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(54) **METHODS AND SYSTEMS FOR NETWORK BASED CAPTURE OF TELEVISION VIEWER GENERATED CLICKSTREAMS**

(75) Inventors: **James Harold Gray**, Ellijay, GA (US); **Thomas Jefferson Brothers**, Gainesville, GA (US)

(73) Assignee: **AT&T Intellectual Property I, L.P.**, Atlanta, GA (US)

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(52) **U.S. Cl.**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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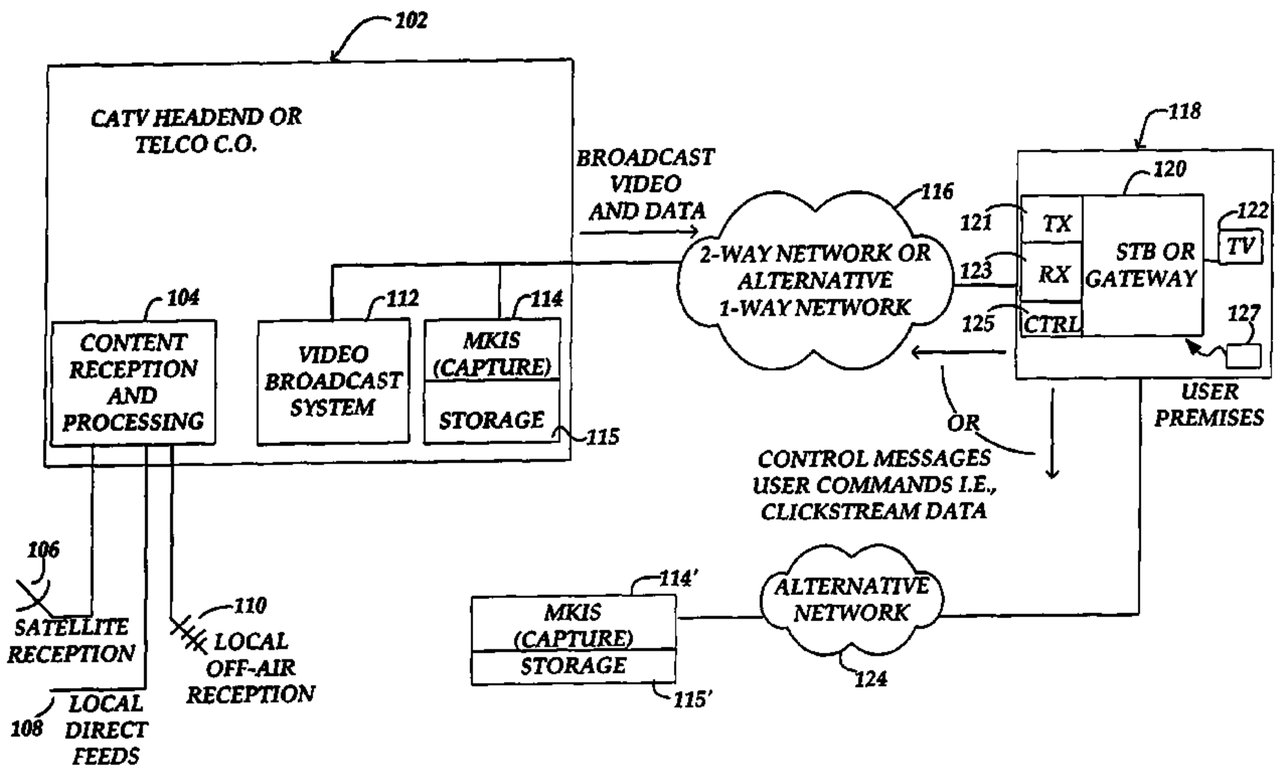
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Primary Examiner — Nasser Goodarzi
Assistant Examiner — Fred Peng
(74) *Attorney, Agent, or Firm* — Scott P. Zimmerman, PLLC

(57) **ABSTRACT**

Methods and systems provide clickstream captures at a remote component, such as a video control system of a television network, by receiving user commands generated by the viewer that are sent to the remote component concurrently relative to when they are generated by the viewer. The commands are captured and then information related to these commands is stored remotely from the premises of the viewer. Additionally, the user commands may be executed remotely such as at a video control system of a television network or alternatively may be executed at the premises of the viewer such as within a set top box. Information related to these user commands continues to be stored remotely from the premises of the viewer after the user commands have been executed such that the information related to these user commands can be processed as necessary and used for various purposes.

23 Claims, 3 Drawing Sheets



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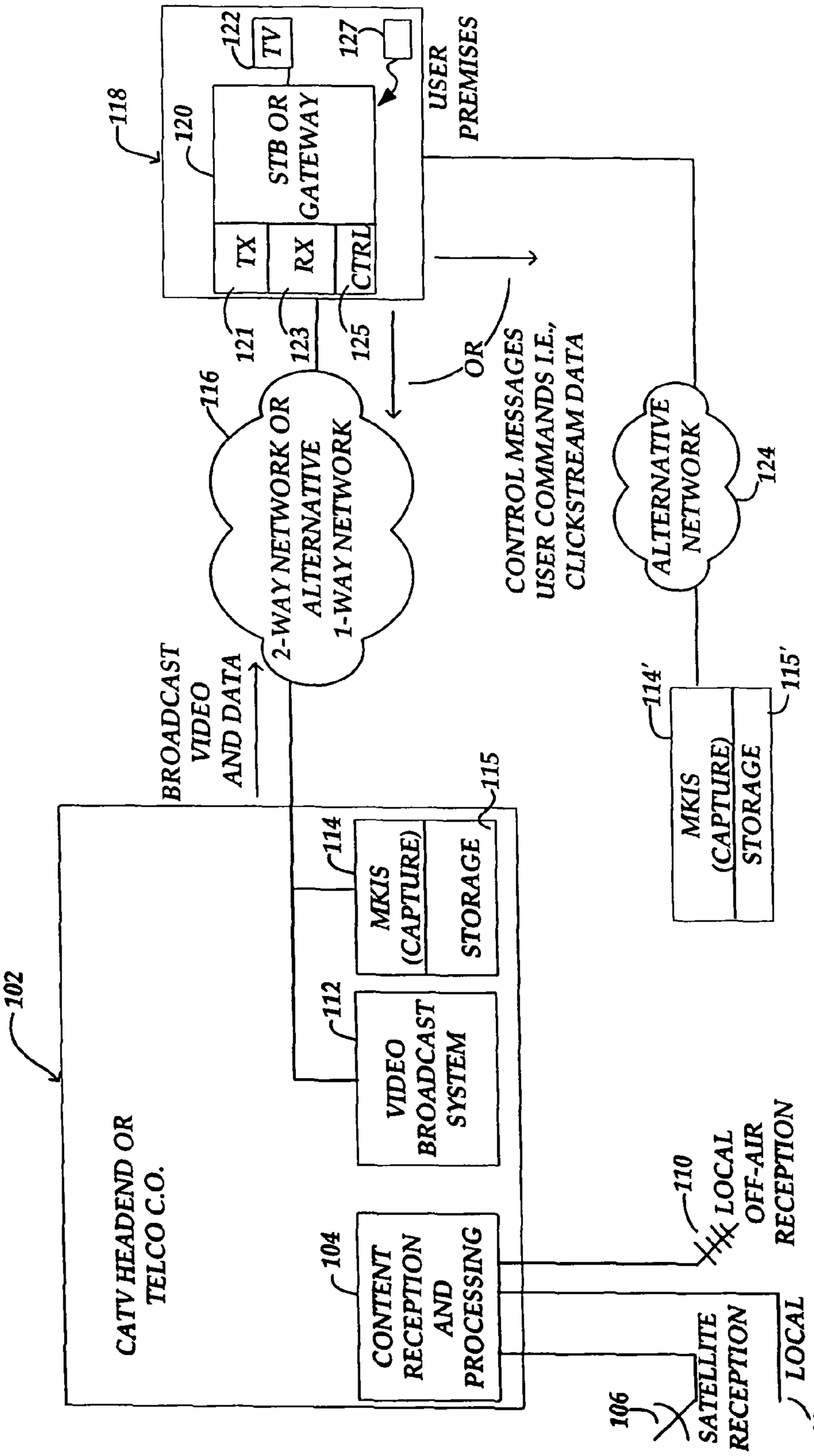

102
CATV HEADEND OR TELCO C.O.
104
CONTENT RECEPTION AND PROCESSING
112
VIDEO BROADCAST SYSTEM
114
MKIS (CAPTURE)
115
STORAGE
106
SATELLITE RECEPTION
108
LOCAL DIRECT FEEDS
110
LOCAL OFF-AIR RECEPTION
BROADCAST VIDEO AND DATA
116
2-WAY NETWORK OR ALTERNATIVE 1-WAY NETWORK
118
120
STB OR GATEWAY
TX
RX
CTRL
121
123
125
122
TV
127
USER PREMISES
OR
CONTROL MESSAGES USER COMMANDS I.E., CLICKSTREAM DATA
ALTERNATIVE NETWORK
124
114'
MKIS (CAPTURE)
115'
STORAGE

Fig.1

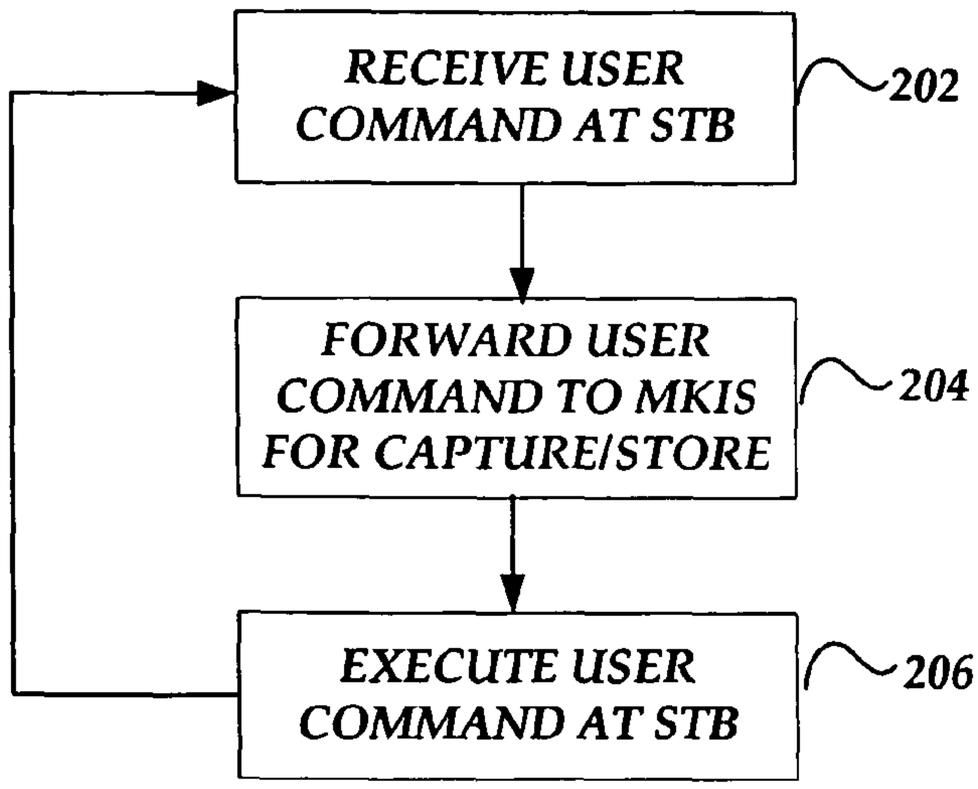

RECEIVE USER COMMAND AT STB
202
FORWARD USER COMMAND TO MKIS FOR CAPTURE/STORE
204
EXECUTE USER COMMAND AT STB
206

Fig. 2

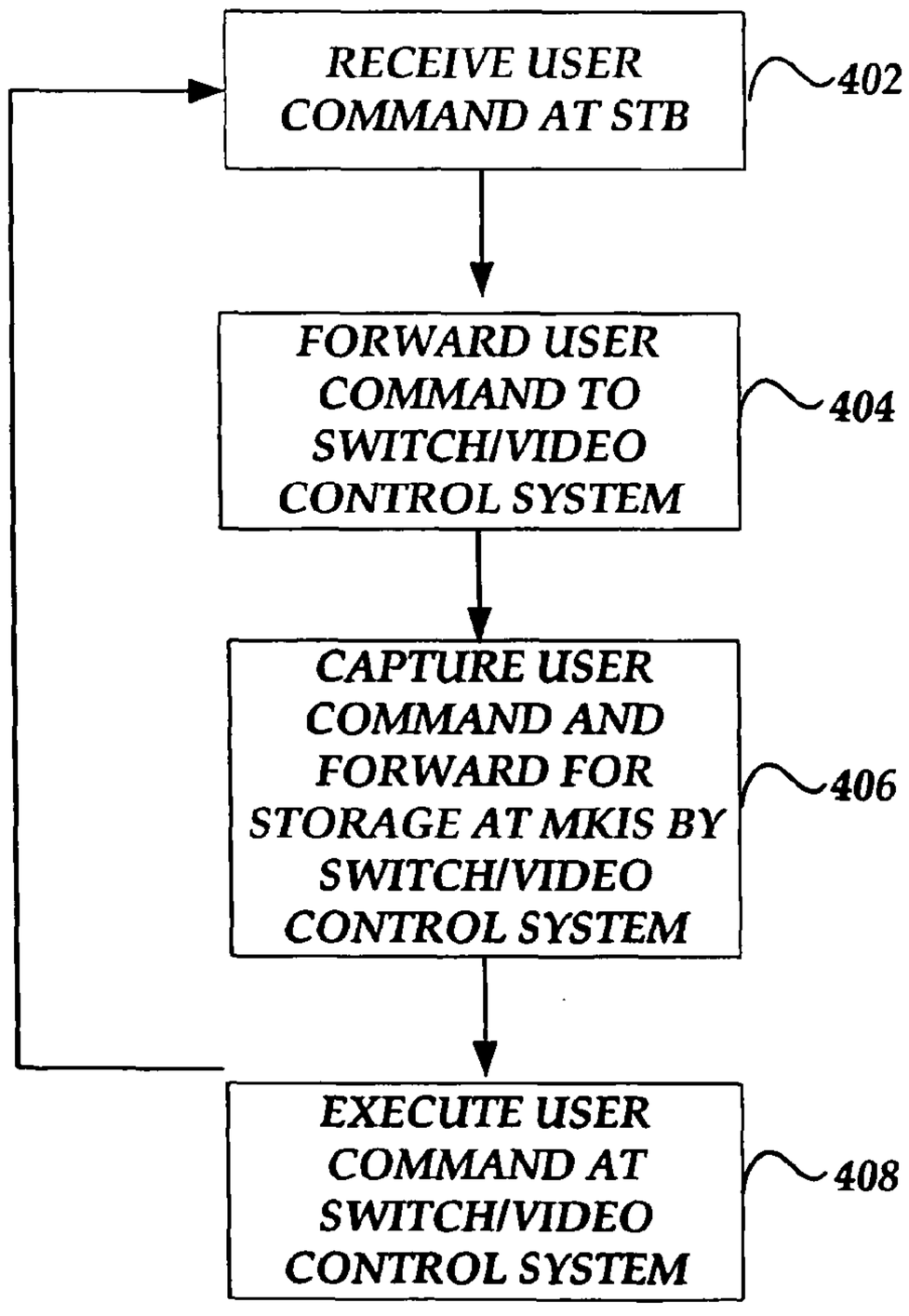

RECEIVE USER COMMAND AT STB
402
FORWARD USER COMMAND TO SWITCH/VIDEO CONTROL SYSTEM
404
CAPTURE USER COMMAND AND FORWARD FOR STORAGE AT MKIS BY SWITCH/VIDEO CONTROL SYSTEM
406
EXECUTE USER COMMAND AT SWITCH/VIDEO CONTROL SYSTEM
408

Fig. 4

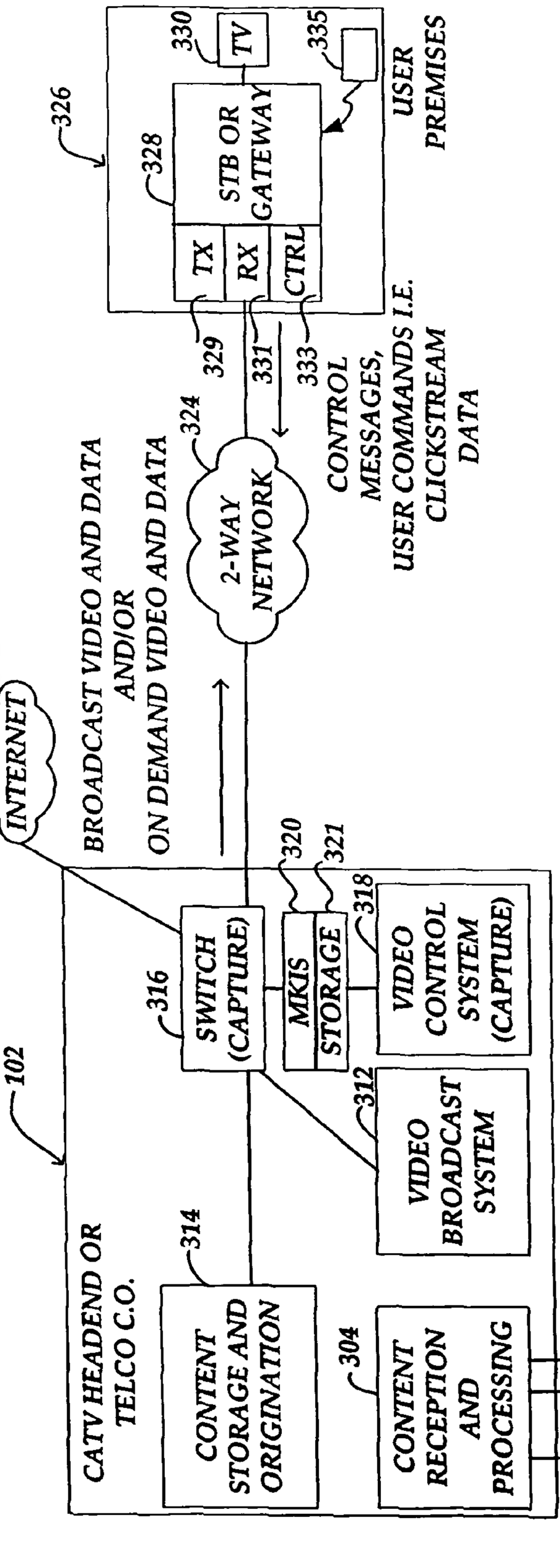

326
328
STB OR GATEWAY
TX
RX
CTRL
330
TV
335
USER PREMISES
329
331
333
CONTROL MESSAGES, USER COMMANDS I.E. CLICKSTREAM DATA
324
2-WAY NETWORK
BROADCAST VIDEO AND DATA AND/OR ON DEMAND VIDEO AND DATA
322
INTERNET
102
316
SWITCH (CAPTURE)
320
321
MKIS
STORAGE
318
VIDEO CONTROL SYSTEM (CAPTURE)
312
VIDEO BROADCAST SYSTEM
CATV HEADEND OR TELCO C.O.
314
CONTENT STORAGE AND ORIGINATION
304
CONTENT RECEPTION AND PROCESSING
310
LOCAL OFF-AIR RECEPTION
306
SATELLITE RECEPTION
308
LOCAL DIRECT FEEDS

Fig.3

METHODS AND SYSTEMS FOR NETWORK BASED CAPTURE OF TELEVISION VIEWER GENERATED CLICKSTREAMS

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is related to and incorporates by reference in the entirety the following applications: U.S. application Ser. No. 10/735,309 filed on Dec. 12, 2003 and entitled METHODS AND SYSTEMS FOR NETWORK BASED CAPTURE OF TELEVISION VIEWER GENERATED CLICKSTREAMS and now issued as U.S. Pat. No. 7,617,508; U.S. application Ser. No. 08/779,306 filed on Jan. 6, 1997 and entitled METHOD AND SYSTEM FOR TRACKING NETWORK USE (now abandoned); U.S. application Ser. No. 09/496,825 filed on Feb. 1, 2000 and entitled METHOD AND SYSTEM FOR TRACKING NETWORK USE and now issued as U.S. Pat. No. 6,983,478; U.S. application Ser. No. 10/017,742 filed on Dec. 14, 2001 and entitled SYSTEM AND METHOD FOR UTILIZING TELEVISION VIEWING PATTERNS; U.S. application Ser. No. 10/017,640 filed on Dec. 14, 2001 and entitled SYSTEM AND METHOD FOR IDENTIFYING DESIREABLE SUBSCRIBERS and now issued as U.S. Pat. 7,212,979; U.S. application Ser. No. 10/016,988 filed on Dec. 14, 2001 and entitled METHOD AND SYSTEM TO PERFORM CONTENT TARGETING and now issued as U.S. Pat. No. 7,444,658; U.S. application Ser. No. 10/017,111 filed on Dec. 14, 2001 and entitled METHOD AND SYSTEM FOR TARGETED INCENTIVES; U.S. application Ser. No. 10/017,630 filed on Dec. 14, 2001 and entitled SYSTEM AND METHOD FOR DEVELOPING TAILORED TELEVISION CONTENT RELATED PACKAGES and now issued as U.S. Pat. No. 7,587,323; U.S. application Ser. No. 10/036,677 filed on Dec. 21, 2001 and entitled METHOD AND SYSTEM FOR MANAGING TIMED RESPONSES TO A/V EVENTS IN TELEVISION and now issued as U.S. Pat. No. 7,086,075; U.S. application Ser. No. 10/036,923 filed on Dec. 21, 2001 and entitled SYSTEM AND METHOD FOR CUSTOMIZING CONTENT-ACCESS LISTS and now issued as U.S. Pat. No. 7,020,652; and U.S. application Ser. No. 10/037,005 filed on Dec. 21, 2001 and entitled SYSTEM AND METHOD FOR STORING AND DISTRIBUTING TELEVISION VIEWING PATTERNS (now abandoned).

TECHNICAL FIELD

The present invention is related to the capture of clickstreams generated by television viewers when making television programming selections. More particularly, the present invention is related to the network based capture of these clickstreams.

BACKGROUND

When a television viewer watches television, the viewer periodically makes selections to control what is being viewed. The viewer may change to a different channel and program, may choose to channel surf during commercials, may choose to shut down the television equipment and not watch any programming during certain time periods, etc. The sequence of these user commands are known as a clickstream which provides an indication of what the viewer is or is not watching on television when the clickstream is captured in relation to time, current channel before a change, current channel after a change, etc.

Initially, this clickstream was not captured in any way. The behavior of the television viewer was not tracked, and there was no way to identify trends in the behavior of the television viewer without requiring the television viewer to become involved, such as manually recording what the viewer watches or installing special equipment in the home of the viewer specifically for the purpose of tracking what programs the viewer watched.

The introduction of set top boxes that tune in broadcasted channels for the viewer gave rise to a way to track the television watching behavior of the viewer without requiring the viewer to become involved. The set top box receives multiple streams of television programming and executes the commands from the viewer such as channel changes to control which stream is being viewed by the viewer. The set top box may also be provided with clickstream capture functionality so that when the set top box receives a user command, the command is captured and stored within the set top box in addition to being executed within the set top box. In this way, the set top box effectively captures the viewing behaviors of the viewer.

The clickstream that has been captured may then be periodically forwarded from the set top box to a service provider system where it can be put to use. The service provider system may process the clickstream relative to profile information of the viewers producing the clickstreams to produce statistics about television viewing habits, such as statistics based on demographics. The service provider and/or television content providers may then utilize these statistics for various purposes. For instance, this information may be used to determine what television programming to provide to consumers.

While this set top box approach does provide the clickstream capture, it has drawbacks because it requires the set top box of every viewer being tracked to have the ability to record and periodically forward the clickstream information. Additionally, for advanced television networks, the switching between streams of programming may be performed within the television network for a viewer rather than at the set top box such that the set top box only receives a single stream at a time. Thus, the set top box may not include the intelligence to recognize the significance of one user command from another but instead simply transfers the user command to the television network for execution such that the set top box is ineffective at capturing the clickstream.

SUMMARY

Embodiments of the present invention address these issues and others by providing network based clickstream capture. The user commands are transferred from the premises of the viewer, such as by a set top box, to a remotely located component such as a video control system within a television network. The user commands are captured at the remotely located component and are stored remotely from the premises of the viewer. Accordingly, the set top box need not necessarily have clickstream capture capabilities.

One embodiment is a method of capturing user commands related to viewing television programming. The method involves receiving a user command at a viewer appliance at a premises of the viewer. Relative to receiving the user command, the user command is concurrently forwarded from the viewer appliance to a component located remotely from the premises of the viewer. Remotely from the premises of the viewer, information related to the user command is stored upon receiving the user command at the component.

Another embodiment is a method of capturing user commands related to viewing television programming. The

method involves receiving a user command at a viewer appliance at a premises of the viewer. Relative to receiving the user command, the user command is concurrently forwarded from the viewer appliance to a component located remotely from the premises of the viewer. The user command is executed at the component to alter an aspect of the television programming being viewed by the viewer. Remotely from the premises of the viewer, information related to the user command continues to be stored after the user command has been executed at the component.

Another embodiment is a system for capturing user commands related to viewing television programming. The system includes a reception mechanism located at a premises of a viewer that receives user commands. A transfer mechanism is located at the premises of the viewer and transfers the user commands concurrently relative to the reception mechanism receiving the user commands. A control mechanism executes the user commands received by the reception mechanism to control an aspect of the television programming being provided to the viewer. A capture mechanism is located remotely from the premises of the viewer and receives the user commands being transferred concurrently by the transfer mechanism. A storage mechanism is located remotely from the premises of the viewer and continues to store information related to the user commands after the user commands have been executed by the control mechanism and received by the capture mechanism.

Another embodiment is a method of capturing user commands from a viewer that are related to viewing television programming. The method involves capturing the user command remotely from the premises of the viewer and continuing to store information related to the user command after the user command has been executed.

Another embodiment is a method of capturing user commands from a viewer that are related to viewing television programming. The method involves receiving the user command at a viewer appliance at the premises of the viewer. The method further involves executing the user command at the viewer appliance and forwarding the user command from the viewer appliance.

DESCRIPTION OF THE DRAWINGS

FIG. **1** shows an illustrative clickstream capture system architecture for implementing embodiments of the present invention where the television programming is broadcast to a viewer appliance that executes the user commands while the clickstream capture is performed remotely from the viewer premises.

FIG. **2** shows an illustrative set of logical operations within the system of FIG. **1** for implementing embodiments of the present invention.

FIG. **3** shows an illustrative clickstream capture system architecture for implementing embodiments of the present invention where at least a portion of the television programming is switched within the television network such that the television network executes user commands while the clickstream capture is performed remotely from the viewer premises.

FIG. **4** shows an illustrative set of logical operations within the system of FIG. **3** for implementing embodiments of the present invention.

DETAILED DESCRIPTION

Embodiments of the present invention provide for the network capture of clickstreams that are generated by TV viewers. Thus, the network capture obtains the clickstreams without requiring the viewer appliance to capture the clickstreams and store the clickstreams for a period of time, and then forward the stored clickstreams on to a downstream location. Instead, the viewer appliance receiving the clickstreams from the viewer forwards the user commands of the clickstream up to the network location as the user commands are being received. This enables the network to have almost immediate access to all user commands of a clickstream which can then be processed as necessary to produce statistics about the behavior of the TV viewers.

FIG. **1** shows one example of a system for capturing the clickstreams where the television programming being provided to the viewer is through broadcast system. Multiple channels of television programming are being broadcast simultaneously to the viewer appliance **120** such as a set top box or broadband gateway, which then tunes to the particular channel of programming that the viewer desires to watch. The broadcast television programming is provided to viewers from a central location **102**, such as a community access television ("CATV") headend or a telephone company ("telco") central office ("CO") which may provide Internet connectivity for streaming programming to the viewer.

The central location **102** includes various components for receiving the television programming to be broadcast to the television viewers. Much of the television programming originates from satellite reception via a satellite receiver dish **106**. Additional direct local feeds **108** receive direct transmission via a wireline link to local television stations. Also, additional local off-air reception via antennas **110** may also receive local programming that is not otherwise received through the direct local feeds **108**.

These programming sources provide received programming to a content reception and processing system **104**. This system **104** takes the various channels of television programming being received and creates a channel line-up. The channel line-up is the distribution of the channels being provided by the service provider over the particular channels designated by the service provider. The content reception and processing system **104** receives a particular stream of programming and assigns it to a particular channel within the channel line-up.

The content reception and processing system **104** provides the individual streams of programming to a video broadcast system **112**. The video broadcast system **112** then broadcasts each of the streams of programming within its assigned channel of the channel line-up. The video broadcast system **112** broadcasts these channels, as well as data such as guide data, over a distribution network **116** that feeds each of a plurality of individual television viewer premises **118**. Typically, the distribution network **116** includes a network of coaxial lines, twisted pair lines, or wireless links that extend over a region being served, where each of the lines terminates at viewer premises **118**.

The broadcasts may be either in an analog or a digital format. The network **116** may carry either format or both formats, such as where one set of channels of the channel line-up are broadcast as analog while another set of channels of the channel line-up are digital. Additionally, the network **116** may carry two-way communications such that communications may be provided back to the central location **102** from viewer premises **118**. Alternatively, the network **116** may carry only one-way communications from the central location **102** to viewer premises **118**.

At viewer premises **118**, the incoming stream of channels is provided to a viewer appliance **120**. A viewer appliance **120** allows a viewer to provide commands to control aspects of the

television programming being viewed, such as channel changes and/or additional aspects such as audio format and volume control. The viewer appliance **120** typically outputs the selected channel to a television **122**. A viewer appliance **120** such as a broadband gateway may be present in place of a set top box so as to receive user commands from different areas of the premises **118** and distribute the selected channel to televisions located in different areas as opposed to having a viewer appliance at each location where a television is present. It should be appreciated that the viewer appliance **120** may be incorporated into the television **122** rather than being a separate component.

When a viewer is watching television, the viewer provides user commands to control the aspects of television programming as desired. The viewer may provide a user command by pressing buttons on a remote control **127** that provides a corresponding signal to the viewer appliance **120** and are received by a reception module **123**. Alternatively, the viewer may provide a user command by pressing buttons located on the viewer appliance **120** itself. The viewer appliance **120** of this example then performs at least two actions. The viewer appliance **120** executes the command through a control module **125** to control the television programming as desired by the viewer. In addition to executing the command, as the command is received the viewer appliance **120** forwards the user command (i.e., a control message) to an external location rather than merely storing a record of it for future transfer by sending the user command from a transmission module **121**.

The viewer appliance **120** may forward the user command to an external location in various ways. For example, where the distribution network **116** is a two-way network, the user command may be transferred over the network **116** back to the central location **102**. The destination for the user command in this example is a marketing information system ("MKIS") **114**. The MKIS **114** is interfaced to the two-way network **116** such that user commands are directed to the MKIS **114** where they are captured from the transmission and stored in storage **115** of the MKIS **114**.

Typically, the user commands coming from a particular viewer premises **118** are stored in association with an identifier of the viewer such that the MKIS **114** matches the user command to a profile for the viewer, such as the demographical categories of the viewer. Also, the context in which the user command is received is known due to the MKIS **114** storing a time stamp for when the user command is received and also having stored the preceding user commands. Accordingly, downstream processing can determine behaviors of TV viewers relative to the content being provided based on knowing when a user command or stream of user commands (i.e., a clickstream) is received relative to what content is being shown on a particular channel at that particular time. Thus, it can be determined that a television viewer switches from one program to another, switches the channel during commercials, mutes the television when certain content is present, etc. Furthermore, these behaviors can be matched statistically with the various demographic categories known for the viewers.

Rather than forwarding the user commands back to the central location **102** through the distribution network **116**, the viewer appliance **120** may be provided with an alternative route to forward the user commands. For example, the distribution network **116** may only be a one-way network or the destination for the user commands may be other than the central location **102**. Thus, the viewer appliance **120** may be provided with a connection to an alternative data network **124** which interconnects an MKIS **114'** having storage **115'** to the viewer appliance **120**. For example, the viewer appliance **120** may be connected to a digital subscriber line ("DSL") or other broadband connection to network **124**, through the public switched telephone network ("PSTN"), through a wireless connection, etc. Thus, when the viewer appliance **120** receives the user command, it is forwarded through the alternative network **124** to the MKIS **114'** where it is captured from the stream of communication and is stored in storage **115'** as described above.

FIG. **2** shows the logical operations performed within the system of FIG. **1** to capture the user commands at a location remote from viewer premises **118**, such as at the MKIS **114**. Initially, the user command is received at the viewer appliance **120** at reception operation **202**. As described above, this may be from the viewer entering a command through a remote control **127** or by entering the command directly on the viewer appliance **120** where the command is received by a reception module **123**.

Upon receiving the user command, the viewer appliance **120** forwards the user command to the MKIS **114** where it is captured and stored as appropriate for future processing at forward operation **204**. Also upon receiving the user command, the viewer appliance **120** executes the user command to alter the aspects of the television programming at execution operation **206**. While forward operation **204** and execution operation **206** are shown to occur in series, it will be appreciated that the viewer appliance **120** may perform these two operations in parallel such that there is no perceived delay by the viewer in entering the command and seeing the result of its execution.

FIG. **3** shows another example of a system for capturing the clickstreams, but in this example the television programming that is being provided to the viewer includes at least video-on-demand. In the video-on-demand system, the streams of programming to be sent to the viewer are switched within the television network of the central location **302** such that only one of the streams is being sent through a network **324** to a viewer appliance **328**. The system of FIG. **3** may also but not necessarily include broadcasted programming where multiple streams are being provided to and selected by the viewer appliance **328** as discussed above in relation to FIG. **1**. The video-on-demand and broadcast television programming is provided to viewers from a central location **302**.

The central location **302** of this example includes various components for receiving the television programming to be provided to the television viewers. Again, much of the television programming originates from a satellite reception via a satellite receiver dish **306**. Additional direct local feeds **308** receive direct transmission via a wireline link to local television stations. Also, additional local off-air reception via antennas **310** may also receive local programming that is not otherwise received through the direct local feeds **308**.

These programming sources provide received programming to a content reception and processing system **304**. This system **304** takes the various channels of television programming being received and creates a channel line-up. The content reception and processing system **304** receives a particular stream of programming and assigns it to a particular channel within the channel line-up.

The content reception and processing system **304** provides the individual streams of programming to a video broadcast system **312**. The video broadcast system **312** then broadcasts each of the streams of programming within its assigned channel of the channel line-up. The video broadcast system **312** broadcasts these channels, as well as data such as guide data, to a switch **316** at the central location **302**. This switch **316** then switches between the various sources of programming to

provide a particular stream of programming through the distribution network **324** to viewer premises **326** according to a selection by a viewer.

In addition to receiving the broadcasted channel line-up from the video broadcast system **312**, the switch **316** may receive television programming content from various other sources as well. For example, the switch **316** may receive content from a content storage and origination system **314**. The content storage and origination system **314** may provide video-on-demand programming such as movies and other programming that viewers may want to watch at any given time such that content is stored and can be selected for playback to the viewer at any time the viewer requests. Such video-on-demand services are often provided on a fee per use basis or monthly fee basis. The switch **316** may also receive content through the Internet **322** from other programming sources and may provide television programming as well as data services to the end viewer through the distribution network **324**.

A video control system **318** is included at the central location **302** to provide additional intelligence for operation of the switch **316**. The switch **316** receives user commands for the changing from one stream to send to the viewer appliance **328** to another. The switch **316** may select one stream or another, such as those streams from the video broadcast system **312**, without further assistance. However, certain channels of the video broadcast system **312** or content from the content and storage origination system **314** may be controlled on an account basis. The video control system **318** verifies that a particular viewer requesting a given channel or content has authorization to receive that channel or content and controls the switch **316** to either provide the channel/content or not provide the channel/content.

The streams being provided to viewer premises **326** may be either in an analog or a digital format. The network **324** may carry either format or both formats, such as where one set of channels of the channel line-up being received by the switch **316** are broadcast as analog while another set of channels of the channel line-up are digital. Additionally, the network **324** carries two-way communications such that communications are provided back to the switch **316** of the central location **302** from viewer premises **326** such that the switch **316** can select the particular stream to provide back through the network **324** to viewer premises **326**.

At viewer premises **326**, the incoming stream of channels is provided to the viewer appliance **328**. The viewer appliance **328** allows a viewer to provide commands to control aspects of the television programming being viewed on a television **330**, such as channel changes and/or additional aspects such as audio format and volume control.

When a viewer is watching television, the viewer continues to provide user commands to control the aspects of television programming as desired. Again, the viewer may provide a user command by pressing buttons on a remote control **335** that provides a corresponding signal to the viewer appliance **328** and are received by a reception module **331**. Alternatively, the viewer may provide a user command by pressing buttons located on the viewer appliance **328** itself. The viewer appliance **328** of this example then performs at least one action. As the command is received, the viewer appliance **328** forwards the user command (i.e., a control message) back to the switch **316** at the central location **302** through a transfer module **329** rather than merely storing a record of it for future transfer. Where the command is a change to a new stream of programming, then the switch **316** and video control system **318** executes the command to begin providing a different stream, rather than the viewer appliance **328** executing the change. Where the user command is other than a channel change, such as a selection of audio format or volume, then the viewer appliance **328** also executes the command through a control module **333**.

Upon the user command being received at the switch **316**, it may be captured by the video control system **318** or the switch **316** from the stream of information being received from the network **324**. An MKIS **320** is interfaced to the switch **316** and video control system **318** such that the user command is then passed to the MKIS **320** where it is stored in storage **321** in association with the contextual information that has been matched with the user command at the video control system **318**, such as the identifier of the viewer who generated the command, the time at which the viewer appliance **328**, switch **316**, or video control system **318** received the user command, etc. Additionally, the video control system **318** may also match the user command being forwarded to the MKIS **320** with a result of the user command or may only forward the result. For example, the user command may be a channel up button, whose result is a change from channel 2 to channel 3 such that the video control system **318** forwards an "on channel 3" result to the MKIS **320** for storage.

The viewer appliance **328** may also forward the user command to an external location in other ways. For example, in systems where the MKIS **320** is not interfaced to the switch **316** and/or video control system **318**, the MKIS **320** may be accessed through an alternative network such as described above in relation to FIG. **1**. The viewer appliance **328** may be provided a connection to an alternative data network which interconnects an MKIS **320** to the viewer appliance **328**. Like in the example of FIG. **1**, the viewer appliance **328** may be connected to a digital subscriber line ("DSL") or other broadband connection, PSTN, wireless, etc. When the viewer appliance **328** receives the user command, it is forwarded back through the network **324** for execution while it is simultaneously forwarded through the alternative network to the MKIS **320** where it is captured from the stream of communication and is stored as described above.

FIG. **4** shows an example of the logical operations that may be performed within the system of FIG. **3**. The viewer appliance **328** receives the user command at reception operation **402**. As the user command is received, the viewer appliance **328** then forwards the user command to the switch **316** or video control system **318** at forward operation **404**. The switch **316** or video control system **318** then captures the user command for the information being returned through the network **324** and forwards the user command to the MKIS **320** for storage as described above at capture operation **406**. As an alternative, rather than the switch **316** and video control system **318** forwarding the user command to the MKIS **320**, the viewer appliance **328** may forward the user command to the MKIS **320** through an alternative network connection where it is then captured and stored. Also upon the switch **316** and/or video control system **318** receiving the user command, the user command is executed to alter the stream of programming being provided through the network **324** to viewer premises **326** at execution operation **408**. Where the user command is not for a change in the stream in programming but is another change, such as a volume change, then the change may be implemented at viewer premises **326** rather than within the central location.

Thus, the embodiments of clickstream capture provide for the forwarding of the user command from the viewer appliance **328** to an external location as the commands are being received. This eliminates the requirement that the viewer appliance **328** record the user commands. However, the viewer appliance **328** may continue to perform clickstream

capture as well to provide redundancy or for other purposes. As an advantage of performing clickstream capture at an external location, the external location typically has much greater capacity than an individual viewer appliance such that rather than filtering the user commands to be stored to eliminate those that are not as useful at understanding viewer behavior, the viewer appliance may forward all user commands so that the external location can capture and store all of the commands rather than selected ones.

The data that has been stored in the MKIS of the embodiments discussed above may then be used for various purposes. It may be used to target advertising for particular times and television programs. It may also be used to determine the proper characteristics for advertisements such as length and content. Furthermore, the data may be used to determine the proper television programming to provide at any given time. Accordingly, the data that is obtained has significant value in relation to making determinations about what content is provided for television viewers. Usage of this data for such purposes is discussed in more detail in U.S. application Ser. No. 09/467,889, filed on Dec. 21, 1999, and entitled METHOD AND SYSTEM FOR PROVIDING TARGETED ADVERTISEMENTS.

Although the present invention has been described in connection with various illustrative embodiments, those of ordinary skill in the art will understand that many modifications can be made thereto within the scope of the claims that follow. Accordingly, it is not intended that the scope of the invention in any way be limited by the above description, but instead be determined entirely by reference to the claims that follow.

What is claimed is:

1. A method, comprising:
receiving content from a distribution network;
receiving a command at a viewer appliance;
establishing communication from the viewer appliance to a remotely located component; when the command is a channel change at the viewer appliance, then immediately upon receipt concurrently forwarding the command from the viewer appliance to the remotely located component for demographic profiling;
when the command is not the channel change, then performing in parallel:
immediately upon receipt concurrently forwarding the command from the viewer appliance to the remotely located component for the demographic profiling; and
executing the command to alter an aspect of the content being viewed by the viewer; and
sending an indication that the command has been executed, whereby local storage of the command at the viewer appliance is eliminated;
sending a request from the viewer appliance for an advertisement in an advertisement insertion slot;
receiving an indication of the advertisement selected based on the demographic profiling; and causing the advertisement to be displayed in the advertisement insertion slot.

2. The method of claim **1**, further comprising presenting the content at the viewer appliance.

3. The method of claim **1**, further comprising matching the command to a present context.

4. The method of claim **3**, further comprising concurrently forwarding the matching to the remotely located component.

5. The method of claim **3**, further comprising determining a result of the command and concurrently forwarding the result to the remotely located component.

6. The method of claim **1**, wherein the viewer appliance comprises a set-top box.

7. The method of claim **1**, further comprising generating targeted advertising.

8. A method of capturing commands from a viewer that are related to viewing content, comprising:
receiving the content at a viewer appliance;
establishing communication from the viewer appliance to a remotely located component;
receiving a command at the viewer appliance;
when the command is a channel change, then immediately upon receipt concurrently forwarding the command from the viewer appliance to the remotely located component for demographic profiling remote execution to a new stream of programming;
when the command is not the channel change, then performing in parallel:
immediately upon receipt concurrently forwarding the command from the viewer appliance to the remotely located component for the demographic profiling;
executing the command to alter an aspect of the content being viewed by the viewer; and
sending an indication that the command has been executed at the viewer appliance, whereby local storage of the command at the viewer appliance is eliminated;
sending a request from the viewer appliance for an advertisement in an advertisement insertion slot;
receiving an indication of the advertisement selected based on the demographic profiling;
and causing the advertisement to be displayed in the advertisement insertion slot.

9. The method of claim **8**, further comprising selecting a volume.

10. The method of claim **8**, further comprising establishing a broadband connection from the viewer appliance to the remotely located component.

11. The method of claim **10**, further comprising matching the command to a present context.

12. The method of claim **11**, further comprising matching the command to a current time when the command is received.

13. The method of claim **10**, further comprising determining a result of the command.

14. The method of claim **13**, further comprising determining an audio format.

15. The method of claim **8**, wherein receiving the command at the viewer appliance comprises receiving the command at a set-top box.

16. The method of claim **8**, further comprising choosing the content based upon the command.

17. A system, comprising:
a processor; and
memory storing instructions that when executed cause the processor to perform operations, the operations comprising:
receiving the content from a distribution network;
establishing communication with a remotely located component;
receiving a command entered during presentation of the content;
concurrently forwarding the command immediately upon receipt to the remotely located component for demographic profiling in response to the command being a channel change;
performing in parallel in response to determining the command is not the channel change:
concurrently forwarding the command immediately upon receipt to the remotely located component for the demographic profiling; and

executing the command to alter an aspect of the content during the presentation; and

sending an indication that the command has been executed, whereby local storage of the command in the memory is eliminated;

sending a request for an advertisement in an advertisement insertion slot;

receiving an indication of the advertisement selected based on the demographic profiling;

and causing the advertisement to be displayed in the advertisement insertion slot.

18. The system of claim **17**, wherein the operations further comprise determining a result of the command.

19. The system of claim **17**, wherein the operations further comprise storing a result of the command.

20. A method of capturing commands from a viewer that are related to viewing content, comprising:

receiving the content from a distribution network at a viewer appliance;

establishing communication from the viewer appliance to a remotely located component;

receiving a command at the viewer appliance entered by the a viewer;

concurrently forwarding the command immediately upon receipt to the remotely located component for demographic profiling in response to determining the command is a channel change; performing in parallel in response to determining the command is not the channel change:

immediately upon receipt concurrently forwarding the command from the viewer appliance to the remotely located component for the demographic profiling; and

executing the command; and

sending an indication that the command has been executed, whereby local storage of the command at the viewer appliance is eliminated;

sending a request for an advertisement in an advertisement insertion slot;

receiving an indication of the advertisement selected based on the demographic profiling;

and causing the advertisement to be displayed in the advertisement insertion slot.

21. The method of claim **20**, further comprising matching the command to a present context.

22. The method of claim **21**, further comprising determining a result of the command.

23. The method of claim **20**, further comprising targeting the advertisement to the command.

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