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(54) **METHOD AND SYSTEM TO DISTRIBUTE CONSUMER VIDEO OVER TELEVISION NETWORK**

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(57) **ABSTRACT**

A method and system for immediate distribution of a purchased consumer video includes an online video portal, which includes a video receiver and a video server. The video receiver connects to the online video merchant over a video distribution network and receives a consumer video from an online video merchant. The consumer video is purchased by a consumer from the online video merchant over a commerce network. The video receiver stores the consumer video in a consumer datastore. The video server connects to a television set of the consumer over a dedicated television channel of a television network. The video server retrieves the stored consumer video from the consumer datastore and sends the consumer video to a television set of the consumer over a dedicated television channel. The consumer video is distributed immediately after the consumer video is received from the online video merchant and stored in the consumer datastore.

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**H04N 7/173** (2011.01)

(52) **U.S. Cl.** ..... **725/91; 725/92; 725/93; 725/114; 725/115; 725/116**

(58) **Field of Classification Search** ..... **725/148, 725/119, 98, 91**

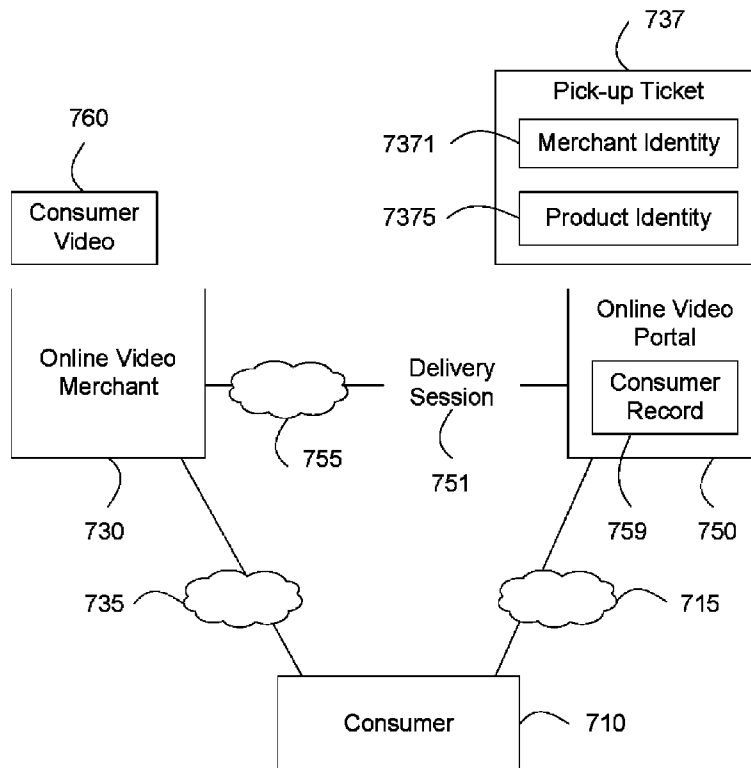
See application file for complete search history.

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**22 Claims, 8 Drawing Sheets**



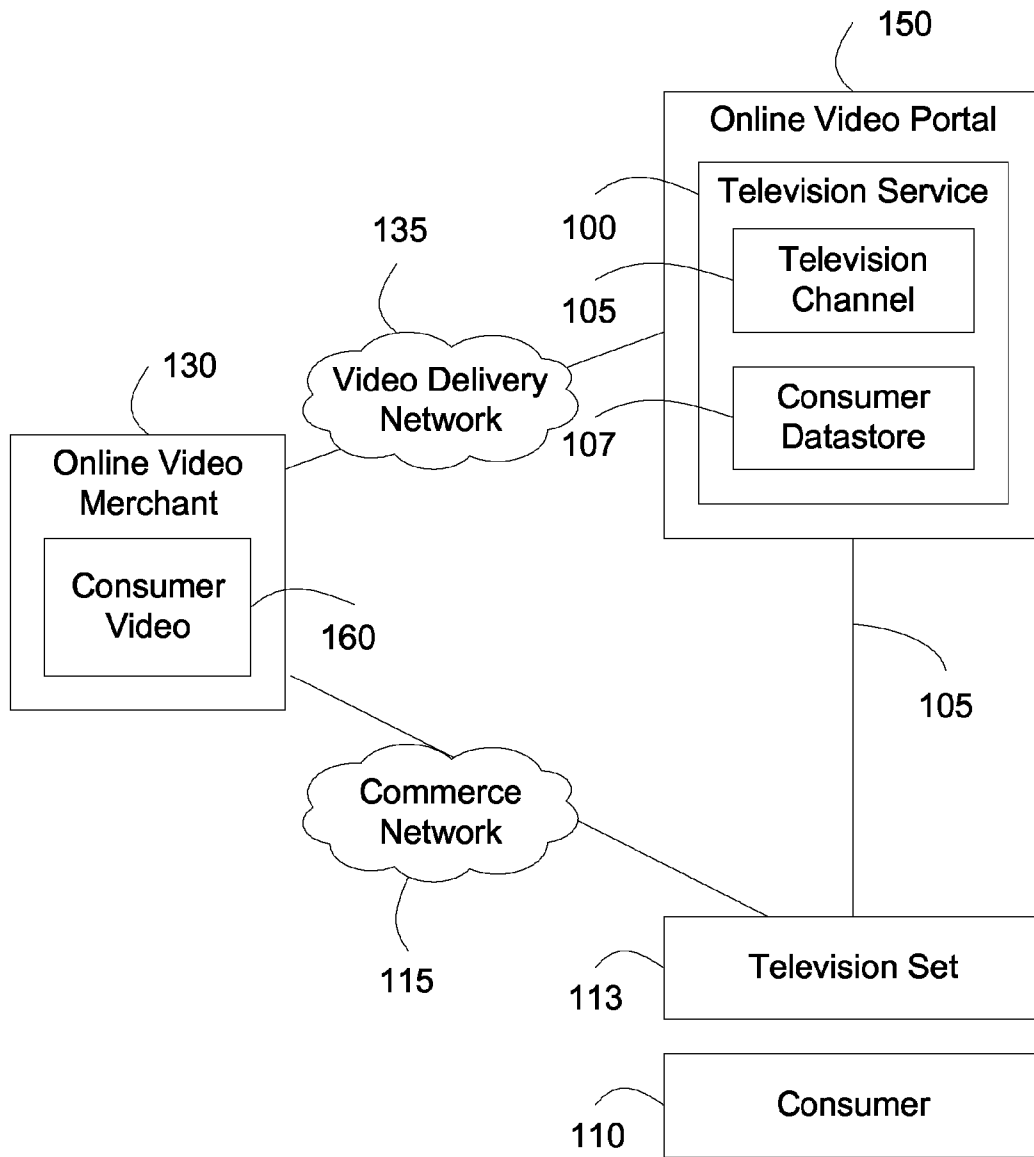


Figure 1

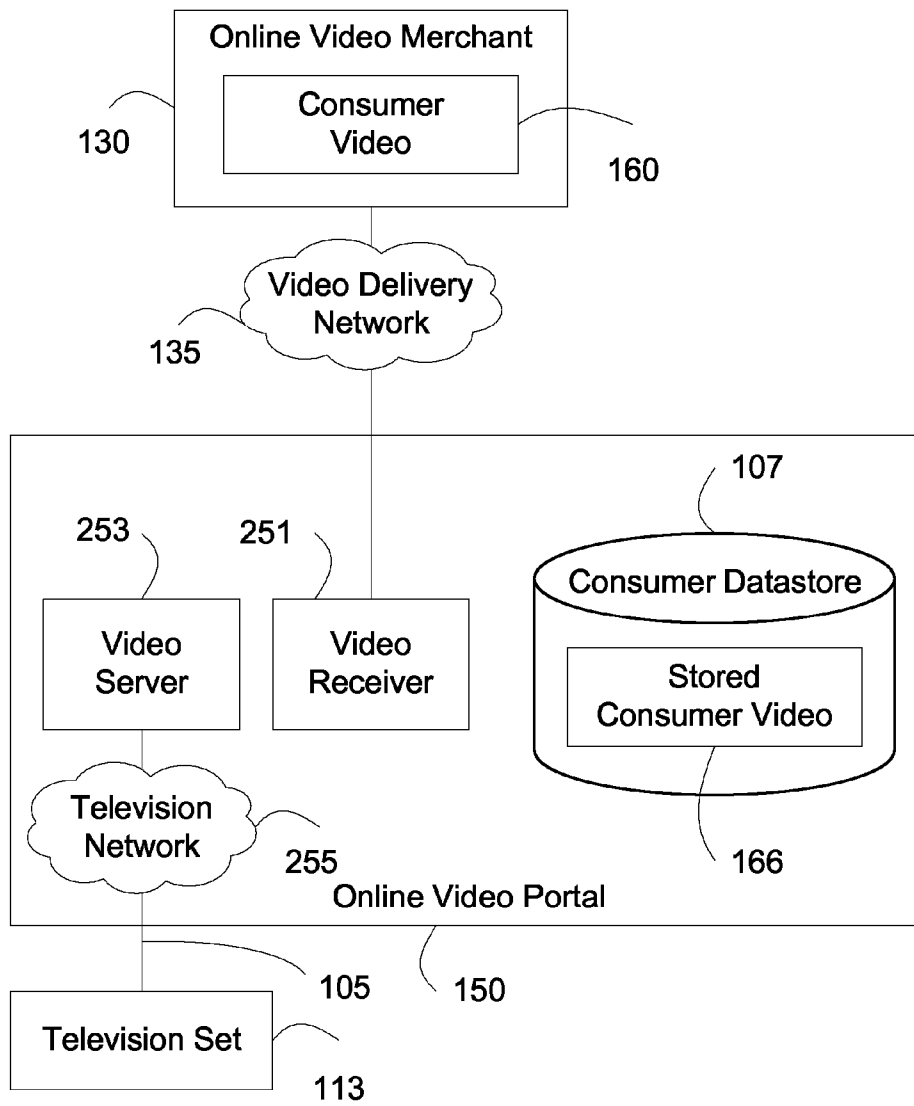


Figure 2

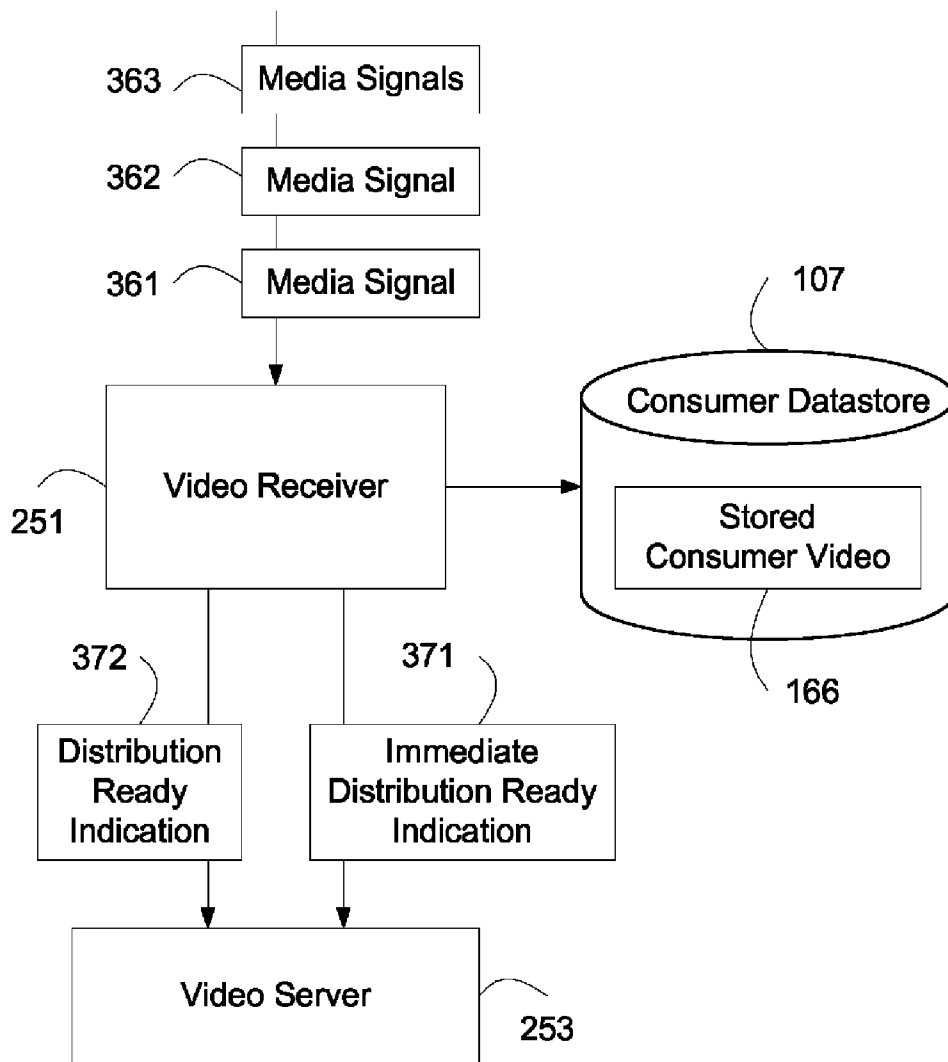


Figure 3

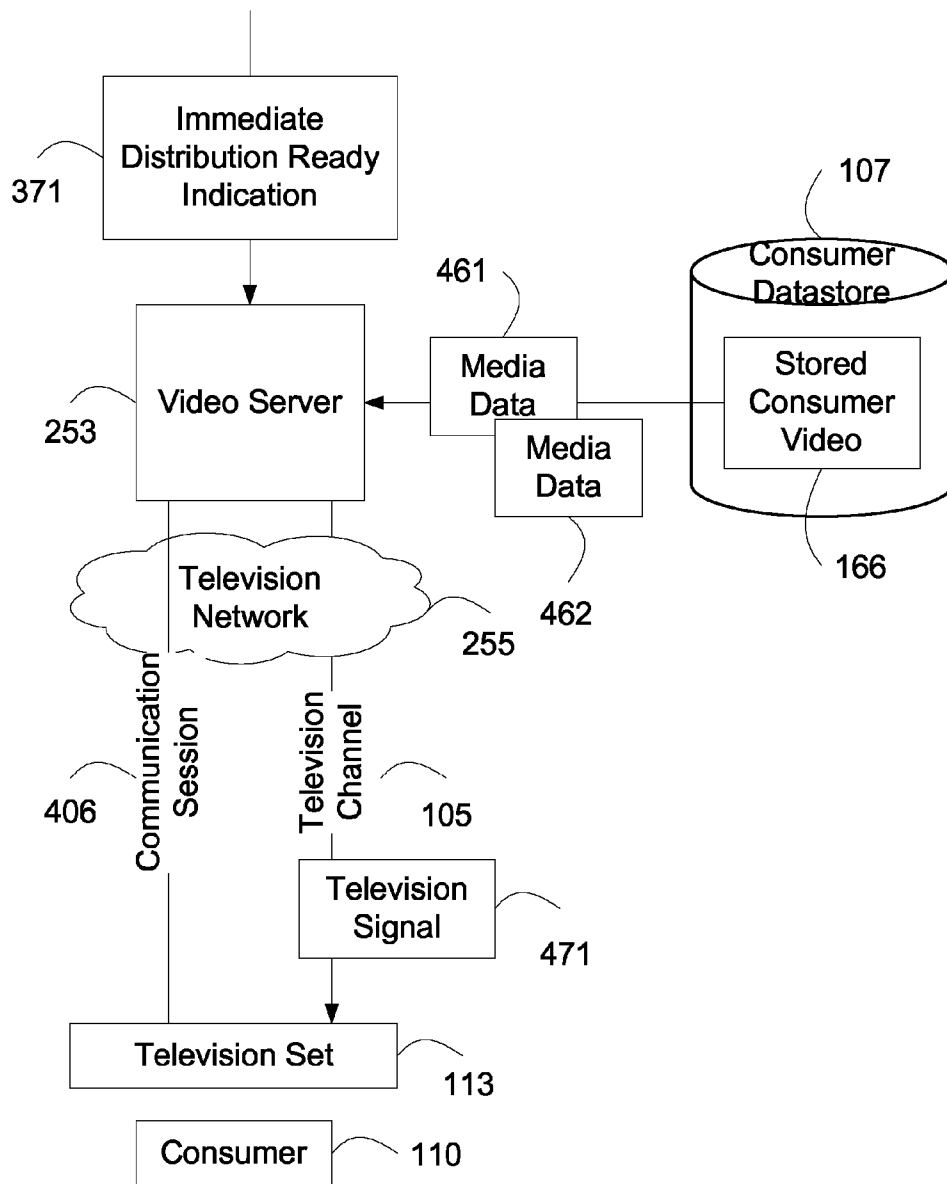


Figure 4

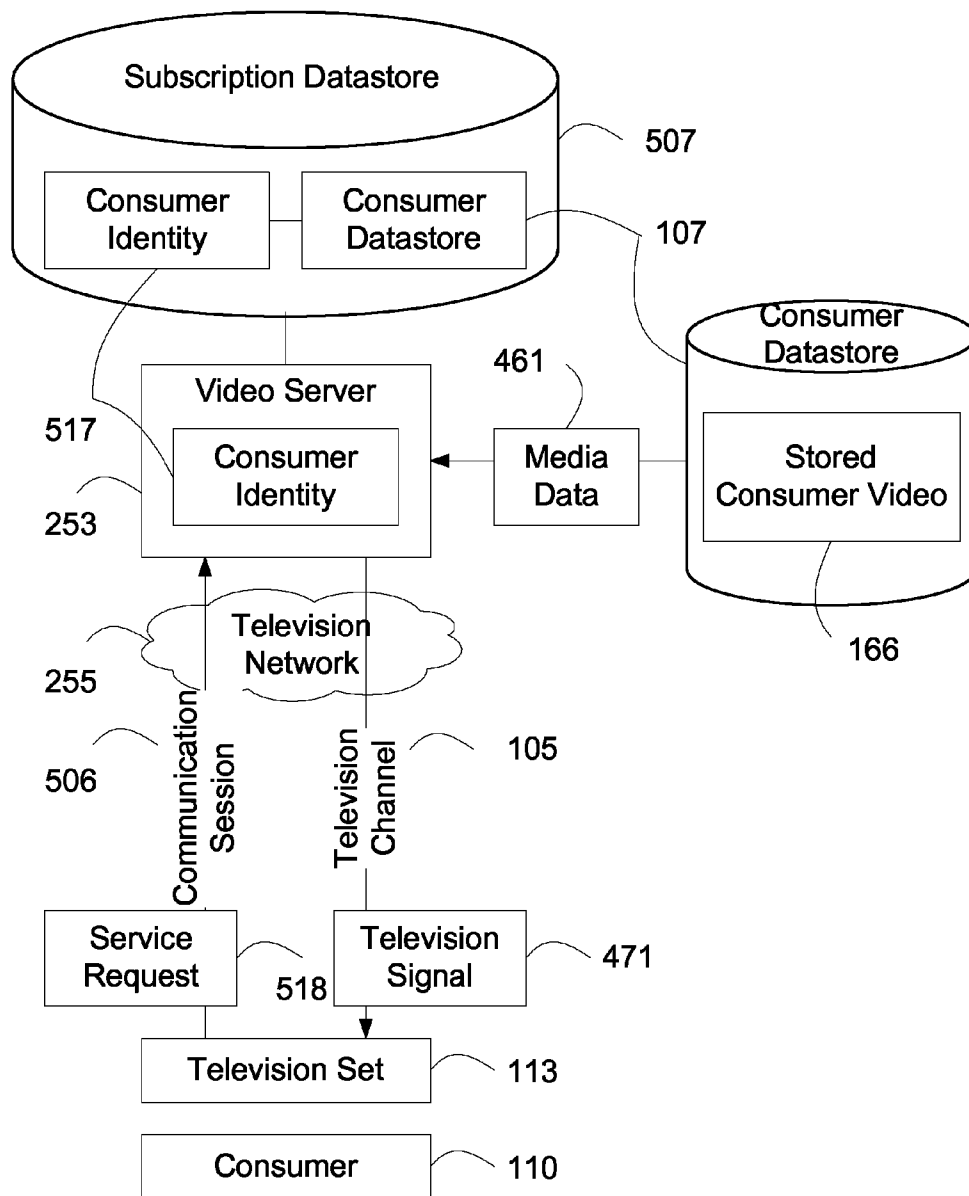


Figure 5

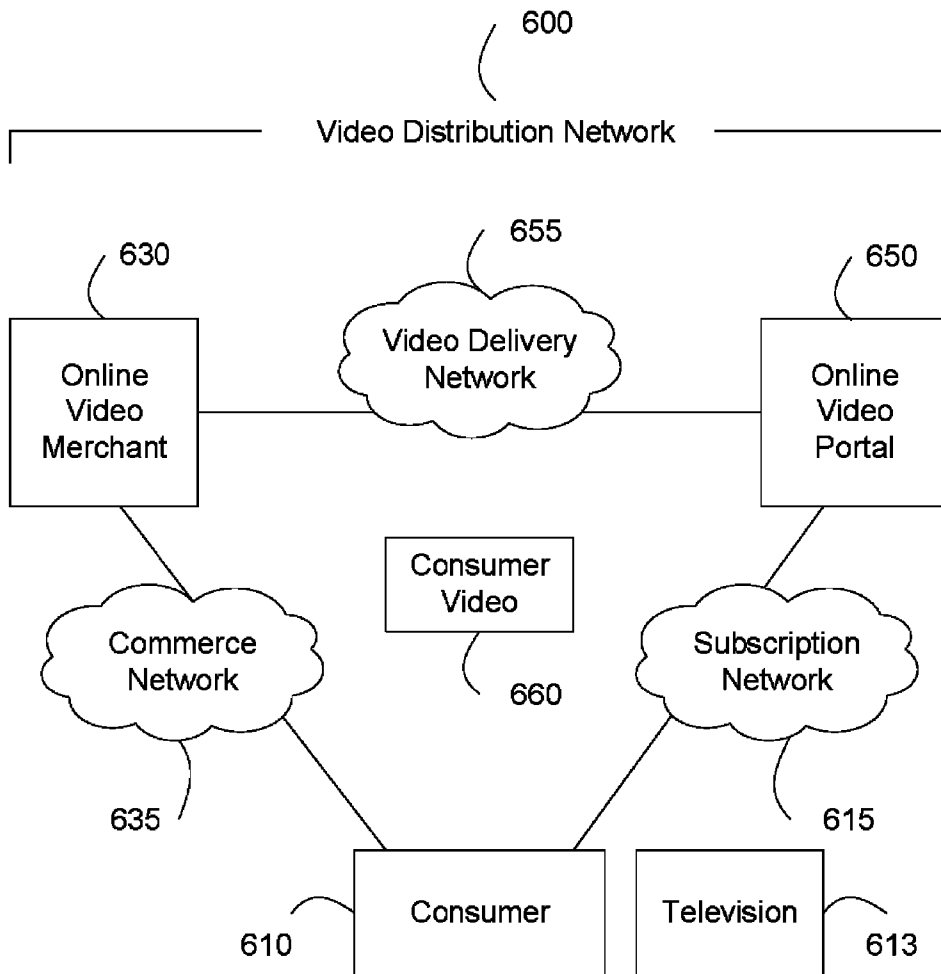


Figure 6

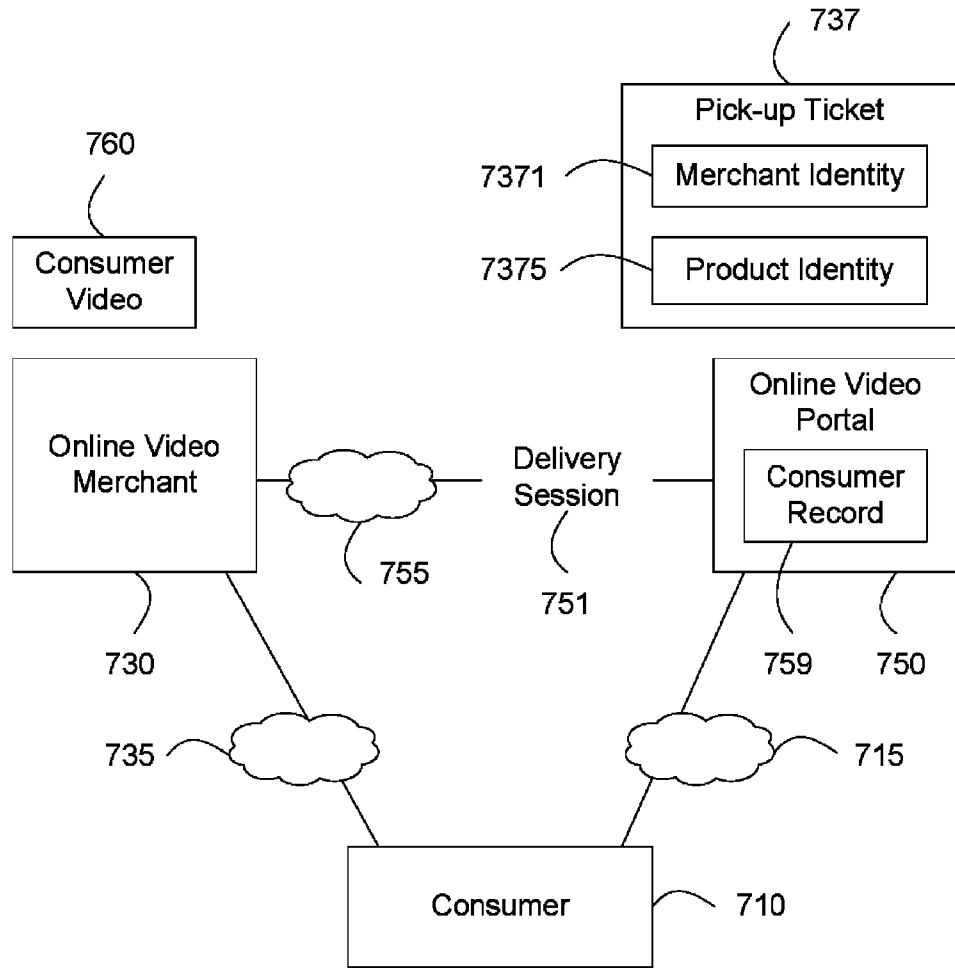


Figure 7



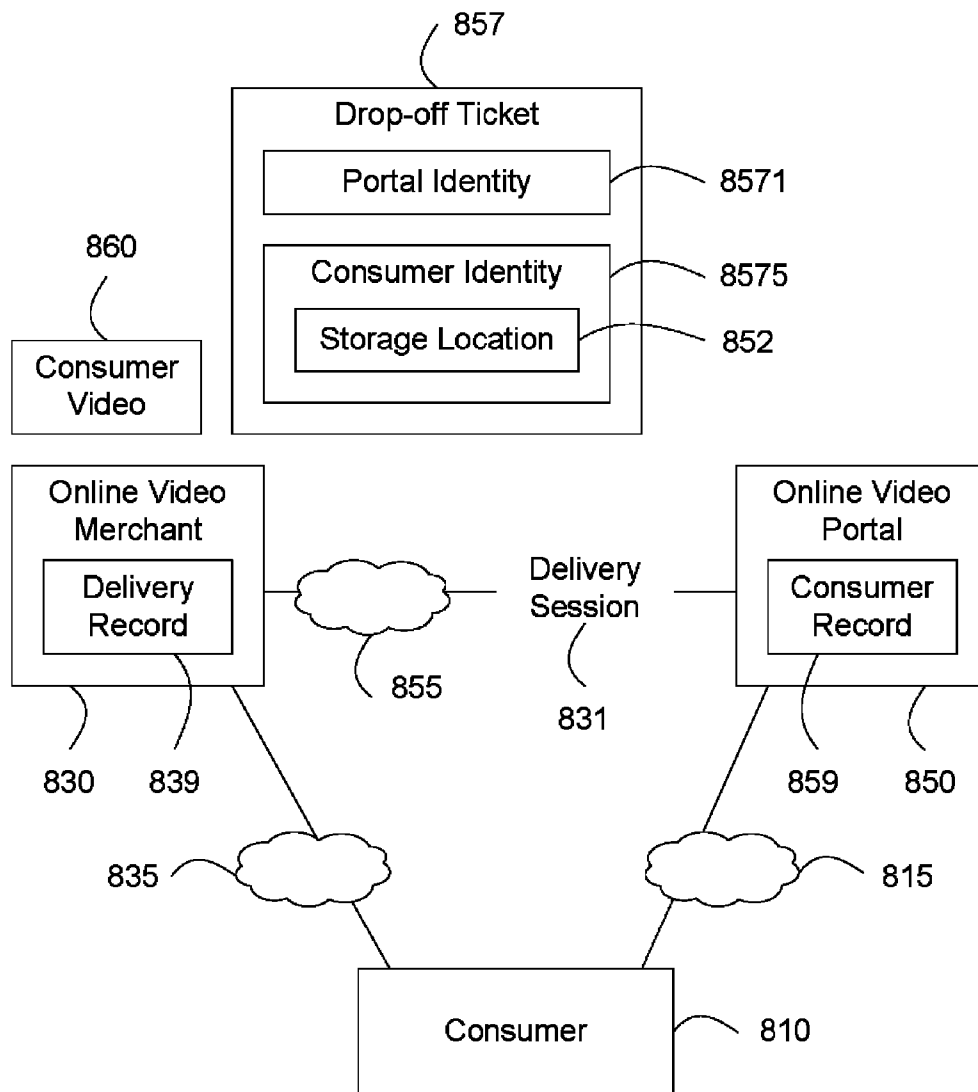


Figure 8

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# METHOD AND SYSTEM TO DISTRIBUTE CONSUMER VIDEO OVER TELEVISION NETWORK

## CROSS-REFERENCE TO RELATED APPLICATIONS

The application is related to co-pending U.S. patent application Ser. No. 11/743,558, filed on May 2, 2007.

## BACKGROUND

### 1. Field

This invention relates generally to television, particularly to a system and method to distribute purchased consumer video over a television network.

### 2. Related Art

Television set is often the centerpiece of a living room. With a good quality television set equipped with a DVD player, a consumer can enjoy home theatrical experience emulating that of a cinema. In addition to broadcast programs, the consumer can also enjoy pay-per-view and video-on-demand programs.

But nothing rivals the wide selection of purchased and rental movies, as evident by the continuous success they enjoy. With the advent of the Internet, many merchants are deploying innovative ways to deliver movies to enthusiasts. For example, NetFlix™ offers online movie rental and delivers the movies via postal service. Motivated by the success of online music download, some e-commerce merchants such as Walmart.com™, Amazon.com™ and iTunes™ are trotting out movie download purchase.

Online movie download from e-commerce merchants provides the convenience of not having to leave home. Unfortunately, the current solution does not allow the consumer to enjoy the movie immediately after a purchase. This is unacceptable in light of the fast-pace and on-the-go lifestyle of modern day living.

In one example, Iris buys the newly released “Dreamgirl” movie from an online e-commerce store. The movie is 142 minutes long and it takes almost 5 hours to download. After the download, Irish has to transfer the movie to a DVD disk or to her Apple™ TV so that she can play the movie on her television set. She is dismayed to find out that the whole process is so tedious and takes such a long time.

In one example, Tina and Mike decide to watch a movie after dinner at home. They check online movie merchant Amazon.com™ and select a movie they like. Unfortunately, they are told by Amazon.com™ to wait for 20 minutes before the movie can be shown. They cannot watch the movie on television right away.

In one more example, Greg enjoys watching streaming videos from the Internet. However, Greg finds the viewing experience for streaming videos at high resolution unacceptable with frequent delays, interruptions or choppiness of the picture.

The above illustrates a need for a system and method for immediate distribution of purchased consumer video over a television network to a television set.

## SUMMARY

A method and system for immediate distribution of a purchased consumer video includes an online video portal, which includes a video receiver and a video server. The video receiver connects to the online video merchant over a video distribution network and receives a consumer video from an

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online video merchant. The consumer video is purchased by a consumer from the online video merchant over a commerce network. The video receiver stores the consumer video in a consumer datastore. The video server connects to a television set of the consumer over a dedicated television channel of a television network. The video server retrieves the stored consumer video from the consumer datastore and sends the consumer video to a television set of the consumer over a dedicated television channel. The consumer video is distributed immediately after the consumer video is received from the online video merchant and stored in the consumer datastore.

## BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 illustrates a television service distributing a purchased consumer video for immediate viewing.

FIG. 2 illustrates an online video portal.

FIG. 3 illustrates a process for receiving a consumer video.

FIG. 4 illustrates a process to distribute a stored consumer video immediately.

FIG. 5 illustrates a process to distribute stored consumer video at a later time.

FIG. 6 illustrates an online video distribution network for consumer viewing.

FIG. 7 illustrates an online consumer video order delivery using a pick up ticket.

FIG. 8 illustrates a process to deliver an online consumer video order using a drop off ticket.

## DETAILED DESCRIPTION

FIG. 1 illustrates a television service distributing a purchased consumer video for immediate viewing.

Online video portal 150 offers a television service 100 to consumer 110. Consumer 110 purchases a consumer video 160 from an online video merchant 130. Television service 100 allows consumer 110 to store consumer video 160, to watch consumer video 160 immediately after the consumer video 160 purchase, and to watch consumer video 160 at a later time after the purchase. In a preferred embodiment, online video merchant 130 operates independently from online video portal 150. In one embodiment, online video merchant 130 is a different business entity from online video portal 150.

Television service 100 includes a dedicated television channel 105. Television service 100 distributes consumer video 160 over television channel 105. Consumer 110 has a television set 113. Consumer 110 tunes television set 113 to television channel 105 to view consumer video 160.

The dedicated television channel 105 does not include transmissions over the Internet. In one embodiment, television channel 105 is a cable television channel. In one embodiment, television channel 105 is a broadcast channel from a Direct Broadcast Satellite (DBS). In one embodiment, television channel 105 is a Internet Protocol Television (IPTV) channel.

In one embodiment, television set 113 includes a set top box. In one embodiment, television set 113 includes a satellite television receiver.

Consumer video 160 includes video and audio content. In one embodiment, consumer video 160 is a movie or a television program. In one embodiment, consumer video 160 is an animation, or a documentary. In one embodiment, consumer video 160 is an instructional video for health and fitness, cooking or tennis. In one embodiment, consumer video 160 is a short video clip. In one embodiment, consumer video 160 is a sport event or beauty pageant production. In one embodi-

ment, consumer video 160 is an opera or play performance. In one embodiment, consumer video 160 is a musical video, or an e-learning/training video. In one embodiment, consumer video 160 is encoded in Moving Pictures Expert Group v2.0 (MPEG-2) format. In one embodiment, consumer video 160 is encoded in MPEG-1 or MPEG-4 format. In one embodiment, consumer video 160 is included in a media container, such as Audio Video Interleave (AVI), Flash Video (FLV) or Quicktime MOV container.

Television service 100 distributes consumer video 160 at a digital television quality. In one embodiment, the digital television quality is Standard Definition Television (SDTV) quality, High Definition Television (HDTV) quality, or Enhanced Definition Television (EDTV) quality.

Television service 100 distributes consumer video 160 immediately so as to allow consumer 110 to watch consumer video 160 immediately after the consumer video 160 purchase. For example, consumer 110 begins watching 3 seconds, 5 seconds or 8 seconds after completing the purchase.

Television service 100 further allows consumer 110 to watch consumer video 160 at a later time after the purchase. For example, a week or an hour after the consumer video 160 purchase, consumer 110 tunes television set 113 to television channel 105, and watches consumer video 160.

Consumer 110 purchases consumer video 160 from online video merchant 130 over commerce network 115. As used herein, a purchase is understood to include renting, leasing, loaning and licensing consumer video 160 from online video merchant 130. In one embodiment, commerce network 115 includes the Internet; consumer 110 purchases consumer video 160 at an electronic commerce (e-commerce) portal operated by online video merchant 130. In one embodiment, television set 113 connects to commerce network 115; consumer 110 uses television set 113 to purchase consumer video 160 from online video merchant 130. In one embodiment, commerce network 115 includes a telephone network; consumer 110 purchases consumer video 160 over a telephone call to online video merchant 130.

Online video portal 150 receives consumer video 160 from online video merchant 130 over video delivery network 135. In one embodiment, video delivery network 135 is based on Internet Protocol (IP). In one embodiment, video delivery network 135 includes an enterprise data network, a virtual Private Network (VPN), or an Extranet. An embodiment of the video delivery network 135 is described in co-pending U.S. patent application entitled, "Method and System to Distribute Online Video", Ser. No. 11/743,558, filed on May 2, 2007. This application is hereby incorporated by reference in its entirety.

Television service 100 includes a consumer datastore 107 for storing consumer video 160. In one embodiment, consumer datastore 107 includes a hard disk with capacity of, for example, 100 gigabytes, 500 gigabytes or 1 terabytes. In one embodiment, consumer datastore 107 includes a database.

Online video portal 150 distributes consumer video 160 signals over television channel 105. Television set 113 tunes to television channel 105 to receive consumer video 160 signals.

FIG. 2 illustrates an online video portal.

Online video portal 150 includes video receiver 251. Video receiver 251 connects to online video merchant 130 over video delivery network 135. Video receiver 251 receives consumer video 160 from online video merchant 130 over video delivery network 135.

Online video portal 150 includes consumer datastore 107. Video receiver 251 stores consumer video 160 as stored consumer video 166 in consumer datastore 107. In one embodi-

ment, consumer video 160 and stored consumer video 166 have the same format. In one embodiment, consumer video 160 and stored consumer video 166 have different formats.

Online video portal 150 includes video server 253. Video server 253 connects to television network 255. Television network 255 includes television channel 105. Video server 253 distributes stored consumer video 166 onto television channel 105 over television network 255.

In one embodiment, video receiver 251 receives consumer video 160 at a speed faster than the speed video server 253 distributes stored consumer video 166.

In one embodiment, video server 253 connects to television network 255 over an Ethernet. In one embodiment, video server 253 connects to television network 255 over an optical data network.

Television network 255 connects to television set 113. In one embodiment, television network 255 includes a cable television network, or a satellite television network. In one embodiment, television network 255 includes an Internet Protocol television (IPTV) network. In one embodiment, television network 255 includes a multi-service operator (MSO) network. In one embodiment, television network 255 includes a direct broadcast satellite (DBS) network. In one embodiment, television network 255 is a private network operated by or for a hotel, a hospital, a vacation resort, a rehabilitation center or a cruise ship. In one embodiment, television network 255 is operated by or for a multi-tenant apartment complex, a business park, or a housing community. In one embodiment, television network 255 is operated by or for a corporation.

FIG. 6 illustrates an online video distribution network for consumer viewing. Online video distribution network 600 includes online video portal 650. Consumer 610 subscribes to online video portal 650. The subscription allows consumer 610 to access consumer video 660 over subscription network 615. Consumer video 660 belongs to consumer 610. The access includes viewing consumer video 660.

In one embodiment, subscription network 615 includes a cable television network. In one embodiment, subscription network 615 includes a satellite television network. In one embodiment, subscription 615 includes an Internet Protocol television (IPTV) network. In one embodiment, subscription network 615 includes a mobile television network based on, for example, MediaFlow, Digital Video Broadcasting-Handheld (DVB-H) or Digital Multimedia Broadcasting (DMB) technology. In one embodiment, subscription network 615 includes the Internet. In one embodiment, subscription network includes a telephone network. Consumer 610 views consumer video 660 using a television 613 connected to subscription network 615.

Consumer 610 orders consumer video 660 from online video merchant 630 over commerce network 635 and requests online video merchant 630 to deliver consumer video 660 to online video portal 650. In one embodiment, the order is for rental of consumer video 660. In another embodiment, the order is for purchase of consumer video 660.

In one embodiment, commerce network 635 includes the Internet; consumer 610 orders consumer video 660 at an electronic commerce (e-commerce) portal operated by online video merchant 630. In one embodiment, commerce network 635 includes a telephony network, such as Public Switched Telephone Network (PSTN), or a public Voice over IP (VoIP) telephone network. Consumer 610 orders consumer video 660 over a telephone call to online video merchant 630. Online video merchant 630 delivers consumer video 660 to online video portal 650 over video delivery network 655.

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FIG. 7 illustrates an online consumer video order delivery using a pick up ticket. Consumer 710 subscribes to online video portal 750. Online video portal 750 includes a consumer record 759 associated with consumer 710. Consumer 710 orders consumer video 760 from online video merchant 730 over commerce network 735 and requests online video merchant 730 to deliver consumer video 760 to online video portal 750.

Online video merchant 730 provides a pick-up ticket 737 to consumer 710 over commerce network 735. Pick-up ticket 737 includes merchant identity 7371 of online video merchant 730 and product identity 7375 of consumer video 760. Consumer 710 provides pick-up ticket 737 to online video portal 750 over subscription network 715. Online video portal 750 uses pick-up ticket 737 to pick up consumer video 760 for consumer 710.

In one embodiment, merchant identity 7371 includes a Web address or a Uniform Resource Locator (URL). Online video portal 750 connects to online video merchant 730 using the Web address. In one embodiment, merchant identity 7371 includes a name of online video merchant 730. Online video portal 750 obtains a Web address based on the name. In one embodiment, online video portal 750 obtains the Web address by matching the name against a lookup table, or by querying a database. In one embodiment, online video portal 750 and online video merchant 730 has an Extranet connection. Merchant identity 7371 includes information for connecting to online video merchant 730 via the Extranet. Online video portal 750 connects to online video merchant 730 via the Extranet.

In one embodiment, online video portal 750 establishes a delivery session 751 with online video merchant 730 over video delivery network 755. Online video portal 750 provides product identity 7375 to online video merchant 730 over delivery session 751. In one embodiment, product identity 7375 includes a Universal Product Code (UPC). In one embodiment, product identity 7375 includes an International Standard Audiovisual Number (ISAN). In one embodiment, product identity 7375 includes a merchandise number, a product tracking number or an inventory number. In one embodiment, product identity 7375 includes a title of consumer video 760. In one embodiment, product identity 7375 includes a product tracking number specific to online video merchant 730, such as Amazon Standard Identification Number (ASIN). In one embodiment, product identity 7375 is associated with an order transaction record for consumer video 760. In one embodiment, delivery session 751 includes an HTTP session; online video portal 750 provides product identity 7375 over the HTTP session.

Online video merchant 730 uses product identity 7375 to retrieve consumer video 760. Online video merchant 730 sends consumer video 760 to online video portal 750 over delivery session 751. In one embodiment, delivery session 751 includes a file transfer session wherein online video merchant 730 sends consumer video 760 over the file transfer session. In one embodiment, the file transfer session is based on File Transfer Protocol (FTP), FTP over Secure Shell (SSH), or FTP/SSL technology. In one embodiment, delivery session 751 includes an HTTP session wherein online video merchant 730 sends consumer video 760 as entity body over the HTTP session. In one embodiment, delivery session 751 is based on Web Service technology. In one embodiment, delivery session 751 is based on cXML, or e-business XML (ebXML) technology. Online video portal 750 receives consumer video 760 and stores consumer video 760 in consumer record 759.

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FIG. 8 illustrates a process to deliver an online consumer video order using a drop off ticket. Consumer 810 subscribes to online video portal 850. Online video portal 850 includes a consumer record 859 associated with consumer 810. Consumer 810 orders consumer video 860 from online video merchant 830 over commerce network 835 and requests online video merchant 830 to deliver consumer video 860 to online video portal 850.

Consumer 810 obtains a drop-off ticket 857 from online video portal 850 over subscription network 815. Drop-off ticket 857 includes portal identity 8571 of online video portal 850 and consumer identity 8575 of consumer 810. In one embodiment, consumer 810 specifies a storage location 852 wherein online video portal 850 includes storage location 852 in consumer identity 8575. In one embodiment, storage location 852 includes a folder name.

Consumer 810 provides drop-off ticket 857 to online video merchant 830 over commerce network 835. Online video merchant 830 stores drop-off ticket 857. In one embodiment, online video merchant 830 stores drop-off ticket 857 in a delivery record 839 associated with consumer video 860.

Online video merchant 830 uses delivery record 839 to drop off consumer video 860.

In one embodiment, portal identity 8571 includes a Web address or a Uniform Resource Locator (URL). Online video merchant 830 connects to online video portal 850 using the Web address. In one embodiment, portal identity 8571 includes a name of online video portal 850 and online video merchant 830 obtains a Web address based on the name. In one embodiment, online video merchant 830 obtains the Web address by matching the name against a lookup table, or by querying a database. In one embodiment, online video merchant 830 and online video portal 850 has an Extranet connection and portal identity 8571 includes information for connecting to online video portal 850 via the Extranet. Online video merchant 830 connects to online video portal 850 via the Extranet.

In one embodiment, online video merchant 830 establishes a delivery session 831 with online video portal 850 over video delivery network 855. Online video merchant 830 provides consumer identity 8575 to online video portal 850 over delivery session 831. In one embodiment, delivery session 831 includes an HTTP session; online video merchant 830 provides consumer identity 8575 over the HTTP session.

Online video merchant 830 sends consumer video 860 to online video portal 850 over delivery session 831. In one embodiment, delivery session 831 includes a file transfer session wherein online video merchant 830 sends consumer video 860 over the file transfer session. In one embodiment, the file transfer session is based on FTP/SSH, or FTP/SSL technology. In one embodiment, delivery session 831 is based on cXML, or E-Business XML (ebXML) technology. In one embodiment, delivery session 831 is based on Web Service technology.

Online video portal 850 receives consumer video 860 and consumer identity 8575. Online video portal 850 determines consumer record 859 based on consumer identity 8575. Online video portal 850 stores consumer video 860 in consumer record 859. In one embodiment, consumer identity 8575 includes storage location 852. Online video portal 850 stores consumer video 860 in storage location 852.

FIG. 3 illustrates a process for receiving a consumer video. Video receiver 251 receives consumer video 160 from online video merchant 130. Video receiver 251 stores consumer video 160 as stored consumer video 166 in consumer datastore 107. While video receiver 251 receives consumer video 160, video receiver 251 indicates that stored consumer

video 166 is ready to be distributed immediately. In one embodiment, video receiver 251 additionally indicates that stored consumer video 166 is ready to be distributed anytime.

In one embodiment, video receiver 251 receives consumer video 160 as a sequence of media signals. Video receiver 251 stores the received sequence of media signals as sequence of media data in stored consumer video 166. In one embodiment, stored consumer video 166 is stored in consumer datastore 107. Video receiver 251 receives a first media signal 361. Media signal 361 corresponds to a beginning portion of consumer video 160. In one embodiment, media signal 361 corresponds to the first 500 milliseconds, 1 second or 5 second of consumer video 160. In one embodiment, media signal 361 corresponds to the first 30, 100, or 200 MPEG-2 frames of consumer video 160. In one embodiment, media signal 361 is related to the difference in the receiving speed of video receiver 251 and the distributing speed of video server 253. In one embodiment, the receiving speed is 12 Mbps and the distributing speed is 12 Mbps. In one embodiment, media signal 361 corresponds to 5 seconds of consumer video 160.

In an embodiment, the receiving speed is faster than the distributing speed. Media signal 361 is related to the initial distributing buffering need of video server 253. In one embodiment, the initial distribution buffering need is 5 Kb. In one embodiment, the initial distribution buffering needs is 6 MPEG-4 frames. In one embodiment, media signal 361 is related to the initial buffering need for media codec conversion.

In another embodiment, receiving media signal 361 indicates a successful communication session establishment between video receiver 251 and online video merchant 130. In one embodiment, the successful communication session establishment includes authentication, sending and receiving speed negotiation, and media format negotiation.

In yet another embodiment, media signal 361 is related to a time duration where video server 253 inserts an advertisement. In one embodiment, video server 253 inserts a 30-second advertisement. In one embodiment, media signal 361 corresponds to 30 seconds of consumer video 160.

Video receiver 251 stores media signal 361 in stored consumer video 166. After video receiver 251 receives media signal 361, video receiver 251 indicates that stored consumer video 166 is ready for immediate distribution. In one embodiment, video receiver 251 sends an immediate distribution ready indication 371 to video server 253. In one embodiment, immediate distribution ready indication 371 includes the location of stored consumer video 166 in consumer datastore 107. In one embodiment, video receiver 251 stores immediate distribution ready indication 371 in stored consumer video 166.

Video receiver 251 receives a second media signal 362 after media signal 361. Media signal 362 corresponds to another portion of consumer video 160.

Video receiver 251 stores media signal 362 in stored consumer video 166. In one embodiment, after video receiver 251 receives second media signal 362, video receiver 251 indicates that stored consumer video 166 is ready to be distributed anytime. In one embodiment, video receiver 251 determines the stored consumer video 166 is ready to be distributed anytime when error or missing media data in the stored consumer video 166 is below a pre-determined threshold based on the desired display quality. In one example, the threshold is 0.01%, 0.2% or 1%. In one example, video receiver 251 determines after the stored consumer video 166 reaches 50% of consumer video 160. In one embodiment, video receiver 251 sends a distribution ready indication 372

to video server 253. In one embodiment, video receiver 251 stores distribution ready indication 372 in stored consumer video 166.

In one embodiment media signal 362 corresponds to the last portion of consumer video 160. In one embodiment, video receiver 251 receives the remaining media signals 363 of consumer video 160. Video receiver 251 stores media signals 363 in stored consumer video 166.

FIG. 4 illustrates a process to distribute a stored consumer video immediately.

Video server 253 receives immediate distribution ready indication 371 from video receiver 251. In one embodiment, video server 253 obtains the location of stored consumer video 166 from immediate distribution ready indication 371. Video server 253 then retrieves stored consumer video 166 and distributes stored consumer video 166 to television set 113 immediately. In one embodiment, the location includes a file system directory path, or a file system folder reference. In one embodiment, the location includes a Universal Resource Locator (URL). In one embodiment, the location includes a query key to a database.

Video server 253 retrieves a sequence of media data from stored consumer video 166. Video server 253 converts the sequence of media data to television signals and distributes television signals onto television channel 105 of television network 255. In one embodiment, video server 253 retrieves media data 461. Video server 253 converts media data 461 to television signal 471. In one embodiment, the conversion includes media codec conversion, such as conversion to MPEG-2 format. In one embodiment, the conversion includes amplitude modulation, frequency modulation, frequency division multiplexing, audio or video codec conversion, or other technologies known to the skill in the art. In one embodiment, television signal 471 is in National Television Standards Committee (NTSC) format. In one embodiment, television signal 471 is in Phase Alternation Line (PAL) format. In one embodiment, television signal 471 is in Advanced Television Systems Committee (ATSC) format.

In one embodiment, video server 253 transmits television signal 471 over a Quadrature Amplitude Modulation (QAM) channel to provide HDTV video quality. The QAM channel corresponds to television channel 105. In another embodiment, video server 253 transmits over a QAM sub-channel to provide SDTV video quality. In one embodiment, video server 253 transmits over a DBS frequency band that corresponds to television channel 105. In one embodiment, video server 253 transmits over an IPTV session.

After processing media data 461, video server 253 proceeds to retrieve next media data 462 from stored consumer video 166.

In one embodiment, video server 253 detects an error while retrieving media data 461. In one scenario, video receiver 251 has not received media signal 361 corresponding to media data 461 from online video merchant 130. In one scenario, video receiver 251 did not receive media signal 361. In another scenario, video receiver 251 detects an error in receiving media signal 361 and does not store media data 461 in stored consumer video 166.

In one embodiment, video server 253 performs error handling for the media data 461. In one embodiment, video server 253 transmits previously transmitted media data. In one embodiment, video server 253 transmits a previously transmitted MPEG-2 frame. In another embodiment, video server 253 transmits an MPEG-2 frame that represents a blue or a snow image. In an embodiment, video server 253 transmits an error-indication image.

In one embodiment, after handling the media data **461** error scenario, video server **253** retrieves next media data **462**.

In one embodiment, after completing the consumer video **160** purchase, consumer **110** tunes television set **113** to television channel **105**. Television set **113** receives television signal **471** from video server **253**. Television set **113** processes and displays television signal **471**.

In one embodiment, television set **113** automatically tunes to television channel **105**. In one embodiment, video server **253** establishes a communication session **406** with television set **113** over television network **255**. After receiving immediate distribution ready indication **371**, video server **253** instructs television set **113** to tune to television channel **105** over communication session **406**. In one embodiment, video server **253** instructs before distributing stored consumer video **166**. In one embodiment, video server **253** instructs 2 seconds, 3 seconds or 5 seconds after video server **253** after starting to distribute stored consumer video **166**.

In one embodiment, communication session **406** is based on Internet Protocol (IP). In one embodiment, communication session **406** is based on Web technologies. In one embodiment, communication session **406** is based on Remote Method Invocation (RMI) or other proprietary technologies.

FIG. 5 illustrates a process to distribute stored consumer video at a later time.

At some time after the consumer video **160** purchasing, such as an hour, 2 hours or 4 days later, consumer **110** instructs television set **113** to tune to television channel **105**.

Television set **113** establishes a communication session **506** with video server **253**, and sends a service request **518** to video server **253** over communication session **506**.

Video server **253** obtains consumer identity **517** from television set **113**. In one embodiment, service request **518** includes consumer identity **517**. In one embodiment, consumer identity **517** includes a device identity such as a serial number of television set **113**. In one embodiment, video server **253** authenticates consumer identity **517** by asking consumer **110** to enter a user name or a pin code.

Video server **253** locates consumer datastore **107** based on consumer identity **517**. In one embodiment, video server **253** connects to a subscription datastore **507**. Subscription datastore **507** includes consumer identity **517** associated with consumer datastore **107** location. Video server **253** matches consumer identity **517** against subscription datastore **507** and retrieves consumer datastore **107** location. Video server **253** accesses consumer datastore **107**.

Video server **253** access stored consumer video **166** in consumer datastore **107**. In one embodiment video server **253** determines that stored consumer video **166** is not ready to be distributed anytime based on distribution ready indication **372**. In one embodiment, stored consumer video **166** includes distribution ready indication **372** wherein distribution ready indication **372** does not indicate that stored consumer video **166** is ready to be distributed anytime. In one embodiment, video server **253** does not receive distribution ready indication **372** from video receiver **251**. In one embodiment, video server **253** informs consumer **110** that stored consumer video **166** is not ready for distribution anytime. In one embodiment, video server **253** displays a screen indicating that stored consumer video **166** is not available. In one embodiment, video server **253** displays a screen indicating that stored consumer video **166** will be available in a future time.

In one embodiment video server **253** determines that stored consumer video **166** is ready to be distributed anytime based on distribution ready indication **372**. In one embodiment, stored consumer video **166** includes distribution ready indication **372** wherein distribution ready indication **372** indi-

cates that stored consumer video **166** is ready to be distributed anytime. In one embodiment, video server **253** receives distribution ready indication **372** from video receiver **251**.

Video server **253** retrieve stored consumer video **166** from consumer datastore **107** and distributes stored consumer video **166** to television set **113**.

Video server **253** retrieves a sequence of media data in stored consumer video **166** and transmits the retrieved sequence of media data onto television channel **105** over television network **255**. In one embodiment, video server **253** retrieves media data **461**, and converts media data **461** into television signal **471**. Video server **253** transmits television signal **471** onto television channel **105**.

Television set **113** receives television signal **471** from television channel **105**. Television set **113** processes and displays television signal **471**.

Foregoing described embodiments of the invention are provided as illustrations and descriptions. They are not intended to limit the invention to precise form described. In particular, it is contemplated that functional implementation of invention described herein may be implemented equivalently in hardware, software, firmware, and/or other available functional components or building blocks, and that networks may be wired, wireless, or a combination of wired and wireless. Other variations and embodiments are possible in light of above teachings, and it is thus intended that the scope of invention not be limited by this Detailed Description, but rather by Claims following.

We claim:

1. A method for distributing a consumer video, comprising:

- (a) receiving a pick-up ticket for the consumer video by an online video portal from a consumer, the pick-up ticket having been sent to the consumer by an online video merchant from whom the consumer ordered the consumer video, the pick-up ticket comprising a merchant identity of the online video merchant and a product identity of the consumer video;
- (b) connecting to the online video merchant by the online video portal using the merchant identity in the pick-up ticket;
- (c) providing the product identity in the pick-up ticket to the online video merchant by the online video portal;
- (d) storing the consumer video associated with the product identity by the online video portal in a consumer datastore at the online video portal; and
- (e) distributing the stored consumer video by the online video portal to a television set of the consumer over a dedicated television channel, wherein the online video portal comprises a video receiver and a video server, wherein the distributing (e) comprises:
  - (e1) sending a distribution ready indication by the video receiver to the video server;
  - (e2) storing the distribution ready indication with the stored consumer video;
  - (e3) establishing a communication session between the video server and the television set over a television network and receiving by the video server over the communication session a service request from the television set for the stored consumer video;
  - (e4) obtaining a consumer identity by the video server from the television set;
  - (e5) locating by the video server the consumer datastore based on the consumer identity;
  - (e6) retrieving the stored consumer video from the consumer datastore by the video server;

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(e7) determining by the video server that the stored consumer video is ready to be distributed any time; and

(e8) distributing by the video server the stored consumer video to the television set over the dedicated television channel. 5

2. The method of claim 1, wherein the dedicated television channel comprises a cable television channel, a broadcast channel from a Direct Broadcast Satellite (DBS), or an Internet Protocol Television (IPTV) Channel. 10

3. The method of claim 1, wherein the storing (d) comprises:

(d1) receiving by the online video portal from the online video merchant the consumer video associated with the product identity as a sequence of media signals. 15

4. The method of claim 3, wherein the storing (d) further comprises:

(d1) storing by the online video portal the sequence of media signals as the stored consumer video.

5. The method of claim 1, wherein the stored consumer video is distributed to the television set of the consumer over the dedicated television channel by the online video portal immediately after the consumer video is stored in the consumer datastore by the online video portal. 20

6. The method of claim 5, wherein the distribution of the stored consumer video begins within 5 seconds of receiving the consumer video. 25

7. The method of claim 1, wherein the service request comprises the consumer identity.

8. The method of claim 1, wherein the video server authenticates the consumer identity received from the consumer. 30

9. The method of claim 1, wherein the locating (e5) comprises:

(e5i) connecting by the video server to a subscription datastore, the subscription datastore comprising consumer identities associated with consumer datastore locations; and 35

(e5ii) matching by the video server the consumer identity against the subscription datastore and retrieving the associated consumer datastore location. 40

10. The method of claim 1, wherein the receiving (a) comprises:

(a1) receiving the order for the consumer video and a request to deliver the consumer video to the online video portal by the online video merchant from the consumer; and 45

(a2) sending the pick-up ticket by the online video merchant to the consumer, the pick-up ticket comprising the merchant identity of the online video merchant and the product identity of the consumer video. 50

11. A system, comprising:  
an online video portal for:

receiving a pick-up ticket for a consumer video from a consumer, the pick-up ticket having been sent to the consumer by an online video merchant from whom the consumer ordered the consumer video and requested that the consumer video be delivered to the online video portal, the pick-up ticket comprising a merchant identity of the online video merchant and a product identity of the consumer video; 55

connecting to the online video merchant using the merchant identity in the pick-up ticket;  
providing the product identity in the pick-up ticket to the online video merchant; and

storing the consumer video in a consumer datastore at the online video portal, 65

wherein the online video portal comprises a video receiver;

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the consumer datastore comprising the stored consumer video; and

a video server for distributing the stored consumer video to a television set of the consumer over a dedicated television channel, wherein the video receiver sends a distribution ready indication to the video server,

wherein the distribution ready indication is stored with the stored consumer video,

wherein a communication session is established between the video server and the television set over a television network,

wherein the video server receives over the communication session a service request from the television set for the stored consumer video, obtains a consumer identity from the television set, locates the consumer datastore based on the consumer identity, retrieves the stored consumer video from the consumer datastore, determines that the stored consumer video is ready to be distributed any time, and distributes the stored consumer video to the television set over the dedicated television channel.

12. The system of claim 11, wherein the dedicated television channel is not the Internet.

13. The system of claim 12, wherein the dedicated television channel comprises a cable television channel, a broadcast channel from a Direct Broadcast Satellite (DBS), or an Internet Protocol Television (IPTV) Channel.

14. The system of claim 11, wherein the video receiver receives the consumer video as a sequence of media signals and stores the sequence of media signals as the stored consumer video.

15. The system of claim 11, wherein the video server distributes the stored consumer video to the television set of the consumer over the dedicated television channel immediately after the consumer video is received from the online video merchant by the video receiver and stored in the consumer datastore.

16. The system of claim 15, wherein the distribution of the stored consumer video begins within 5 seconds of receiving the consumer video.

17. The system of claim 11, wherein the service request comprises the consumer identity.

18. The system of claim 11, wherein the video server authenticates the consumer identity received from the consumer.

19. The system of claim 11, wherein the video server connects to a subscription datastore, the subscription datastore comprising consumer identities associated with consumer datastore locations, wherein the video server matches the consumer identity against the subscription datastore and retrieves the associated consumer datastore location.

20. The system of claim 11, wherein the system further comprises the online video merchant for receiving from the consumer the order for the consumer video and a request to deliver the consumer video to the online video portal, and for sending the pick-up ticket to the consumer, the pick-up ticket comprising the merchant identity of the online video merchant and the product identity of the consumer video.

21. A non-transitory computer readable medium with program instructions for distributing a consumer video, comprising instructions for:

(a) receiving a pick-up ticket for the consumer video by an online video portal from a consumer, the pick-up ticket having been sent to the consumer by an online video merchant from whom the consumer ordered the consumer video, the pick-up ticket comprising a merchant identity of the online video merchant and a product identity of the consumer video;

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- (b) connecting to the online video merchant by the online video portal using the merchant identity in the pick-up ticket;
- (c) providing the product identity in the pick-up ticket to the online video merchant by the online video portal; 5
- (d) storing the consumer video associated with the product identity by the online video portal in a consumer data-store at the online video portal; and
- (e) distributing the stored consumer video by the online video portal to a television set of the consumer over a dedicated television channel, wherein the online video portal comprises a video receiver and a video server, wherein the distributing (e) comprises: 10
  - (e1) sending a distribution ready indication by the video receiver to the video server; 15
  - (e2) storing the distribution ready indication with the stored consumer video;
  - (e3) establishing a communication session between the video server and the television set over a television network and receiving by the video server over the communication session a service request from the television set for the stored consumer video; 20
  - (e4) obtaining a consumer identity by the video server from the television set;

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- (e5) locating by the video server the consumer datastore based on the consumer identity;
  - (e6) retrieving the stored consumer video from the consumer datastore by the video server;
  - (e7) determining by the video server that the stored consumer video is ready to be distributed any time; and
  - (e8) distributing by the video server the stored consumer video to the television set over the dedicated television channel.
22. The medium of claim 21, wherein the receiving instruction 25
- (a) comprises instructions for:
    - (a1) receiving the order for the consumer video and a request to deliver the consumer video to the online video portal by the online video merchant from the consumer; and
    - (a2) sending the pick-up ticket by the online video merchant to the consumer, the pick-up ticket comprising the merchant identity of the online video merchant and the product identity of the consumer video.

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