
	Applicant: David Strober	
	Filing Date: June 25, 2012	Group Art Unit: 2173

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
	1.	2006-525771 A		JP			See English counterpart in Desig. ID No. 2	
	2.	2004100500A2		WO				
	3.	2004-356695 A		JP			English Abstract	

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	4.	Japanese Patent Office, Examination Report for JP Patent App. No. 2014-506460, dated June 28, 2016 (6 pages) (and English Translation)

Examiner Signature	Date Considered
/DARRIN HOPE/	/D.H/ (04/28/2017)

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /D.H/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 9012

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/532,546	06/25/2012	715	2173	30160-0005001

APPLICANTS

INVENTORS

David Strober, Rye, NY;

**** CONTINUING DATA ***************************

This application is a CIP of 13/157,821 06/10/2011 PAT 8904289
which claims benefit of 61/477,998 04/21/2011

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
07/06/2012

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /DARRIN HOPE/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		NY	4	20	3

ADDRESS

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

TITLE

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
870	No._____ to charge/credit DEPOSIT ACCOUNT	☐ 1.16 Fees (Filing)
	No._____ for following:	☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

BIB (Rev. 05/07).

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

CPC						
Symbol					**Type**	**Version**
G06F		17	/	30846	F	2013-01-01
G06F		9	/	4445	I	2013-01-01
G06F		17	/	30864	I	2013-01-01
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			/			
			/			

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

/DARRIN HOPE/ Examiner.Art Unit 2173	04/28/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/TADEESE HAILU/ Primary Examiner.Art Unit 2173	05/01/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
715	716	G	0	6	F	3 / 01 (2006.01.01)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

/DARRIN HOPE/ Examiner.Art Unit 2173	04/28/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/TADEESE HAILU/ Primary Examiner.Art Unit 2173	05/01/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No. 20170428

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	**Art Unit**
	DARRIN HOPE	2173

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	20	33										
5	2		18												
	3		19												
6	4		20												
9	5		21												
10	6		22												
11	7		23												
12	8		24												
	9		25												
7	10	14	26												
8	11	15	27												
13	12	4	28												
1	13	16	29												
	14	17	30												
2	15	18	31												
3	16	19	32												

/DARRIN HOPE/ Examiner.Art Unit 2173	04/28/2017	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/TADEESE HAILU/ Primary Examiner.Art Unit 2173	05/01/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13532546	STROBER, DAVID
	Examiner	Art Unit
	DARRIN HOPE	2173

CPC- SEARCHED		
Symbol	Date	Examiner
G06F3/01	11/3/2014	DH

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
715/716		11/3/2014	DH

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	7/25/2015	DH
EAST	7/8/2016	DH
EAST	4/28/2017	DH

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
715	716	4/28/2017	DH

To: PATDOCTC@fr.com,,
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 26211

May 08, 2017 03:42:07 AM

Dear PAIR Customer:

FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 26211 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:
The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
13532546	NOA	05/08/2017	30160-0005001
	892	05/08/2017	30160-0005001
	1449	05/08/2017	30160-0005001

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 149550

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☑ The address associated with Customer Number: 149550

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

Touchstream Technologies, Inc.
79 Madison Avenue
New York, NY 10016

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	7-7-2017
Name	Herb Mitschele	Telephone	310-383-3383
Title	CEO, Touchstream Technologies, Inc.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: TOUCHSTREAM TECHNOLOGIES, INC.

Application No./Patent No.: 13/532,546 Filed/Issue Date: 06/25/2012

Titled: VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

TOUCHSTREAM TECHNOLOGIES, INC. , a CORPORATION

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 029121, Frame 0324, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

_____ 7/17/17

Signature Date

Herb Mitschele CEO

Printed or Typed Name Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	29817068
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	26211
Filer:	Keith Joshua Bae/Traci Burke
Filer Authorized By:	Keith Joshua Bae
Attorney Docket Number:	30160-0005001
Receipt Date:	18-JUL-2017
Filing Date:	25-JUN-2012
Time Stamp:	15:49:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	TSTH_277746_Executed_POA.pdf	122307 745b1febd5eee081afc0e368be98156558888790	no	1

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	TSTH_277746_Executed_Statement_373b.pdf	100580 3ad40214a3a3a3b3c79b545f37e2750b0a829f3e	no	1
Warnings:					
Information:					
			Total Files Size (in bytes):	222887	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/532,546	06/25/2012	David Strober	30160-0005001

CONFIRMATION NO. 9012

149550
SHOOK, HARDY & BACON LLP
(Touchstream Technologies, Inc.)
2555 GRAND BLVD
KANSAS CITY, MO 64108-2613

POA ACCEPTANCE LETTER

OC000000092900959

Date Mailed: 07/20/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/18/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/hteffera/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/532,546	06/25/2012	David Strober	30160-0005001

CONFIRMATION NO. 9012

POWER OF ATTORNEY NOTICE

26211
FISH & RICHARDSON P.C. (NY)
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

OC000000092900907

Date Mailed: 07/20/2017

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/18/2017.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/hteffera/

To: IPDOCKET@SHB.COM,IPRCDKT@SHB.COM,tquick@shb.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 149550

Jul 20, 2017 04:17:52 AM

Dear PAIR Customer:

SHOOK, HARDY & BACON LLP
(Touchstream Technologies, Inc.)
2555 GRAND BLVD
KANSAS CITY, MO 64108-2613
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 149550 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
13532546	N570	07/20/2017	30160-0005001
	N570	07/20/2017	30160-0005001

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
13532546	25-Jun-2012	David Strober	TSTH.277746/30130-00050	9012

TITLE OF INVENTION :

VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Small	Utility under 35 USC 111(a)	2173	716000	DARRIN HOPE

Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
$480	$0	$480	08-Aug-2017	$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
149550 SHOOK, HARDY & BACON LLP (Touchstream Technologies, Inc.) 2555 GRAND BLVD KANSAS CITY MO 64108-2613 UNITED STATES 816-474-6550 IPDOCKET@SHB.COM	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☐ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

○ Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.
Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment. If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

◉ Applicant asserting small entity status. See 37 CFR 1.27.
Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

○ Applicant changing to regular undiscounted fee status.
Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

Doc Code: IFEE PTOL/85B-EFS

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:

☒ Issue Fee

☐ I authorize USPTO to apply my previously paid issue fee to the current fees due

☐ Publication Fee

☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____

☐ Advance Order - # of copies _____

☒ If **in addition to** the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number 192112 . The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

1. Shook, Hardy & Bacon L.L.P.
2.
3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
TOUCHSTREAM TECHNOLOGIES, INC.	New York	NEW YORK	united states	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/KEITH J. BAE/	**Date**	08-08-2017
Name	Keith J. Bae	**Registration Number**	64633

WEB IFEE 1.0

Electronic Patent Application Fee Transmittal

Application Number:	13532546
Filing Date:	25-Jun-2012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Filer:	Keith Joshua Bae/Traci Burke
Attorney Docket Number:	TSTH.277746/30130-0005001

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPL ISSUE FEE	2501	1	480	480
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**480**

Electronic Acknowledgement Receipt

EFS ID:	30011928
Application Number:	13532546
International Application Number:	
Confirmation Number:	9012
Title of Invention:	VIRTUALIZED HOSTING AND DISPLAYING OF CONTENT USING A SWAPPABLE MEDIA PLAYER
First Named Inventor/Applicant Name:	David Strober
Customer Number:	149550
Filer:	Keith Joshua Bae/Traci Burke
Filer Authorized By:	Keith Joshua Bae
Attorney Docket Number:	TSTH.277746/30130-0005001
Receipt Date:	08-AUG-2017
Filing Date:	25-JUN-2012
Time Stamp:	15:31:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$480
RAM confirmation Number	080917INTEFSW15312501
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	46359 415d2ca22ea23fa0d1485a5318a4ce1b0556ca37	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32417 2133cf8ca5b77b2d3948f5c2563f81cad7125495	no	2
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Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	30160-0005001	13/532,546
	Applicant: David Strober	
	Filing Date: June 25, 2012	Group Art Unit: 2173

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes	Translation No
Change(s) applied to document, /S.J.W./ 5/11/2017	1.	2006-525771 A	11/2006	JP			See English counterpart in Desig. ID No. 2	
	2.	2004100500A2	11/2004	WO				
	3.	2004-356695 A	12/2004	JP			English Abstract	

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	4.	Japanese Patent Office, Examination Report for JP Patent App. No. 2014-506460, dated June 28, 2016 (6 pages) (and English Translation)

Examiner Signature	Date Considered
/DARRIN HOPE/	/D.H/ (04/28/2017)

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/532,546	09/19/2017	9767195	TSTH.277746/30130-0005001	9012

149550 7590 08/30/2017

SHOOK, HARDY & BACON LLP
(Touchstream Technologies, Inc.)
2555 GRAND BLVD
KANSAS CITY, MO 64108-2613

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 602 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

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APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

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13532546	ISSUE.NTF	08/30/2017	TSTH.277746/30130-0005001

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