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U.S. Patent 7,440,559

U.S. Patent 7,440,559 (“*Videolabs*” or the “patent-at-issue”) was filed on October 22, 2003 and claims priority on the same date. Claim 1 of the patent-at-issue is generally directed to a processor that interacts with a remote terminal, receiving content status and terminal status information from it, as well as server status information about available content. This server status information includes a list of available content pieces. The processor then sends a response back to the terminal, directing it to perform actions based on the received information, thereby controlling the content flow to the terminal. Notably, the content being managed and controlled by the processor consists of multimedia content, indicating a broad range of media types being handled by the system.

The primary reference, the U.S. Patent 8,010,095 (“*NTT DoCoMo*”), was filed on May 8, 2008. According to its cover page, the publication claims a priority date of May 14, 2001, on the basis of a prior application. The patent is directed to a management server that retrieves application programs from the content server upon request and sends them, along with reliability information, to the mobile terminal. The mobile terminal then manages these applications, coordinating their operations with other programs based on their reliability. This coordination ensures that low-reliability applications don't compromise information security by unexpectedly distributing valuable information. This approach enhances user convenience on mobile terminals without compromising their security.

The primary reference, U.S. Patent 7,219,153 (“*Cisco*”), was filed on December 2, 2002, and claims priority on the same date. The patent is directed to a system that combines the notification capabilities of a presence system with the content distribution abilities of a content delivery network. A content host offers content to a content delivery network, while also notifying a central server about the availability of that content. Subscribers to this content receive notifications from the central server about the content's availability and its location within the delivery network. With this information, subscribers can retrieve the content from the network.

The primary reference, U.S. Patent 8,370,196 (“*SK Planet*”), was filed on March 22, 2003, and claims an earliest priority on March 23, 2002. The patent is directed to an apparatus of providing a multimedia advertising service through a mobile communication network. A content server downloads ad contents to a mobile terminal along with content-displaying condition and the mobile terminal having received the ad contents displays the received ad contents according to the content-displaying condition when an event specified by the content-displaying condition occurs. Afterwards, a content-displayed history is uploaded to the content server by the mobile terminal.

A sample claim chart comparing claim 1 of *Videolabs* to *NTT DoCoMo*, *Cisco*, and *SK Planet* is provided below.

US7440559 (“ <i>Videolabs</i> ”)	A. US8010095 (“ <i>NTT DoCoMo</i> ”) B. US7219153 (“ <i>Cisco</i> ”) C. US8370196 (“ <i>SK Planet</i> ”)
<p>1.pre An apparatus comprising:</p> <p>1.a a processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information, and configured to receive server status information regarding a source of content, wherein the server status information comprises a listing of at least one piece of content available from the source,</p>	<p>A. US8010095</p> <p>“The application delivery system comprises a plurality of mobile terminals namely, mobile terminals 11-1, 11-2, . . ., a plurality of base stations namely, base stations 13-1, 13-2, . . . , a plurality of switching stations 14, mobile communication network 15, management server 16, authentication server 17, gateway server 18, Internet 19, and a plurality of content servers namely, content servers 20-1, 20-2, Each mobile terminal is referred to as “mobile terminal 11”, each base station is referred to as “base station 13”, each content server is referred to as “content server 20”, hereafter respectively, if there is no need to distinguish them from other apparatuses of the same kind.” <i>NTT DoCoMo</i> at col. 6:30-41</p> <p>“When button “2” is depressed, mobile terminal 11-1 may transmits a request to management server 16 to transmit information on applications that can be downloaded to mobile terminal 11-1 (step S501) (FIG. 23).” <i>NTT DoCoMo</i> at col. 27:37-40</p> <p>“Management server 16 is a server for delivering applications to mobile terminals 11 in response to requests from mobile terminals 11. Management server 16 may receive applications from content servers 20. Content servers 20 are providers of the applications. Management server 16 may store the received applications in a database, before the applications are delivered to mobile terminals 11.” <i>NTT DoCoMo</i> at col. 7:38-44</p> <p>“FIG. 5 is a block diagram showing a general outline of an example configuration of management server 16. Management server 16 comprises cryptograph key storing unit 51, application information storing unit 52, user information storing unit 53, and control unit 54.” <i>NTT DoCoMo</i> at col. 11:59-63</p> <p>“Application information storing unit 52 may be a unit for storing applications. In addition, information on locations where applications are stored that are transmitted by each</p>

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1. An **apparatus** comprising:

1.a a **processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information**, and configured to receive **server status information regarding a source of content**, wherein the server status information comprises **a listing of at least one piece of content available from the source**,

of content servers 20 may be stored by application information storing unit 52. The information may be in the form of a database. Application information storing unit 52 may also store any **other information related to the applications such as names of the applications.**" *NTT DoCoMo* at col. 12:3-13

"Control unit 54 may be a microprocessor that controls each of the components of management server 16. For example, control unit 54 may control operations related to obtaining public keys from authentication server 17, obtaining applications from content servers 20, decrypting applications that are encrypted, encrypting applications that are to be transmitted to mobile terminals 11, and delivering the applications to mobile terminals 11. Moreover, **control unit 54 may update the data in the databases of** cryptograph key storing unit 51, application information storing unit 52, and **user information storing unit 53.**" *NTT DoCoMo* at col. 12:19-29

"User information storing unit 53 may be a unit for storing information in a database indicating which applications are written in memories 12 of each of mobile terminals 11. In addition, **user information storing unit 53 may store information indicating which applications have been purchased by users of each of mobile terminals 11** and are therefore ready for downloading to memories 12 in response to the users' requests." *NTT DoCoMo* at col. 12:11-18

"Next, management server 16 may register the information of the application that mobile terminal 11-1 requested be registered. The registration information may include the identification number of the application, the reliability index of the application, etc. The registration information may be stored in download-ready application area 53B of user information storing unit 53-1 (step S310)." *NTT DoCoMo* at col. 24:36-42

"After receiving the identification number of the selected application, management server 16 may read the data stored in download-ready application area 53B (FIG. 6), and determine whether the appointed application is given a reliability index at or above a determine level, such as "1" or more than "1." Next, **management server 16 may read the data stored in downloaded application area 53A (FIG. 6)**

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1. An **apparatus** comprising:

1.a a **processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information**, and configured to receive **server status information regarding a source of content**, wherein the server status information comprises **a listing of at least one piece of content available from the source**,

and check whether memory 12 (FIG. 3) of mobile terminal 11-1 has enough free space to store the selected application (step S504).” *NTT DoCoMo* at col. 27:58-67

“In response to the deletion select screen, the user of mobile terminal 11-1 can select an application for deletion from memory 12 by depressing a button whose number corresponds to the number of the application on the deletion select screen. **Mobile terminal 11-1 may transmit the identification number of the application selected for deletion to management server 16 (step S506).** After the operation in step S506, mobile terminal 11-1 may display a down loading screen, such as screen D25 (FIG. 22) on display unit 21.” *NTT DoCoMo* at col. 29:31-40

B. US7219153

“The presence system 102, in one embodiment, includes a **presence server 120 and a content host 110. The presence server 120 is a computerized device having a controller 112, such as a memory and a processor**, and a communications interface 115. A network 101 connects the **content subscribers 150 with the presence server 120** and allows for distribution of presence information 173 from the presence server 120. In one embodiment, the network 101 is the Internet or a local area network (LAN).” *Cisco* at col. 7:25-33

“**The content host 110 is a computerized device (e.g., a computer, such as a personal computer) configured to transmit the content 171 to the content delivery network 170 for further distribution to the content subscribers 150. The content host 110 is also configured to transmit notification or presence information 167 to the presence server 120 regarding the availability of content 171 associated with the content host 110, such as content 171 originating from the content host 110.**” *Cisco* at col. 7:34-42

“In step 210, **the presence server 120 receives presence information 167 from the content host 110 where the presence information 167 indicates the availability of content 171 associated with the content host 110.** The content host 110 is different from any of the content servers 140-N and is different from the content delivery manager 130 of the content delivery network 170.” *Cisco* at col. 8:14-20

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1. An **apparatus** comprising:

1.a a **processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information**, and configured to receive **server status information regarding a source of content**, wherein the server status information comprises **a listing of at least one piece of content available from the source**,

“In step 212, **the presence server 120 receives a subscription request 172 from a content subscriber 150-N**. In one embodiment, the subscription request 172 relates to a request for information relating to a particular content host 110. When the content subscriber 150-N wants to receive notification 167 as to the availability of the particular content 171 associated with the content host 110, the content subscriber 150-N sends a subscription request 172 to the presence server 120. In one embodiment, **the presence server 120 maintains information related to the subscription request 172 within a content subscriber list 116 to track additions or deletions of content subscribers 150 for a particular content host or hosts 110**. Such an aspect of the presence server 120 will be described in further detail with respect to FIG. 3.” *Cisco* at col. 8:37-50

C. US8370196

“Referring to FIG. 1, the mobile communication system includes an **advertising server 110, download server 120**, advertising analysis server 130, location management server 140, home location register (HLR) 150, packet data serving node (PDSN) 160, short message service server (SMSS) 170, short message service center (SMSC) 180, mobile switching center (MSC) 190 and **mobile terminal 10**.” *SK Planet* at col. 4:31-37

“The **download server 120 connected to the advertising server 110 stores multimedia contents as advertisements and downloads corresponding multimedia advertisements to the corresponding terminal 10**.” *SK Planet* at col. 4:47-50

“The terminal 10 displays multimedia advertisements downloaded from the download server 120 according to display condition information. **The terminal 10 uploads display history information associated with the displayed multimedia advertisements to the advertising server 110**.” *SK Planet* at col. 5:11-15

“First, if **a multimedia content** (containing advertisement display condition information) **as an advertisement created by an advertisement creating server 100 is registered in the download server 120, the download server 120 assigns a corresponding service ID (SID) to the registered content and stores the assigned SID** at step S201.” *SK Planet* at col. 5:22-27

<p>(cont.)</p> <p>1. An apparatus comprising:</p> <p>1.a a processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information, and configured to receive server status information regarding a source of content, wherein the server status information comprises a listing of at least one piece of content available from the source,</p>	<p>“Then, the advertisement creating server 100 transmits, to the advertising server 110, an advertisement transmission request message containing the advertisement display condition information, information of a target subscriber for a desired advertisement, a transmission date, an SID and a callback uniform resource locator (URL) at step 8202.” <i>SK Planet</i> at col. 5:28-33</p>
<p>1.b wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information and the server status information, and</p>	<p>A. US8010095</p> <p>“When management server 16 receives a request for purchasing an application from mobile terminal 11, management server 16 may prepare a transmission of the requested application. When the application is downloaded to mobile terminal 11, management server 16 may appoint an area for storing the application in the memory of mobile terminal 11. In addition, management server 16 may permit mobile terminal 11 to store the application in the area. Moreover, management server 16 may instruct mobile terminal 11 to execute an activation operation for the application.” <i>NTT DoCoMo</i> at col. 7:65-67 through col. 8:1-7</p> <p>“Content server 20 stores one or several applications that are developed according to the specifications of mobile terminal 11. Content server 20 may transmit the applications to management server 16 in response to requests for the applications made by management server 16. The administration entity of content server 20 can transmit the applications to the administration entity of management server 16 for carrying out examinations of the contents of the applications if necessary.” <i>NTT DoCoMo</i> at col. 8:27-34</p> <p>“First, management server 16 may read the data stored in downloaded application area 53A of user information storing unit 53-1. The data is read to determine whether the application to be deleted is stored in memory 12 of mobile terminal 11-1. If the application is stored in memory 12 of mobile terminal 11-1, management server 16</p>

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1.b wherein **the processor is configured to send, to the terminal, a response to the content status** that instructs the terminal to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information and the server status information, and

may transmit a deletion command to mobile terminal 11-1. The deletion command may include the identification number of management area 40-1 where the application that is to be deleted is located.” *NTT DoCoMo* at col. 34:30-38

B. US7219153

“After the presence server 120 receives an update 167 as to the availability of content 171 associated with the content host 110, the presence server 120 distributes the notification 167 along with network information 168 indicating the location of the content 171, relative to the content delivery network 170, to the content subscribers 150 (e.g., computerized devices such as personal computers). Such distribution allows the content subscribers 150 to access the content 171, associated with the content host 110, from the content delivery network 170.” *Cisco* at col. 8:1-10

“In step 212, the presence server 120 receives a subscription request 172 from a content subscriber 150-N. In one embodiment, the subscription request 172 relates to a request for information relating to a particular content host 110. When the content subscriber 150-N wants to receive notification 167 as to the availability of the particular content 171 associated with the content host 110, the content subscriber 150-N sends a subscription request 172 to the presence server 120. In one embodiment, the presence server 120 maintains information related to the subscription request 172 within a content subscriber list 116 to track additions or deletions of content subscribers 150 for a particular content host or hosts 110. Such an aspect of the presence server 120 will be described in further detail with respect to FIG. 3.” *Cisco* at col. 8:37-50

“The list 116 contains, for each content subscriber 150, subscriber identification information 342, such as subscriber name information 310, status information 320 relating to the subscriber, subscription type 330, and subscriber geographic location information 340.” *Cisco* at col. 10:38-42

“In one embodiment, the presence system 120 uses the content subscriber identifier information 342 to provide or restrict a content subscriber 150 access to notification or presence information 167 relating to content 171 associated with a content host 110. As shown in FIG. 1, the presence server 120 receives an access restriction 176 from the content

<p>(cont.) 1.b wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information and the server status information, and</p>	<p>host 110. The access restriction 176 relates to a limitation on a content subscriber's 150-N access to content 171. The presence server 120 detects content subscriber 150 access to the presence information 167 by comparing the content subscriber identifier information 342 and the access restriction 176. Accordingly, the presence server 120 is configured to provide or restrict transmission, to the content subscriber 140, of presence information 167 based on the results of the comparison.” <i>Cisco</i> at col. 11:3-17</p> <p>C. US8370196 “The advertising server 110 transmits a script for the advertisement content download and a corresponding SID to the terminal 10 at step S506. Thus, the terminal 10 accesses the download server 120, and downloads the advertisement content corresponding to the SID and display condition information associated with the advertisement content from the download server 120 at step S507.” <i>SK Planet</i> at col. 7:1-7</p> <p>“If the terminal 10 receives an advertising SMS message for advertisement content download, as shown in FIG. 2, from the SMSS/SMSC 170/180 at step S5, the MMI 640 of the terminal 10 accesses the advertising server 110 on the basis of the URL contained in the received advertising SMS message and requests the advertising server 110 to download a corresponding advertisement content at step S6.” <i>SK Planet</i> at col. 9:42-48</p>
<p>1.c wherein the at least one piece of content available from the source, and the content for which the processor is configured to control the flow, comprise multimedia content.</p>	<p>A. US8010095 “Management server 16 is a server for delivering applications to mobile terminals 11 in response to requests from mobile terminals 11. Management server 16 may receive applications from content servers 20. Content servers 20 are providers of the applications. Management server 16 may store the received applications in a database, before the applications are delivered to mobile terminals 11.” <i>NTT DoCoMo</i> at col. 7:38-44</p> <p>B. US7219153 “In one embodiment of the system 100, for example, the content host 110 provides content 171, such as unique audio or video streams, to the content delivery network 170. For example, a content host operator can provide real time video or audio streams 171 to the content delivery</p>

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1.c wherein the at least **one piece of content available from the source**, and the **content for which the processor is configured to control the flow, comprise multimedia content.**

network 170 either as he creates the streams 171 or as he receives the streams from secondary sources (e.g., audio playing on the operator's compact disk player). After the content host 110 sends the content 171 (e.g., the audio or video streams) to the content delivery network 170, the content host 110 sends presence information 167, to the presence server 120, indicating the availability of the content 171 associated with the content host 110." *Cisco* at col. 7:55-67

"In such a case, **the presence server 120 provides presence information 167 to the subscriber 150 regarding the availability** (e.g., status) or a change in the availability of all content 171 (e.g., all hierarchical levels) **associated with the content host 110.**

The root hierarchical element 410, **in one embodiment, includes one or more hierarchically arranged sublevels that relate to distinct subscription constraints for particular content subscribers 150. For example, a first sublevel 420 beneath the provider status level 410 includes the audio media status level and a second sublevel 440 beneath the provider status level 410 includes a video media status level.**" *Cisco* at col. 12:4-15

C. US8370196

"If the terminal 10 receives an advertising SMS message for advertisement content download, as shown in FIG. 2, from the SMSS/SMSC 170/180 at step S5, **the MMI 640 of the terminal 10 accesses the advertising server 110 on the basis of the URL contained in the received advertising SMS message and requests the advertising server 110 to download a corresponding advertisement content at step S6.**" *SK Planet* at col. 9:42-48

"A multimedia advertising service uses multimedia data as advertisement contents. The terminal 10 for supporting the multimedia advertising service must be equipped with the media player 663 for reproducing a multimedia image on a terminal screen." *SK Planet* at col. 10:50-54