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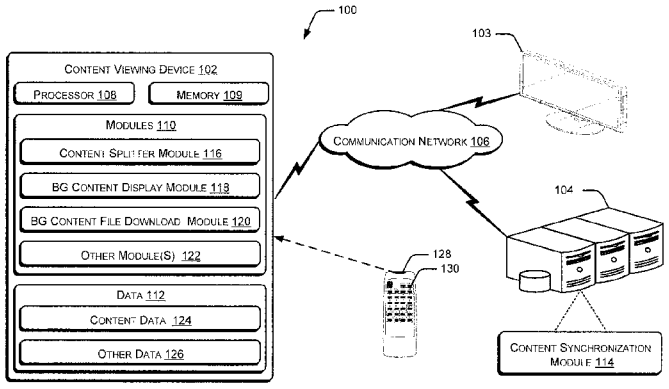

Figure 1

(57) Abstract: Systems and methods for providing information about IPTV streams are described herein. In one implementation, a content viewing device (102) for providing information about Internet Protocol Television (IPTV) streams comprises a processor (108), and a content splitter module (116) coupled to the processor (108), the content splitter module (116) receives an IPTV stream as a composite content from a service provider of IPTV services and splits the composite content into primary content and background content. The content viewing device (102) further comprises a background content display (BGCD) module (118), coupled to the processor (108), to determine whether a user input to provide the background content of the primary content has been received. The BGCD module (118) thereafter provides the background content to the user on determining the receipt of the user input.

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PROVIDING INFORMATION ABOUT INTERNET PROTOCOL TELEVISION STREAMS

FIELD OF INVENTION

[0001] The present subject matter relates to Internet Protocol Television (IPTV) and, particularly but not exclusively, to providing information about IPTV streams.

BACKGROUND

[0002] Digital broadcasting services have been traditionally provided through satellite, cable, or ground waves. The increase in network speeds and the enhancement of quality of service (QoS) of services provided over the internet has led to the wide adoption of Internet Protocol television (IPTV). The IPTV services facilitate providing digital broadcasting service over the Internet. Initially, many service providers had developed and used proprietary technologies to offer various IPTV products and IPTV services to the users. With time, various standards related to IPTV have been introduced and adopted. For example, the Technical Module IP Infrastructure (TM-IPI) ad-hoc group which is under the Digital Video Broadcasting (DVB) Project is a representative IPTV standard group. IPTV provides many additional features, over traditional broadcast televisions, which include the possibility to offer video on demand (VOD) service, using picture-in-picture to view a second channel as a pop-up window or an overlay window while watching a program on a first channel, pausing a program, rewinding a program and restarting a program.

SUMMARY

[0003] This summary is provided to introduce concepts related to providing information about IPTV streams. This summary is not intended to identify essential features of the claimed subject matter nor is it intended for use in determining or limiting the scope of the claimed subject matter.

[0004] According to an embodiment of the present subject matter, a content viewing device for providing information about Internet Protocol Television (IPTV) streams comprises a processor, and a content splitter module coupled to the processor, The content splitter module receives an IPTV stream as a composite content from a service provider of IPTV services and splits the composite content into primary content and background content. The content viewing device further comprises a background content display (BGCD) module, coupled to the processor, to determine whether a user input to provide the background content of the primary

content has been received. The BGCD module thereafter provides the background content to the user on determining the receipt of the user input.

[0005] According to another embodiment of the present subject matter, a method for providing information about IPTV streams comprises receiving an IPTV stream as a composite content from a service provider of IPTV services and splitting the composite content into primary content and background content. The method further comprises determining whether a user input to provide the background content of the primary content has been received and providing the background content to the user on determining the receipt of the user input.

[0006] According to another embodiment of the present subject matter, a non-transitory computer-readable medium having a set of computer readable instructions that, when executed, cause a content viewing device to receive an IPTV stream as a composite content from a service provider of IPTV services and split the composite content into primary content and background content. On execution of the computer readable instructions, the content viewing device further determines whether a user input to provide the background content of the primary content has been received and provides the background content to the user on determining the receipt of the user input

BRIEF DESCRIPTION OF THE FIGURES

[0007] The detailed description is described with reference to the accompanying figures. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The same numbers are used throughout the figures to reference like features and components. Some embodiments of system and/or methods in accordance with embodiments of the present subject matter are now described, by way of example only, and with reference to the accompanying figures, in which:

[0008] Figure 1 illustrates a network environment implementation of a content viewing device for providing background information about IPTV streams, in accordance with an embodiment of the present subject matter;

[0009] Figure 2 illustrates a method for providing background information about IPTV streams, in accordance with an embodiment of the present subject matter; and

[0010] It should be appreciated by those skilled in the art that any block diagrams herein represent conceptual views of illustrative systems embodying the principles of the present

subject matter. Similarly, it will be appreciated that any flow charts, flow diagrams, state transition diagrams, pseudo code, and the like represent various processes which may be substantially represented in computer readable medium and so executed by a computer or processor, whether or not such computer or processor is explicitly shown.

DETAILED DESCRIPTION

[0011] Systems and methods related to providing information about IPTV streams are described herein. In one embodiment, the present subject matter may be implemented in various computing systems, such as a television (TV), smart TV, set top box and multimedia device.

[0012] In recent times, there has been a lot of development in TV technology. The commercially available TV sets now include data processing units and integrate various functionalities. For example, the commercially available Smart TVs, also referred to as connected TVs and hybrid TVs, integrate services, such as Web 2.0 features, available over the Internet. The smart TVs are usually connected to the servers of the content provider using an integrated or a separate set-top box. The smart TVs also integrate the functionalities of a computing device, such as a laptop. For example, many smart TVs facilitate the user to browse the internet, chat with friends using messengers, watch video using video applications, such as a YouTube™ application and play multimedia games. Many smart TVs also include a plurality of web widgets or applications which facilitate the user to browse and view content available over the internet.

[0013] Recently service providers started providing more information about the content being displayed to the user. For example, the user, while watching a movie on a channel, may press an "information" button of a remote of the set top box and obtain information, such as the cast, a very brief storyline and the duration of the movie. In many cases, a user may like to obtain complete information about the content being displayed to the user. For example, the content being viewed by the user may be an adaptation of a novel and the user may be interested in reading the novel. However, the commercially available set top box provides information which is restricted to the meta-data of the content being displayed. Such meta-data provides limited information, such as the cast, a very brief storyline and the duration of the content, and may not be as detailed and informative as per the user's expectations. Thus, the user may have to independently search the information regarding the content being viewed by him which leads to reduced user experience.

[0014] The present subject matter discloses methods and systems for providing information about IPTV streams to the users. The techniques may be implemented in various types of devices, such as set top box, smart televisions and multimedia devices.

[0015] In accordance with one example of the present subject matter, a user views IPTV stream provided by a service provider on a content viewing device such as a smart TV, a television communicatively connected to a set top box and a multimedia device. In said example, the service provider provides an IPTV stream as a composite content which comprises of a primary content and a background content. In one example, both the primary content and the background content are dynamic. In yet another example, the background content may be based on the primary content. The primary content may be audio content or video content or an audio-video content. The background content may be some textual content which provides information about the primary content being viewed by the user. For example, the background content may be the meta-data associated with the primary content. The background content may provide details about the storyline of the primary content, lead performers of the primary content, run-time of the primary content and merchandise associated with the primary content.

[0016] In one example, the background content may be provided, by a content provider, along with the primary content to the service provider for being relayed to the users. In another example, the background content may be provided by the service provider and integrated with the primary content provided by the content provider. Thereafter, the composite content may be relayed to the users. In yet another example, the background content may be provided by a third party, such as an advertising agency, and the received background content may be integrated by the service provider with the primary content provided by the content provider for being relayed to the user. The service provider may synchronize the background content with the primary content so that the user viewing the primary content can relate to the background content.

[0017] In operation, the composite content received from the service provider is fed to a content viewing device of the user either directly or through a set top box which may be integrated or may be separately connected with the content viewing device. The composite content is then split into the constituent contents, i.e., the primary content and the background content. By default the primary content is displayed to the user.

[0018] In case, a user input is received indicative of the user's intention of viewing the background content, the content viewing device may display the background information to the

user. In one example, the background information may be displayed as picture-in-picture (PIP) window or an overlay window or a pop-up window which may be opaque or translucent. In another example, the background information may be displayed by dividing the display unit of the content viewing device into two portions, wherein the first portion displays the primary content and the second portion displays the background content. In yet another example, the background content may be displayed on a browser application installed on the content viewing device or a reader application installed on the content viewing device.

[0019] The background information may also provide various interactive options to the user. For example, if the primary content is a movie which is based on a novel, the background information may include links to an electronic store from where the novel may be purchased. In said example, the user may click on the links and on clicking the user may be re-directed to a portal of the electronic store from which the novel may be purchased. In another example, if the primary content is an advertisement of a restaurant, the background information may include links to place an order or may include phone numbers of the restaurant. Further, the user may click on the phone numbers to place a call to the restaurant using techniques such as voice over internet protocol (VOIP) and calling applications, such as Skype™.

[0020] Thus, the aforementioned systems and methods for providing information about IPTV streams facilitate the user to obtain detailed background information about the content being watched by them. Further, this creates opportunities of revenue generation for the service provider. The user experience is also enhanced as the user is able to obtain information he is interested in.

[0021] The above systems and the methods are further described in conjunction with the following figures. It should be noted that the description and figures merely illustrate the principles of the present subject matter. Further, various arrangements may be devised that, although not explicitly described or shown herein, embody the principles of the present subject matter and are included within its spirit and scope.

[0022] The manners in which the systems and methods for providing information about IPTV streams are implemented are explained in details with respect to Figures 1 and 2. While aspects of described systems and methods for providing information about IPTV streams can be implemented in any number of different computing systems, environments, and/or

implementations, the examples and implementations are described in the context of the following system(s).

[0023] Figure 1 illustrates a network environment implementation 100 of a content viewing device 102 for providing background information about IPTV streams, in accordance with an embodiment of the present subject matter. The content viewing device 102 may be implemented as various devices, such as a smart TV 103, a laptop, a personal computer, a set top box connected to a screen and a multimedia device. The content viewing device 102 may receive content from a content server 104, maintained by a service provider, over a communication network 106. The communication network 106 may include a Global System for Mobile Communication (GSM) network, a Universal Mobile Telecommunications System (UMTS) network, or any other communication network that use any of the commonly used protocols, for example, Hypertext Transfer Protocol (HTTP) and Transmission Control Protocol/Internet Protocol (TCP/IP).

[0024] In one implementation, the content viewing device 102 includes a processor 108, and a memory 109 connected to the processor 108. The processor 108 may include microprocessors, microcomputers, microcontrollers, digital signal processors, central processing units, state machines, logic circuitries and/or any other devices that manipulate signals and data based on computer-readable instructions. Among other capabilities, the processor 108 may fetch and execute computer-readable instructions stored in the memory 109.

[0025] Functions of the various elements shown in the figures, including any functional blocks labeled as "processor(s)", may be provided through the use of dedicated hardware as well as hardware capable of executing computer-readable instructions.

[0026] The memory 109, communicatively coupled to the processor 108, can include any non-transitory computer-readable medium known in the art including, for example, volatile memory, such as static random access memory (SRAM) and dynamic random access memory (DRAM), and/or non-volatile memory, such as read only memory (ROM), erasable programmable ROM, flash memories, hard disks, optical disks, and magnetic tapes.

[0027] Further, the content viewing device 102 may include modules 110. The modules 110 may be coupled to the processor 108. The modules 110, amongst other things, include routines, programs, objects, components, and data structures, which perform particular tasks or

implement particular abstract data types. The modules 110 may also be implemented as, signal processor(s), state machine(s), logic circuitries, and/or any other device or component that manipulate signals based on computer-readable instructions.

[0028] In said implementation, the modules 110 include a content splitter module 116, a background (BG) content display (BGCD) module 118, a background (BG) content file download (BGCFD) module 120 and other module(s) 122. The other module(s) 122 may include computer-readable instructions that supplement applications or functions performed by the content viewing device 102.

[0029] Further, the content viewing device 102 may also include data 112. In one implementation, the data 122 includes content data 124 and other data 126. The other data 126 may include data generated and saved by the modules 110 for providing various functionalities of the content viewing device 102.

[0030] In one example, the content viewing device 102 may include an input unit 128 which may be informed of a keypad comprising a plurality of keys or an on-screen keyboard comprising a plurality of keys or a remote. In said example, the input unit 128 includes a dedicated background information button 130 to initiate display of background information of an IPTV stream.

[0031] In one example, the content server 104 may include a content synchronization module 114. The content synchronization module may be structurally and functionally similar to the modules 110.

[0032] In operation, the content server 104 relays IPTV stream as a composite content to the users. In one example, the composite content comprises of a primary content and a background content. The primary content may be a video or an audio which may be played to the user. For example, the primary content may be a movie, a TV show, a music video, a song, an advertisement and so on. In one example, the content synchronization module 114 may receive the primary content and the background content from a content provider. The content synchronization module 114 may synchronize the background content with the primary content so that if played at the same time, the background content corresponds to and is related to the primary content. In another example, the content provider may directly provide the composite synchronized content to the content server 104. In such a case, the content synchronization module 114 may not process the composite content.

[0033] In yet another example, the background content may be provided by a third party, such as an advertising agency, or the service provider. In said example, the content synchronization module 114 may integrate the background content with the primary content provided by the content provider for being relayed to the user. The content synchronization module 114 may increase or decrease the playback speed of the background content so as to synchronize the background content with the primary content.

[0034] The content server 104 relays the composite content to the content viewing system 102. The content viewing system 102 receives the composite content either directly or through an integrated set top box or through a separately connected set top box. The composite content is then fed to the content splitter module 116. The content splitter module 116 may then split the composite content into its constituents, i.e., the primary content and the background content. The primary content is played or displayed to the user as a default.

[0035] In one example, the user may press the dedicated background information button 130 to obtain background information of the primary content. On receiving the user input, the BGCD module 118 is activated. The BGCD module 118 may be in form of an application or a browser.

[0036] In one example, the BGCD module 118 may display the background information as picture-in-picture (PIP) window or an overlay window or a pop-up window which may be opaque or translucent. In another example, the BGCD module 118 may display the background information by dividing the display unit of the content viewing device 102 into two portions, wherein the first portion displays the primary content and the second portion displays the background content. In another example, the BGCD module 118 may display the background information on a web browser application or reader application installed on the content viewing device 102

[0037] In one example, the BGCD module 118 may format the background information based on the various interactive options included within the background information. For example, any links within the background information may be formatted by using a different font, font color, font size, font style and so on, for highlighting the links to the user. In one example, if the primary content being displayed to the user is an advertisement of a pizza delivery service, the background information may include links to place an order or may include phone numbers of the pizza delivery service. Further, BGCD module 118 may facilitate the user

to click on the phone numbers to place a call to the restaurant using techniques such as voice over internet protocol (VOIP) and calling applications, such as Skype™.

[0038] In one example, if the primary content being displayed to the user is a TV show, the user may wish to download the background information regarding the primary content. On selecting the appropriate option using the input unit 128, the BGCFD module 120 may provide the users to download the background information in various formats, such as a portable document format (pdf), a document format and a text format. In certain situations, the background information may be provided to the user free of cost. In another example, wherein the download of the background information is a paid option, the BGCFD module 120 may provide the user to pay for the download using various options, such as net banking, credit card, debit card and deduction from subscription. The BGCFD module 120 may store the downloaded data as content data 124 which may be viewed by the user as per his convenience.

[0039] Thus, the content viewing device 102 for providing information about IPTV streams facilitate the user to obtain detailed background information about the content being watched by them. Further, this creates opportunities of revenue generation for the service provider. The user experience is also enhanced as the user is able to obtain information he is interested in.

[0040] Figure 2 illustrates a method 200 for providing information about IPTV streams, according to an example of the present subject matter. The order in which the method 200 is described is not intended to be construed as a limitation, and any number of the described method blocks can be combined in any order to implement method 200, or an alternative method. Additionally, individual blocks may be deleted from the method 200 without departing from the spirit and scope of the subject matter described herein. Furthermore, the method 200 may be implemented in any suitable hardware, machine readable instructions, firmware, or combination thereof.

[0041] In one example, the steps of the method 200 can be performed by programmed computers. Herein, some examples are also intended to cover program storage devices, for example, digital data storage media, which are machine or computer readable and encode machine-executable or computer-executable programs of instructions, where said instructions perform some or all of the steps of the described method 200. The program storage devices may

be, for example, digital memories, magnetic storage media such as a magnetic disks and magnetic tapes, hard drives, or optically readable digital data storage media.

[0042] With reference to method 200 as depicted in Figure 2, as depicted in block 202, composite content is received from the service provider. In one example, the content splitter module 116 received the composite content from a service provider of IPTV streams.

[0043] As illustrated in block 204, the composite content is split into primary content and background content. In one example, the content splitter module 116 splits the composite content into primary content and background content. The content splitter module 116 may implement commercially available de-multiplexing techniques to split the composite content into primary content and background content.

[0044] At block 206, it is determined whether a user input for viewing background content has been received. In one example, the BGCD module 118 may determine whether the user input has been received. As mentioned earlier, the user may indicate his preference to view background information by pressing the dedicated background information button 130 of the input device 128.

[0045] If at block 206, the user input for viewing background content is determined to have been received, then as shown in block 208, a switch is made from the primary content to the background content. In one implementation, the BGCD module 118 may initiate the switching between the primary content and the background content. If at block 206, the user input for viewing background content is determined not to have been received, then the method proceeds to block 212.

[0046] As shown in block 210, the background content is displayed to the user. In one example, the BGCD module 118 may display the background content to the user. The BGCD module 118 may display the background information as picture-in-picture (PIP) window or an overlay window or a pop-up window which may be opaque or translucent. In another example, the BGCD module 118 may display the background information by dividing the display unit of the content viewing device 102 into two portions, wherein the first portion displays the primary content and the second portion displays the background content. In another example, the BGCD module 118 may display the background information on a web browser application or reader application installed on the content viewing device 102.

[0047] At block 212, it is determined whether a user input for downloading files related to the background content is received. In one implementation, the BGCD module 118 determines whether the user has selected the option of downloading the files related to the background content. In one example, the user may select the option of downloading the files related to the background content by selecting or clicking on the appropriate option or link present in the background content.

[0048] If at block 212, the user input for downloading files related to the background content is determined to have been received, then as shown in block 214, the files related to the background content are downloaded. In one example, the BGCFD module 120 may download the files from various sources, such as the content server 104 and a third party source. Further, the BGCFD module 120 may initiate accounting or billing the user based on whether the download is billable or free.

[0049] If at block 212, the user input for downloading files related to the background content is determined not to have been received, as shown in block 216, the operation is aborted.

[0050] Thus, the method 200 for providing information about IPTV streams facilitates the user to obtain detailed background information about the content being watched by them. Further, the method 200 creates opportunities of revenue generation for the service provider. The user experience is also enhanced as the user is able to obtain information he is interested in.

[0051] Although implementations for providing information about IPTV streams have been described in language specific to structural features and/or methods, it is to be understood that the appended claims are not necessarily limited to the specific features or methods described. Rather, the specific features and methods are disclosed as examples of systems and methods for providing information about IPTV streams.

I/We claim:

1. A content viewing device (102) for providing information about Internet Protocol Television (IPTV) streams, the content viewing device (102) comprising:

a processor (108);

a content splitter module (116) coupled to the processor (108), to:

receive a IPTV stream as a composite content from a service provider of IPTV services; and

split the composite content into primary content and background content; and

a background content display (BGCD) module (118), coupled to the processor (108), to :

determine whether a user input to provide the background content of the primary content has been received; and

provide the background content to the user on determining the receipt of the user input.

2. The content viewing device (102) as claimed in claim 1, wherein the BGCD module (118) further formats interactive options present in the background content for highlighting the interactive options.

3. The content viewing device (102) as claimed in claim 1, wherein the BGCD module (118) further provides the background by generating at least one of a picture-in-picture (PIP) window, an overlay window, a pop-up window, division of a display unit of the content viewing device (102) and on a browser application.

4. The content viewing device (102) as claimed in claim 1, the content viewing device (102) further comprises a background content file download (BGCFD) module (120), coupled to the processor (108), to

determine whether a user input to download a file pertaining to the background content of the primary content has been received; and

download the file on determining the receipt of the user input.

5. The content viewing device (102) as claimed in claim 4, wherein the BGCFD module (120) further:

receives a user input selecting an interactive option present in the background content; and

initiates a response action on the user selecting the interactive content.

6. The content viewing device (102) as claimed in claim 5, wherein the BGCFD module (120) further initiates at least one of placing a call and redirecting to a web-page of an electronic store.

7. A method for providing information about Internet Protocol Television (IPTV) streams, comprising:

receiving an IPTV stream as a composite content from a service provider of IPTV services;

splitting the composite content into primary content and background content;

determining whether a user input to provide the background content of the primary content has been received; and

providing the background content to the user on determining the receipt of the user input.

8. The method as claimed in claim 7, wherein the method further comprises formatting interactive options present in the background content for highlighting the interactive options.

9. The method as claimed in claim 7, wherein the method further comprises providing the background, by generating at least one of a .picture-in-picture (PIP) window, an overlay

window, a pop-up window, division of a display unit of the content viewing device (102) and on a browser application.

10. The method as claimed in claim 7, wherein the method further comprises:

determining whether a user input to download a file pertaining to the background content of the primary content has been received; and

downloading the file on determining the receipt of the user input.

11. The method as claimed in claim 7, wherein the method further comprises:

receiving a user input selecting an interactive option present in the background content; and

initiating a response action on the user selecting the interactive content.

12. A non-transitory computer-readable medium having a set of computer readable instructions that, when executed, cause a content viewing device (102) to:

receive an IPTV stream as a composite content from a service provider of IPTV services;

split the composite content into primary content and background content;

determine whether a user input to provide the background content of the primary content has been received; and

provide the background content to the user on determining the receipt of the user input.

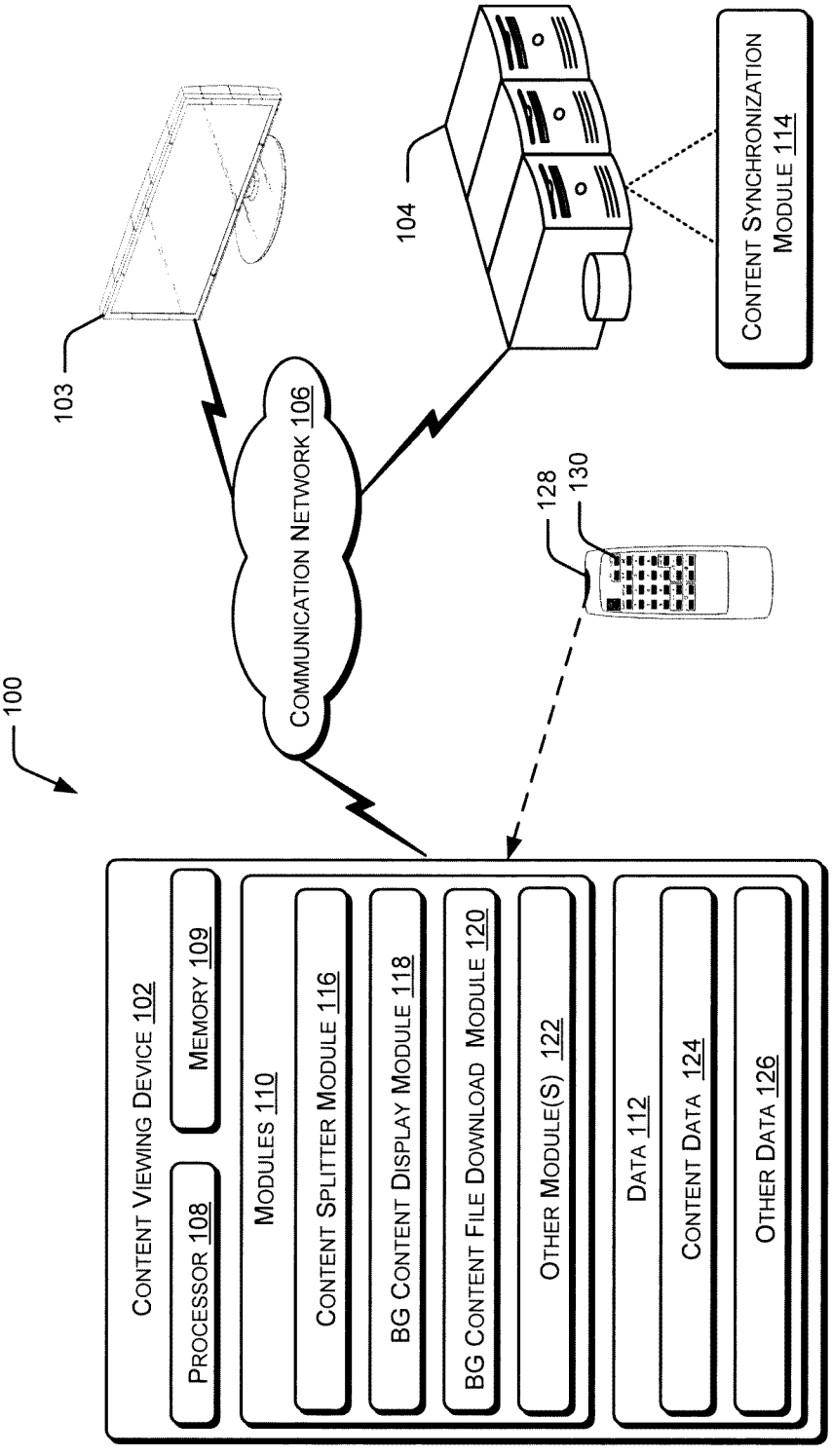
100
103
104
128
130
COMMUNICATION NETWORK 106
CONTENT SYNCHRONIZATION MODULE 114
CONTENT VIEWING DEVICE 102
PROCESSOR 108
MEMORY 109
MODULES 110
CONTENT SPLITTER MODULE 116
BG CONTENT DISPLAY MODULE 118
BG CONTENT FILE DOWNLOAD MODULE 120
OTHER MODULE(S) 122
DATA 112
CONTENT DATA 124
OTHER DATA 126

Figure 1

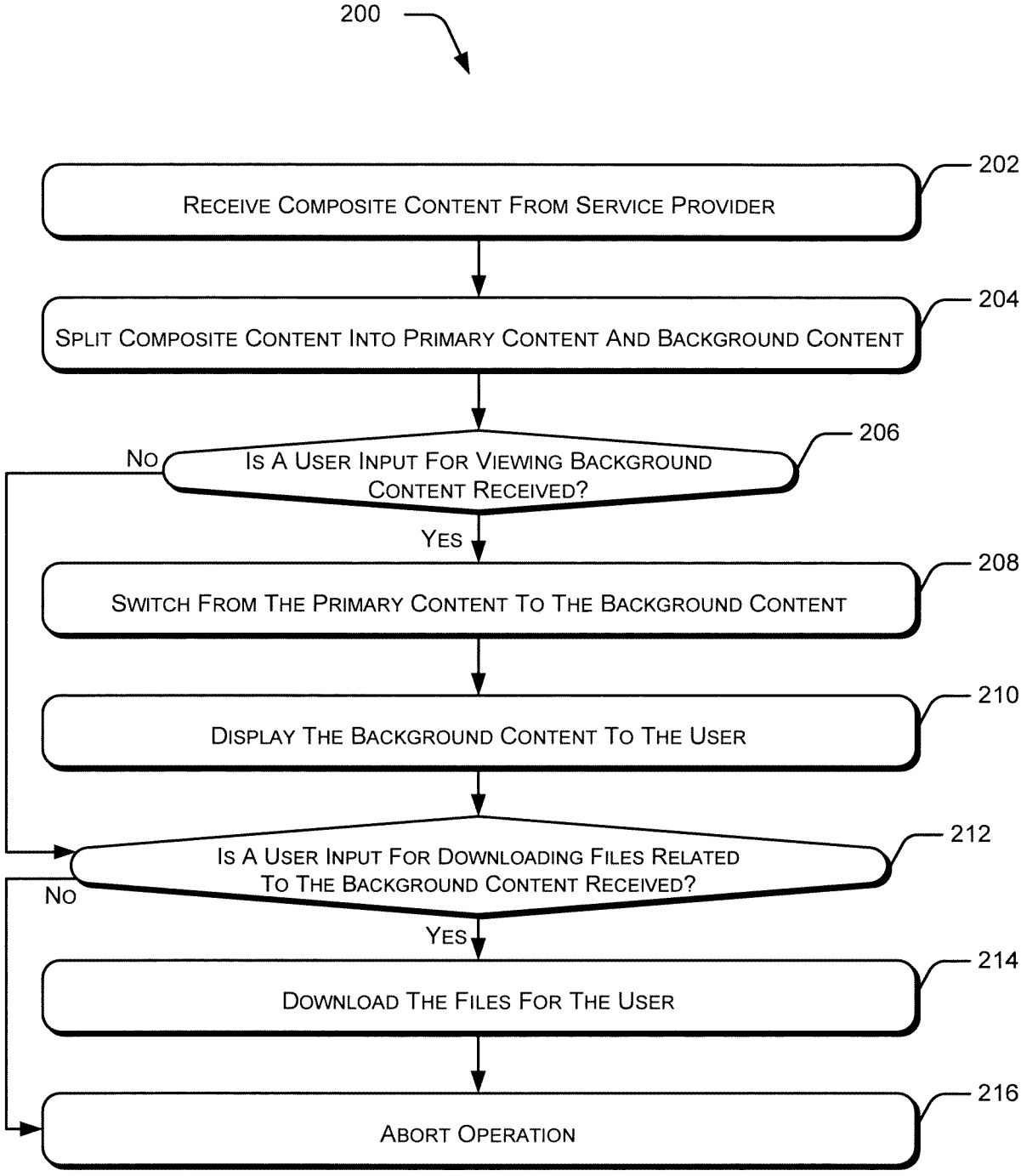
200
RECEIVE COMPOSITE CONTENT FROM SERVICE PROVIDER
202
SPLIT COMPOSITE CONTENT INTO PRIMARY CONTENT AND BACKGROUND CONTENT
204
IS A USER INPUT FOR VIEWING BACKGROUND CONTENT RECEIVED?
206
NO
YES
SWITCH FROM THE PRIMARY CONTENT TO THE BACKGROUND CONTENT
208
DISPLAY THE BACKGROUND CONTENT TO THE USER
210
IS A USER INPUT FOR DOWNLOADING FILES RELATED TO THE BACKGROUND CONTENT RECEIVED?
212
NO
YES
DOWNLOAD THE FILES FOR THE USER
214
ABORT OPERATION
216

Figure 2

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2014/001295

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04N21/431 H04N21/478 H04N21/81 H04N21/236
ADD.

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)
H04N

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 practicable, 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.
X	US 2001/001160 A1 (SHOFF DANIEL J [US] ET AL) 10 May 2001 (2001-05-10) paragraph [0004] paragraphs [0014], [0018] paragraph [0035] - paragraph [0037] paragraph [0050] - paragraph [0069] paragraph [0081] -----	1-12
X	US 2011/320627 A1 (LANDOW KATE [US] ET AL) 29 December 2011 (2011-12-29) paragraph [0018] paragraph [0022] - paragraph [0023] paragraph [0035] - paragraph [0036] paragraph [0054] - paragraph [0055] paragraph [0062] - paragraph [0066] ----- -/--	1-12

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 July 2014	22/07/2014

Name and mailing address of the ISA/	Authorized officer
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Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2014/001295

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 7 293 275 B1 (KRIEGER ALLYSON M [US] ET AL) 6 November 2007 (2007-11-06) column 5, line 63 - column 10, line 67 column 12, line 56 - column 13, line 64 -----	1-12

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2014/001295

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2001001160 A1	10-05-2001	US 6240555 B1	29-05-2001
		US 2001001160 A1	10-05-2001
		US 2004210824 A1	21-10-2004
		US 2005015815 A1	20-01-2005
US 2011320627 A1	29-12-2011	US 2011320627 A1	29-12-2011
		US 2011321096 A1	29-12-2011
		US 2013227622 A1	29-08-2013
		WO 2012006023 A2	12-01-2012
US 7293275 B1	06-11-2007	US 7293275 B1	06-11-2007
		US 2008276278 A1	06-11-2008
		US 2012151530 A1	14-06-2012