



US008315916B1

(12) **United States Patent**
Ho et al.

(10) **Patent No.:** **US 8,315,916 B1**
(45) **Date of Patent:** ***Nov. 20, 2012**

(54) **METHOD AND SYSTEM TO DISTRIBUTE ONLINE VIDEO**

(75) Inventors: **Chi Fai Ho**, Palo Alto, CA (US); **Shin Cheung Simon Chiu**, Palo Alto, CA (US)

(73) Assignee: **TP Lab, Inc.**, Palo Alto, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **13/211,294**

(22) Filed: **Aug. 16, 2011**

Related U.S. Application Data

(62) Division of application No. 11/743,558, filed on May 2, 2007, now Pat. No. 8,032,421.

(51) **Int. Cl.**
G06Q 30/00 (2012.01)

(52) **U.S. Cl.** **705/26.1; 705/51; 725/92**

(58) **Field of Classification Search** **705/26.1, 705/51; 725/92**

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2002/0069420 A1* 6/2002 Russell et al. 725/92
2004/0111373 A1* 6/2004 Iga 705/51
2008/0228600 A1* 9/2008 Treyz et al. 705/27

* cited by examiner

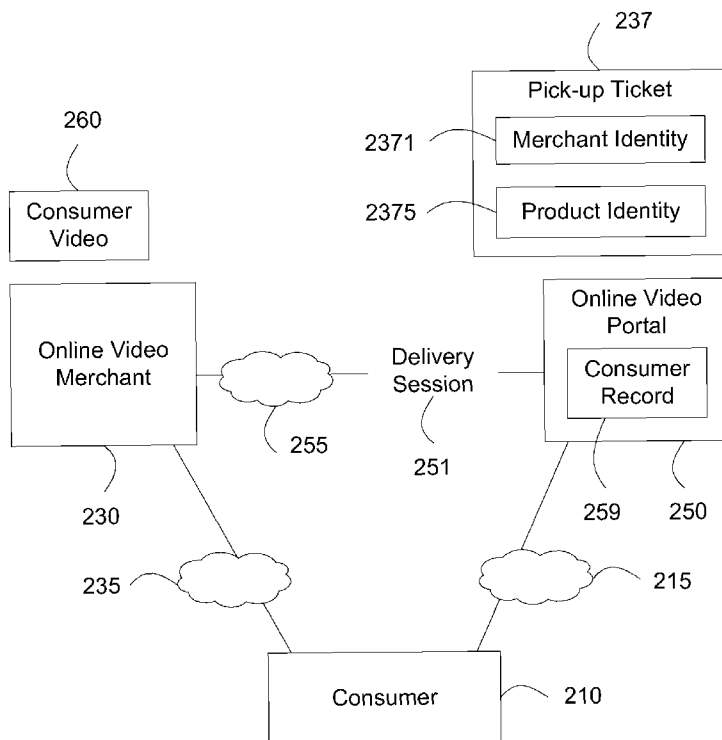
Primary Examiner — Yogesh C Garg

(74) *Attorney, Agent, or Firm* — North Shore Patents, P.C.; Michele Liu Baillie

(57) **ABSTRACT**

An online video distribution network includes an online video portal and an online video merchant. In one embodiment, when the consumer orders a video, the merchant provides a pick-up ticket to the consumer. The portal uses the merchant identity in the pick-up ticket to connect to the merchant, and the merchant uses a product identity in the pick-up ticket to retrieve and send the video to the portal. In another embodiment, the portal provides the consumer with a drop-off ticket, which is provided to the merchant. The merchant connects to the portal using the portal identity in the drop-off ticket, and sends the video and a customer identity in the drop-off ticket to the portal. The portal determines a consumer record associated with the consumer identity and stores the video in the consumer record. The consumer can then easily access the video at the portal.

6 Claims, 3 Drawing Sheets



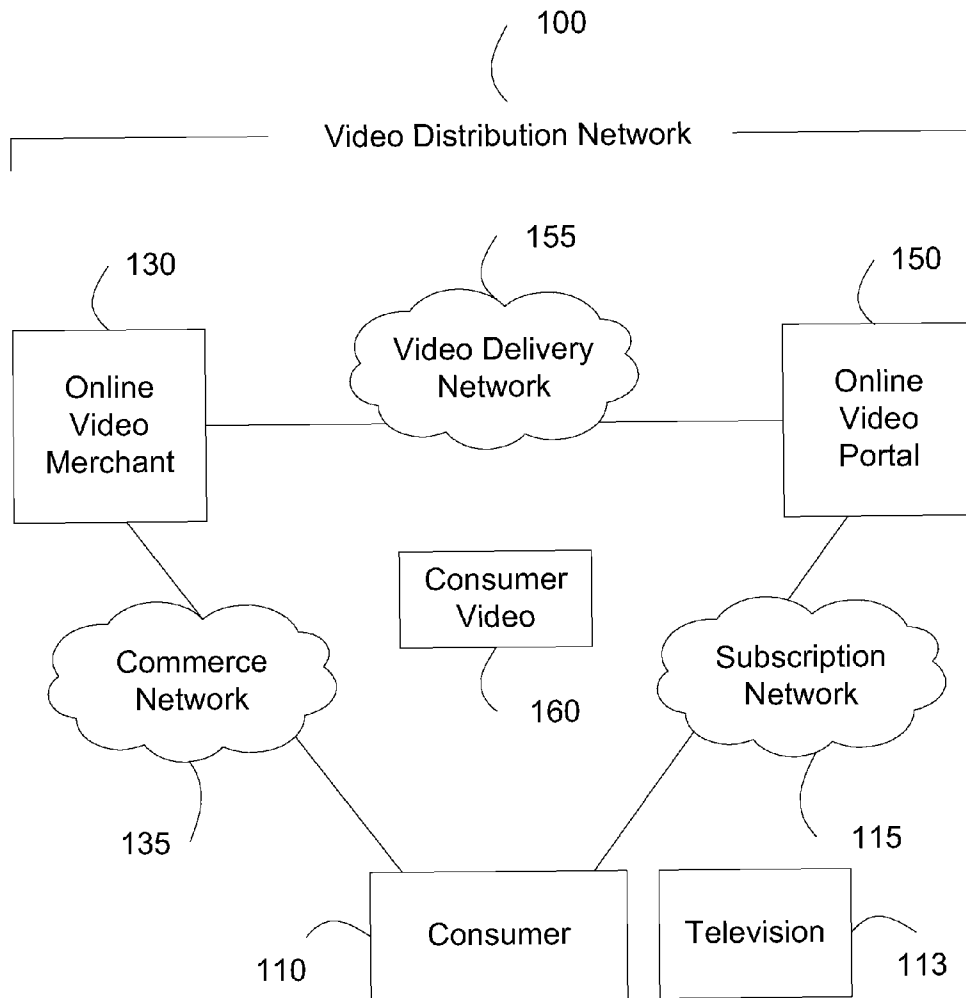


Figure 1

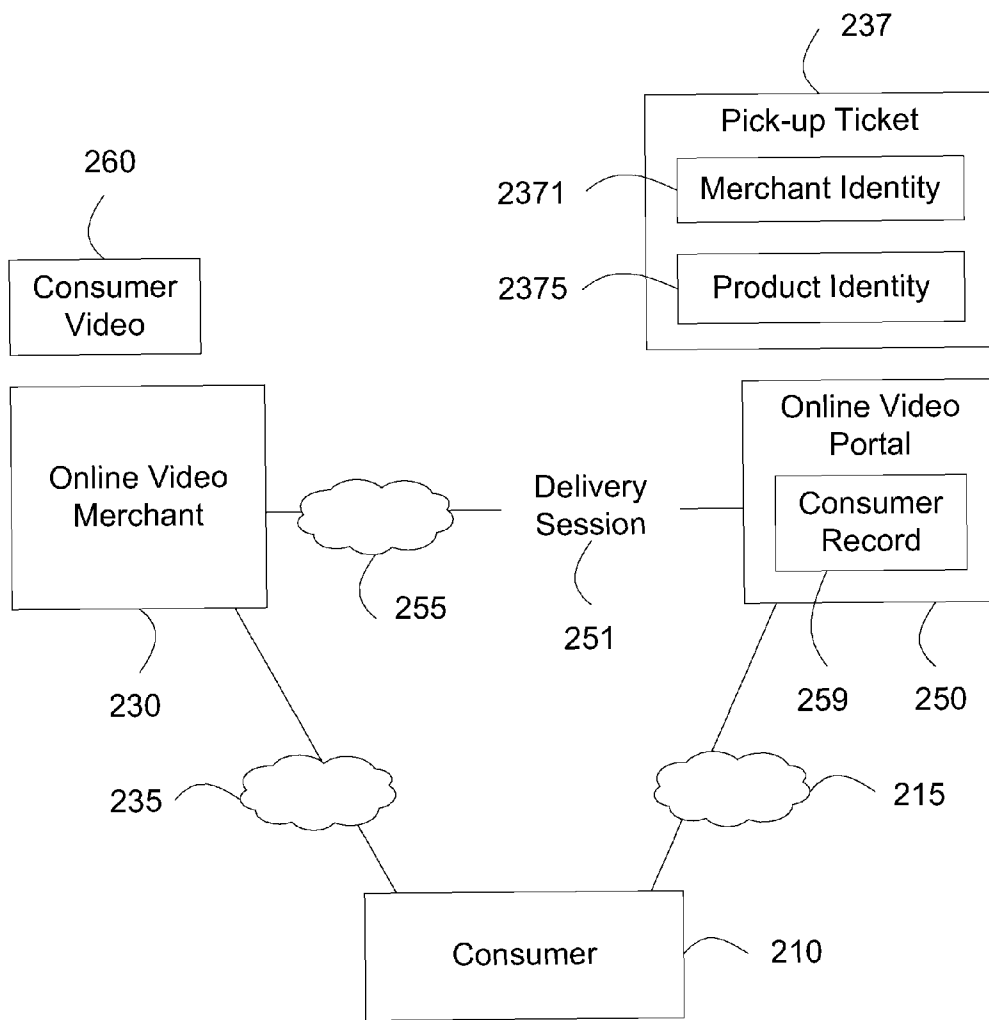


Figure 2

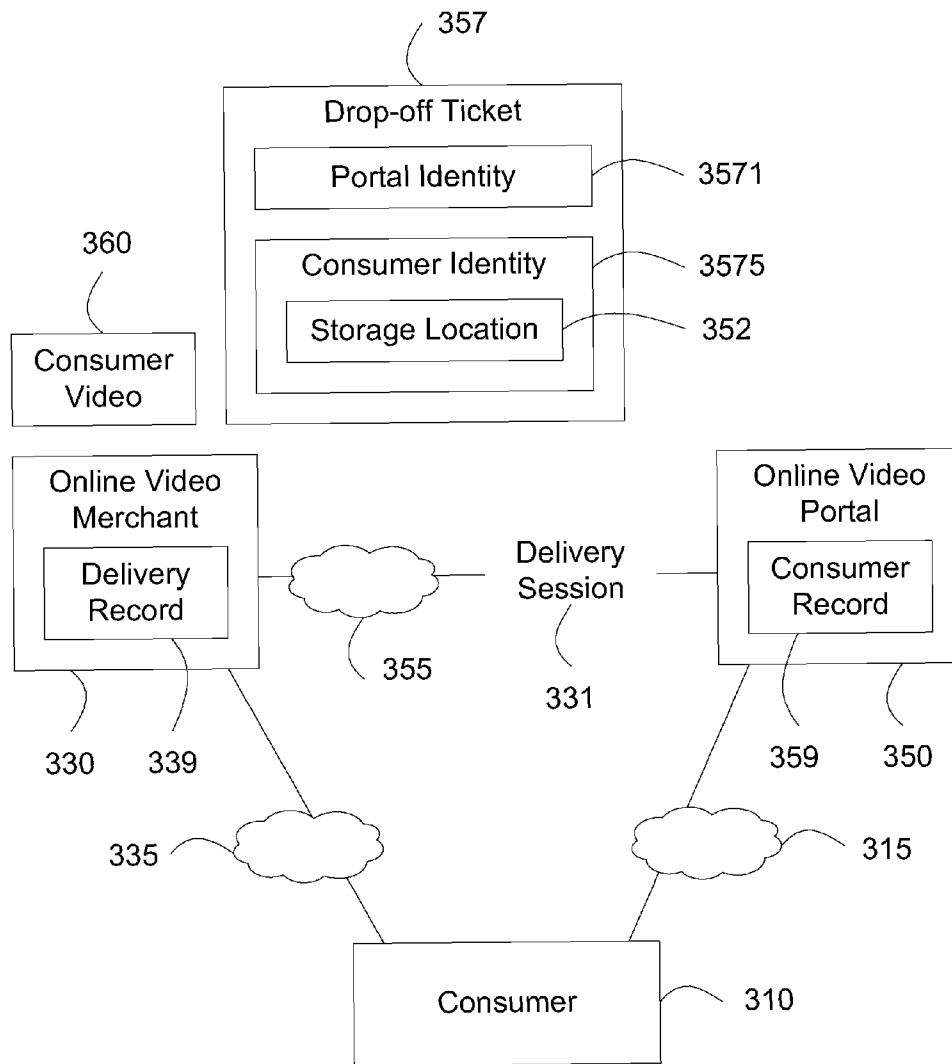


Figure 3

1

METHOD AND SYSTEM TO DISTRIBUTE ONLINE VIDEO

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a divisional of co-pending U.S. patent application Ser. No. 11/743,558, entitled "Method and System to Distribute Online Video", filed on May 2, 2007.

BACKGROUND OF THE INVENTION

1. Field

This invention relates generally to media, particularly to a system and method to distribute online video.

2. Related Arts

Watching movies is an entertainment of choice for most people. With a good quality television set equipped with a VCR or DVD player, people can enjoy home theatre experience rivaling that of a cinema, all in the comfort of a living room.

People used to buy or rent movies from local merchants. 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, e-commerce merchants such as Walmart.com, Amazon.com and iTunes are trotting out movie download purchase as well.

At the same time, storing personal media content, such as videos and photos, in the Internet has become popular, particularly among the young generation. Internet portals offer storage for this purpose. This allows easy access of personal media content, such as viewing from different locations or sharing with friends.

In one example, a college student Keith stores his videos in YouTube so that he can access his collection when he is in school, and when he visits his parents across town during weekends. He purchases a movie from Walmart.com and wants to store his videos in YouTube. Keith finds the upload procedure inconvenient and slow, taking over 3 hours to complete.

In another example, Bret rents a movie from an online merchant. He plans to watch the movie in his girlfriend's apartment after work. After downloading the movie from the online merchant, Bret has to copy the movie to a DVD disc so that he can bring it along. Bret wishes there is a convenient way for the merchant to deliver the movie to his online media storage so they can watch the movie from her apartment.

In one more example, Roger downloads a movie he just purchased to his hard-drive based digital video recorder. The recorder is connected to the big screen television in the family room. There is no easy way for Roger to watch the movie from his bedroom.

The above illustrates a need for a system and method to distribute online video for easy personal access.

BRIEF SUMMARY OF THE INVENTION

An online video distribution network includes an online video portal and an online video merchant. In one embodiment, when the consumer orders a video, the merchant provides a pick-up ticket to the consumer. The portal uses the merchant identity in the pick-up ticket to connect to the merchant, and the merchant uses a product identity in the pick-up ticket to retrieve and send the video to the portal. In another embodiment, the portal provides the consumer with a drop-

2

off ticket, which is provided to the merchant. The merchant connects to the portal using the portal identity in the drop-off ticket, and sends the video and a customer identity in the drop-off ticket to the portal. The portal determines a consumer record associated with the consumer identity and stores the video in the consumer record. The consumer can then easily access the video at the portal.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE FIGURES

FIG. 1 illustrates an online video distribution network for consumer viewing.

FIG. 2 illustrates an online consumer video order delivery using a pick up ticket.

FIG. 3 illustrates a process to deliver an online consumer video order using a drop off ticket.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 illustrates an online video distribution network for consumer viewing.

Online video distribution network **100** includes online video portal **150**. Consumer **110** subscribes to online video portal **150**. The subscription allows consumer **110** to access consumer video **160** over subscription network **115**. Consumer video **160** belongs to consumer **110**. The access includes viewing consumer video **160**.

In one embodiment, consumer video **160** is a movie. In one embodiment, consumer video **160** is an animation, television series 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 embodiment, consumer video **160** is an opera or play performance.

In one embodiment, subscription network **115** includes a cable television network. In one embodiment, subscription network **115** includes a satellite television network. In one embodiment, subscription **115** includes an Internet Protocol television (IPTV) network. In one embodiment, subscription network **115** 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 **115** includes the Internet. In one embodiment, subscription network includes a telephone network.

Consumer **110** views consumer video **160** using a television **113** connected to subscription network **115**. In one embodiment, television **113** includes a set top box. In one embodiment, television **113** includes a mobile phone, or a personal media player.

Online video distribution network **100** includes online video merchant **130**. Consumer **110** orders consumer video **160** from online video merchant **130** over commerce network **135** and requests online video merchant **130** to deliver consumer video **160** to online video portal **150**. In one embodiment, the order is for rental of consumer video **160**. In another embodiment, the order is for purchase of consumer video **160**.

In one embodiment, commerce network **135** includes the Internet; consumer **110** orders consumer video **160** at an electronic commerce (e-commerce) portal operated by online video merchant **130**. In one embodiment, commerce network **135** includes a telephony network, such as Public Switched Telephone Network (PSTN), or a public Voice over IP (VoIP)

telephone network. Consumer **110** orders consumer video **160** over a telephone call to online video merchant **130**.

Online video merchant **130** delivers consumer video **160** to online video portal **150** over video delivery network **155**. Online video portal **150** stores consumer video **160** for consumer **110**. In one embodiment, video delivery network **155** is based on Internet Protocol (IP). In one embodiment, video delivery network **155** includes an enterprise data network. In one embodiment, video delivery network **155** includes a Virtual Private Network (VPN). In one embodiment, video delivery network **155** includes an Extranet.

FIG. 2 illustrates an online consumer video order delivery using a pick up ticket.

Consumer **210** subscribes to online video portal **250**. Online video portal **250** includes a consumer record **259** associated with consumer **210**. Consumer **210** orders consumer video **260** from online video merchant **230** over commerce network **235** and requests online video merchant **230** to deliver consumer video **260** to online video portal **250**.

Online video merchant **230** provides a pick-up ticket **237** to consumer **210** over commerce network **235**. Pick-up ticket **237** includes merchant identity **2371** of online video merchant **230** and product identity **2375** of consumer video **260**.

Consumer **210** provides pick-up ticket **237** to online video portal **250** over subscription network **215**.

In one embodiment, consumer **210** provides pick-up ticket **237** using a proprietary technology based on, for example, Remote Method Invocation (RMI). In one embodiment, consumer **210** provides pick-up ticket **237** using a Web service. In one embodiment, consumer **210** provides pick-up ticket **237** using Hypertext Transfer Protocol (HTTP). In one embodiment, consumer **210** provides pick-up ticket **237** over a telephone call to online video portal **250**. Online video portal **250** stores pick-up ticket **237** in consumer record **259**.

Online video portal **250** uses pick-up ticket **237** to pick up consumer video **260** for consumer **210**.

In one embodiment, merchant identity **2371** includes a Web address or a Uniform Resource Locator (URL). Online video portal **250** connects to online video merchant **230** using the Web address. In one embodiment, merchant identity **2371** includes a name of online video merchant **230**. Online video portal **250** obtains a Web address based on the name. In one embodiment, online video portal **250** obtains the Web address by matching the name against a lookup table, or by querying a database. In one embodiment, online video portal **250** and online video merchant **230** has an Extranet connection. Merchant identity **2371** includes information for connecting to online video merchant **230** via the Extranet. Online video portal **250** connects to online video merchant **230** via the Extranet.

In one embodiment, online video portal **250** establishes a delivery session **251** with online video merchant **230** over video delivery network **255**. Online video portal **250** provides product identity **2375** to online video merchant **230** over delivery session **251**. In one embodiment, product identity **2375** includes a Universal Product Code (UPC). In one embodiment, product identity **2375** includes an International Standard Audiovisual Number (ISAN). In one embodiment, product identity **2375** includes a merchandise number, a product tracking number or an inventory number. In one embodiment, product identity **2375** includes a title of consumer video **260**. In one embodiment, product identity **2375** includes a product tracking number specific to online video merchant **230**, such as Amazon Standard Identification Number (ASIN). In one embodiment, product identity **2375** is associated with an order transaction record for consumer video **260**. In one embodiment, delivery session **251** includes

an HTTP session; online video portal **250** provides product identity **2375** over the HTTP session.

Online video merchant **230** uses product identity **2375** to retrieve consumer video **260**. Online video merchant **230** sends consumer video **260** to online video portal **250** over delivery session **251**. In one embodiment, delivery session **251** includes a file transfer session wherein online video merchant **230** sends consumer video **260** 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 **251** includes an HTTP session wherein online video merchant **230** sends consumer video **260** as entity body over the HTTP session. In one embodiment, delivery session **251** is based on Web Service technology. In one embodiment, delivery session **251** is based on cXML, or e-business XML (ebXML) technology.

In a different embodiment, merchant identity **2371** includes a street address. Online video portal **250** goes to the street address and presents product identity **2375** to online video merchant **230**. Online video merchant **230** puts consumer video **260** in a physical digital media such as a DVD, a Blu-Ray (BR) optical disc, or a hard disk. Online video merchant **230** gives the physical digital media to online video portal **250**. In one embodiment, online video portal **250** uses a courier service to pick up consumer video **260** at the street address.

Online video portal **250** receives consumer video **260** and stores consumer video **260** in consumer record **259**.

Online video portal **250** notifies consumer **210** after receiving consumer video **260**.

In one embodiment, consumer record **259** includes contact information for consumer **210**, such as an email address or a telephone number. In one embodiment, online video portal **250** sends a notification email to the email address. In another embodiment, online video portal **250** notifies consumer **210** over a telephone call. In one embodiment, online video portal **250** notifies consumer **210** using a Short Message Service (SMS). In one embodiment, online video portal **250** presents an alert message the next time consumer **210** accesses online video portal **250** over subscription network **215**.

In one embodiment, online video merchant **230** notifies consumer **210** after sending consumer video **260**. In one embodiment, online video merchant **230** retrieves the order transaction record associated with product identity **2375**. The order transaction record includes contact information for consumer **210** such as an email address or a telephone number. Online video merchant **230** notifies consumer **210** using the contact information.

In one embodiment, consumer **210** specifies a storage location when providing pick-up ticket **237** to online video portal **250**. In one embodiment, the storage location includes a folder name. Online video portal **250** stores the storage location in consumer record **259** along with pick-up ticket **237**. After receiving consumer video **260**, online video portal **250** stores consumer video **260** in the storage location.

In one embodiment, online video portal **250** picks up consumer video **260** immediately after receiving pick-up ticket **237**. In one embodiment, online video portal **250** picks up consumer video **260** at a scheduled time. In one embodiment, the scheduled time is included in pick-up ticket **237**. In one embodiment, online video portal **250** schedules pick up at every hour at the hour, every other hour, or after 6:00 pm. In one embodiment, online video portal **250** schedules bulk pick up for a plurality of consumer videos including consumer video **260**.

5

In one embodiment, merchant identity **2371** includes a key. Online video merchant **230** validates the key before sending consumer video **260**. In one embodiment, product identity **2375** includes a key. Online video merchant **230** validates the key before sending consumer video **260**.

FIG. 3 illustrates a process to deliver an online consumer video order using a drop off ticket.

Consumer **310** subscribes to online video portal **350**. Online video portal **350** includes a consumer record **359** associated with consumer **310**. Consumer **310** orders consumer video **360** from online video merchant **330** over commerce network **335** and requests online video merchant **330** to deliver consumer video **360** to online video portal **350**.

Consumer **310** obtains a drop-off ticket **357** from online video portal **350** over subscription network **315**. Drop-off ticket **357** includes portal identity **3571** of online video portal **350** and consumer identity **3575** of consumer **310**. In one embodiment, consumer **310** specifies a storage location **352** wherein online video portal **350** includes storage location **352** in consumer identity **3575**. In one embodiment, storage location **352** includes a folder name.

Consumer **310** provides drop-off ticket **357** to online video merchant **330** over commerce network **335**. Online video merchant **330** stores drop-off ticket **357**. In one embodiment, online video merchant **330** stores drop-off ticket **357** in a delivery record **339** associated with consumer video **360**.

Online video merchant **330** uses delivery record **339** to drop off consumer video **360**.

In one embodiment, portal identity **3571** includes a Web address or a Uniform Resource Locator (URL). Online video merchant **330** connects to online video portal **350** using the Web address. In one embodiment, portal identity **3571** includes a name of online video portal **350** and online video merchant **330** obtains a Web address based on the name.

In one embodiment, online video merchant **330** obtains the Web address by matching the name against a lookup table, or by querying a database. In one embodiment, online video merchant **330** and online video portal **350** has an Extranet connection and portal identity **3571** includes information for connecting to online video portal **350** via the Extranet. Online video merchant **330** connects to online video portal **350** via the Extranet.

In one embodiment, online video merchant **330** establishes a delivery session **331** with online video portal **350** over video delivery network **355**. Online video merchant **330** provides consumer identity **3575** to online video portal **350** over delivery session **331**. In one embodiment, delivery session **331** includes an HTTP session; online video merchant **330** provides consumer identity **3575** over the HTTP session.

Online video merchant **330** sends consumer video **360** to online video portal **350** over delivery session **331**. In one embodiment, delivery session **331** includes a file transfer session wherein online video merchant **330** sends consumer video **360** 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 **331** is based on cXML, or E-Business XML (ebXML) technology. In one embodiment, delivery session **331** is based on Web Service technology.

In a different embodiment, portal identity **3571** includes a street address. Online video merchant **330** provides consumer identity **3575** and sends consumer video **360** stored in a physical digital media to the street address. In one embodiment, online video merchant **330** uses postal service, a package delivery company such as United Parcel Service (UPS), or Federal Express (FedEx) to send consumer video **360** to the

6

street address. In another embodiment, online video merchant **330** uses a third party video delivery business entity to send consumer video **360**.

Online video portal **350** receives consumer video **360** and consumer identity **3575**. Online video portal **350** determines consumer record **359** based on consumer identity **3575**. Online video portal **350** stores consumer video **360** in consumer record **359**. In one embodiment, consumer identity **3575** includes storage location **352**. Online video portal **350** stores consumer video **360** in storage location **352**.

Online video portal **350** notifies consumer **310** after receiving consumer video **360**. The notification includes consumer video **360** identity and storage location **352**. In one embodiment, consumer record **359** includes contact information for consumer **310**, such as an email address or a telephone number. In one embodiment, online video portal **350** sends a notification email to the email address. In another embodiment, online video portal **350** notifies consumer **310** over a telephone call. In one embodiment, one line video portal **350** notifies consumer **310** using a Short Message Service (SMS). In one embodiment, online video portal **350** presents an alert message that consumer video **360** is stored in storage location **352** the next time consumer **310** accesses online video portal **350**.

In one embodiment, online video merchant **330** notifies consumer **310** after sending consumer video **360**. In one embodiment, delivery record **339** is associated with contact information for consumer **310**, such as an email address or a telephone number. Online video merchant **330** notifies consumer **310** using the contact information.

In one embodiment, online video merchant **330** drops off consumer video **360** immediately after storing drop-off ticket **357**. In one embodiment, online video merchant **330** drops off consumer video **360** at a later time. In one embodiment, online video merchant **330** drops off consumer video **360** after an electronic fund transfer transaction for consumer video **360** is completed. In one embodiment, online video merchant **330** drops off consumer video **360** after an electronic fund transfer is approved. In one embodiment, online video merchant **330** drops off consumer video **360** along with other consumer videos in a bulk delivery to online video portal **350**. In one embodiment, online video merchant **330** completes an electronic fund transfer transaction after completing delivery of consumer video **360**.

In one embodiment, consumer identity **3575** includes a key. In one embodiment, online video portal **350** validates the key before receiving consumer video **360**.

In one embodiment, a second consumer subscribes to online video portal **150**. Consumer **110** requests online video merchant **130** to deliver consumer video **160** to online video portal **150** for the second consumer. In one embodiment, after receiving consumer video **160**, online video portal **150** notifies the second consumer as well as consumer **110**.

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.

7

The invention claimed is:

1. A method for online consumer video order delivery, comprising:

- (a) receiving an order for a consumer video and a request to deliver the consumer video to an online video portal computing device by an online video merchant computing device from a consumer computing device;
 - (b) providing a pick-up ticket by the online video merchant computing device to the consumer computing device, wherein the pick-up ticket comprises a merchant identity of an online video merchant and a product identity of the consumer video, wherein the providing of the pick-up ticket to the consumer computing device enables the online video portal computing device to:
 - (b1) receive the pick-up ticket from the consumer computing device by the online video portal computing device over a subscription network;
 - (b2) in response to receiving the pick-up ticket, retrieve the merchant identity and the product identity from the pick-up ticket by the online video portal computing device;
 - (b3) connect to the online video merchant computing device by the online video portal computing device using the merchant identity retrieved from the pick-up ticket; and
 - (b4) provide the product identity retrieved from the pick-up ticket to the online video merchant computing device by the online video portal computing device;
 - (c) receiving the product identity by the online video merchant computing device from the online video portal computing device;
 - (d) in response to receiving the product identity, retrieving the consumer video by the online video merchant computing device using the product identity; and
 - (e) sending the consumer video by the online video merchant computing device to the online video portal computing device.
- 2.** The method of claim **1**, further comprising:
- (f) in response to sending the consumer video to the online video portal computing device, notifying the consumer computing device by the online video merchant computing device that the consumer video has been sent by the online video merchant computing device.
- 3.** The method of claim **1**, further comprising:
- (f) receiving the consumer video from the online video merchant computing device by the online video portal computing device; and

8

- (g) storing the consumer video by the online video portal computing device.

4. The method of claim **3**, further comprising:

- (h) notifying the consumer computing device by the online video portal computing device of a receipt of the consumer video by the online video portal computing device.

5. A system, comprising:

- an online video portal computing device for storing video for a consumer computing device; and

- an online video merchant computing device for receiving from the consumer computing device an order for a consumer video and a request to deliver the consumer video to the online video portal computing device,

- wherein the online video merchant computing device provides a pick-up ticket to the consumer computing device, wherein the pick-up ticket comprises a merchant identity of an online video merchant and a product identity of the consumer video,

- wherein the online video portal computing device receives the pick-up ticket from the consumer computing device, wherein in response to receiving the pick-up ticket, the online video portal computing device retrieves the merchant identity and the product identity from the pick-up ticket;

- wherein the online video portal computing device connects to the online video merchant computing device using the merchant identity retrieved from the pick-up ticket,

- wherein the online video portal computing device provides the product identity retrieved from the pick-up ticket to the online video merchant computing device,

- wherein in response to receiving the product identity from the online video portal computing device, the online video merchant computing device retrieves the consumer video using the product identity,

- wherein the online video merchant computing device sends the consumer video to the online video portal computing device,

- wherein the online video portal computing device stores the consumer video.

6. The system of claim **5**, wherein in response to sending the consumer video to the online video portal computing device, the online video merchant computing device further notifies the consumer computing device that the consumer video has been sent by the online video merchant computing device.

* * * * *