

Petitioner's Demonstratives

Netflix, Inc. v. VideoLabs, Inc.

U.S. Patent No. 7,440,559

Case: IPR2023-00630

June 27, 2024

Instituted Grounds

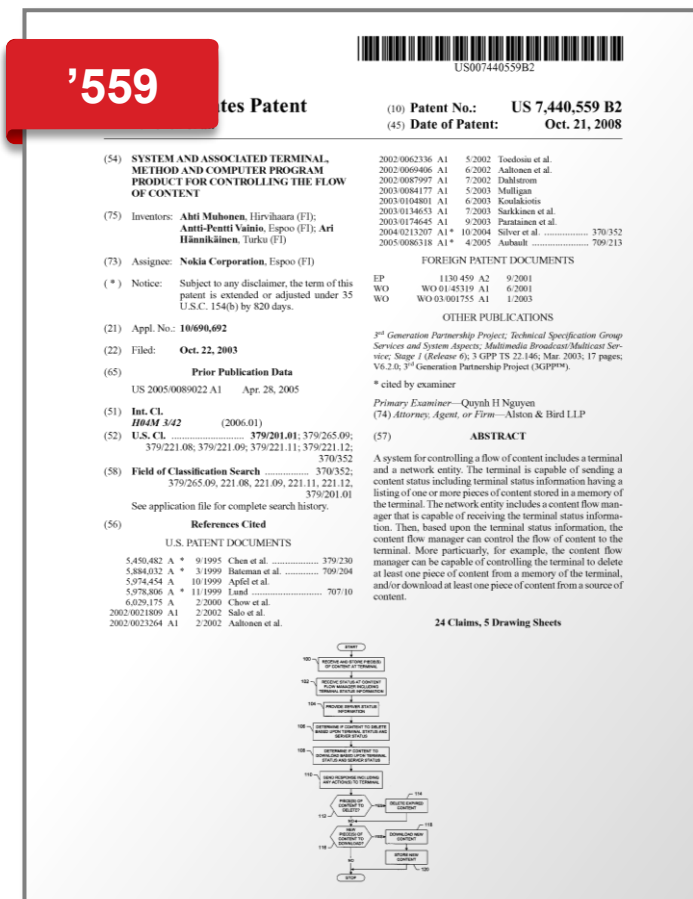
Ground	Challenged Claims	Basis	References
1	1, 2, 4, 7, 8, 10, 13, 14, 16, 19, 20, 22	§102	Cassin
2	1-24	§103	Cassin, Huston
3	1-24	§103	Huston

Pet. at 15

Disputed Issues

- 1 "server status information comprises a listing of at least one piece of content available from the source"
- 2 "a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"
- 3 "terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"
- 4 "a response to the content status that instructs the terminal to delete at least one piece of content from the memory of the terminal"
- 5 A POSITA would be motivated to combine *Cassin* and *Huston*

U.S. Patent No. 7,440,559



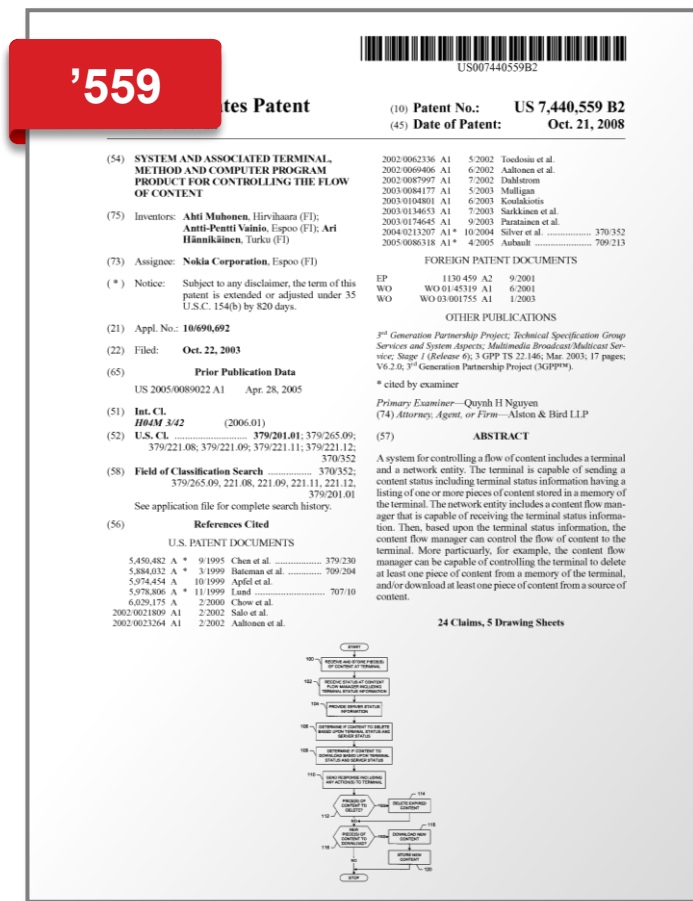
(10) Patent No.: US 7,440,559 B2

(54) SYSTEM AND ASSOCIATED TERMINAL, METHOD AND COMPUTER PROGRAM PRODUCT FOR CONTROLLING THE FLOW OF CONTENT

(22) Filed: Oct. 22, 2003

EX1001 ('559 Patent)

'559 Patent | Alleged Problem | Inefficient Content Delivery

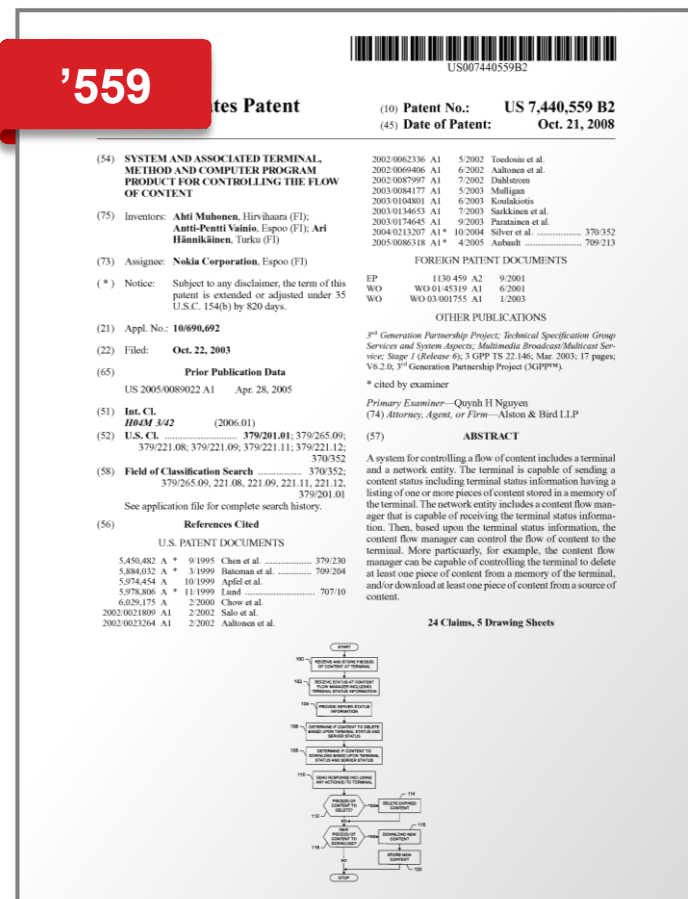


Mobile terminals would “pull” content from a server

In mobile terminals for combined use of mobile telecommunications and digital broadband data broadcast techniques, mobile terminals typically download content in accordance with a “pull” technique. In this regard, mobile terminals typically pull content from a server, such as by dispatching a uniform resource indicator (URI) from a mobile terminal to a server, which responds by providing information associated with the URI. Although mobile terminals typically download content in accordance with a pull technique, the server or content provider must typically have control over the content flow policy to the mobile terminal. For example, the server or content provider must typically have control over when pieces of content expire and are removed from the mobile terminal, when to deliver new pieces of content to the mobile terminal, what new pieces of content to deliver, etc.

EX1001 ('559 Patent) at 2:25-39

'559 Patent | Alleged Problem | Inefficient Content Delivery



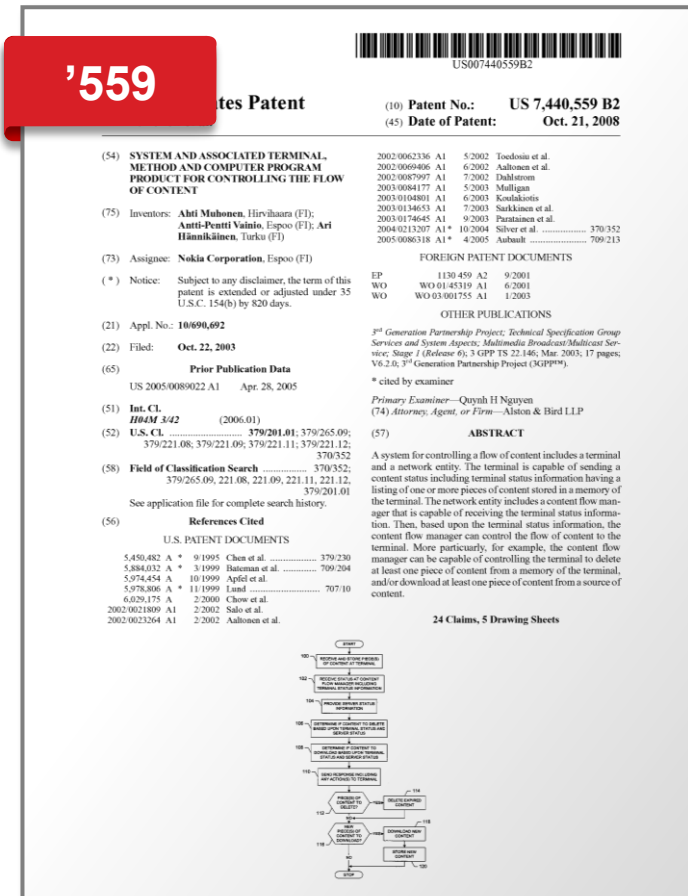
Techniques for downloading content did not account for user preferences or previous contents in mobile terminal

As will be appreciated, in various instances, user preferences, capabilities of the mobile terminal and/or previous contents stored or otherwise received by the mobile terminal can have an affect on the flow of new content to the mobile terminal. Current techniques for downloading content from mobile terminals, however, do not provide for such user preferences, capabilities, previous contents and/or use of previous contents. Thus, current techniques for downloading content can suffer from inefficient content flow control between the mobile terminal and the server or content provider. More particularly, current techniques for downloading content can suffer from inefficient control of content received and thereafter stored by mobile terminals, as well as inefficient control of content stored by mobile terminals.

EX1001 ('559 Patent) at 2:40-53

'559 Patent | Disclosed Solution | Network Entity Controlling Content to Terminal

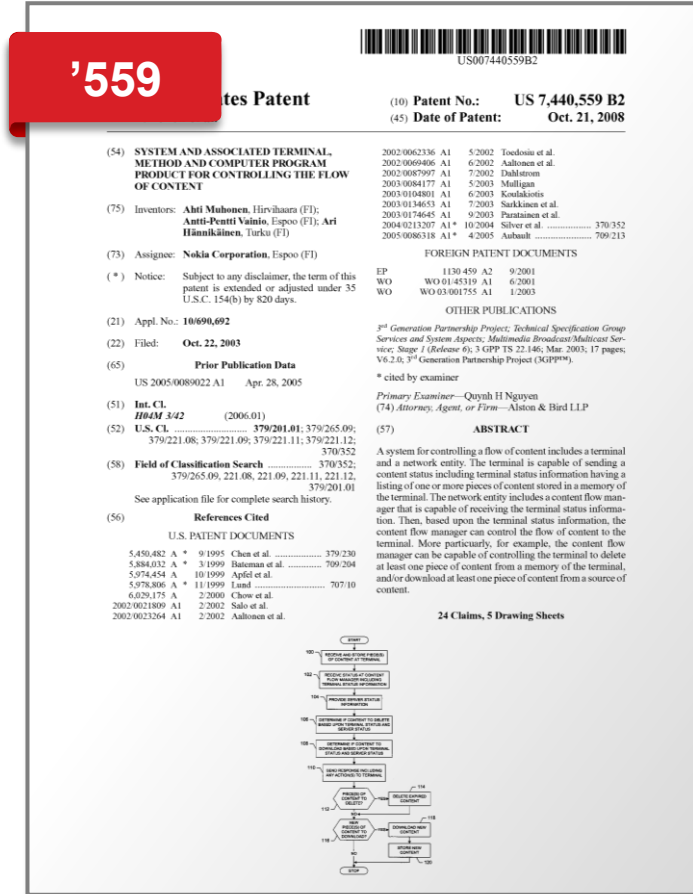
The '559 patent controls the flow of content using “terminal status information” and “server status information”



broadcast networks. To facilitate control of the flow of content in accordance with embodiments of the present invention, a terminal is capable of sending a content request that includes terminal status information. A network entity, such as a digital broadcast receiver, can then control the flow of content to the terminal based upon the terminal status information. Advantageously, the terminal status information can include information regarding the terminal that accounts for user preferences, capabilities of the terminal and/or previous contents stored by the terminal. Thus, in contrast to conventional techniques for downloading content to a terminal, the network entity can control the flow of content to the terminal based upon information that accounts for user preferences, capabilities of the terminal and/or previous contents stored by the terminal.

EX1001 ('559 Patent) at 2:62 – 3:9

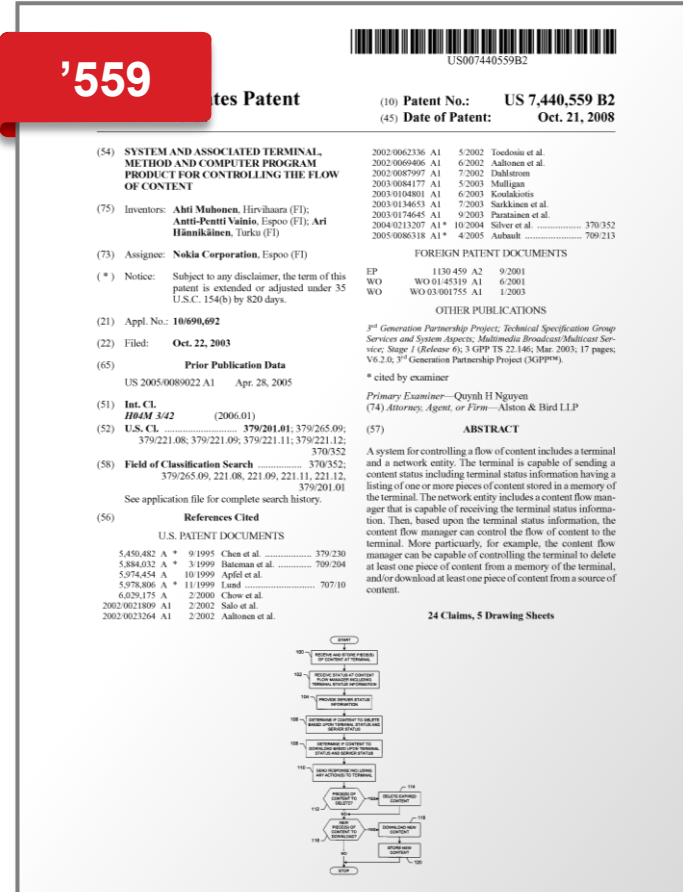
'559 Patent | Disclosed Solution | Controlling Content with Terminal and Server Status Information



The '559 patent controls the flow of content using “terminal status information” and “server status information” of content stored in the memory of the terminal. Similarly, the control flow manager can be capable of controlling the terminal to download one or more pieces of content from the source of content based upon server status information including a listing of available piece(s) of content from the source.

EX1001 ('559 Patent) at 3:31-36

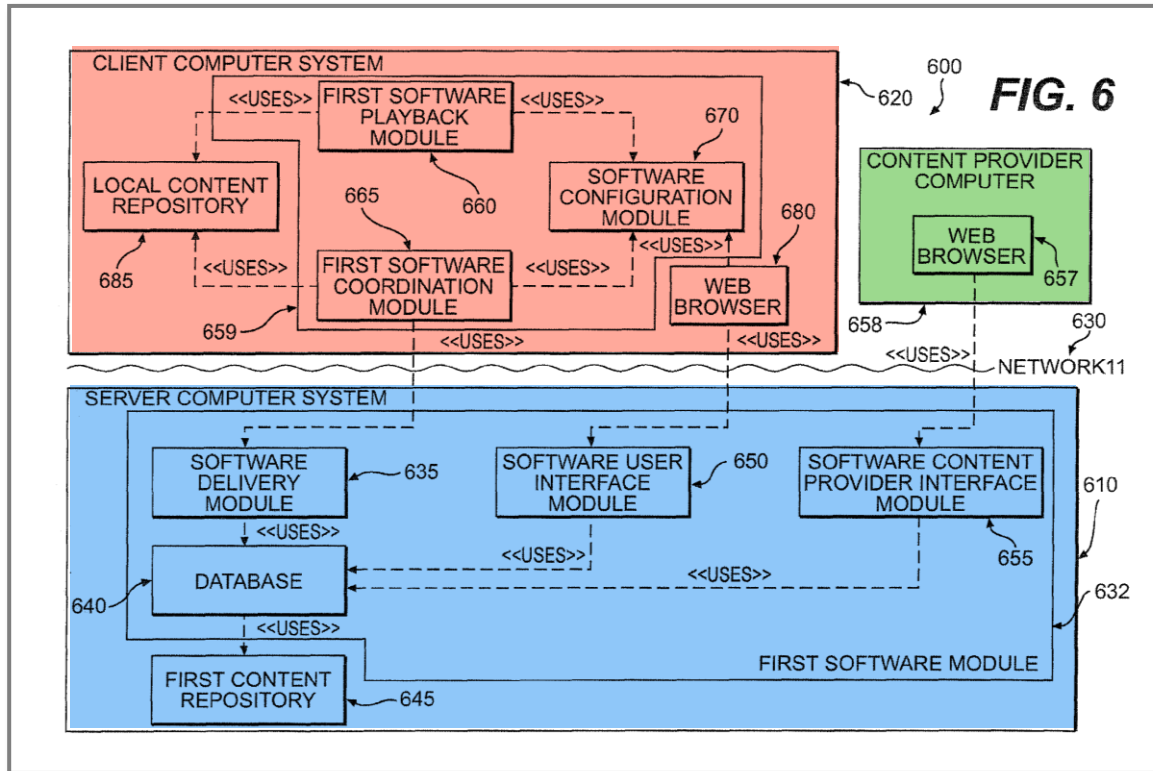
'559 Patent | Representative Claim 1



1. An apparatus comprising:
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, 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
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.

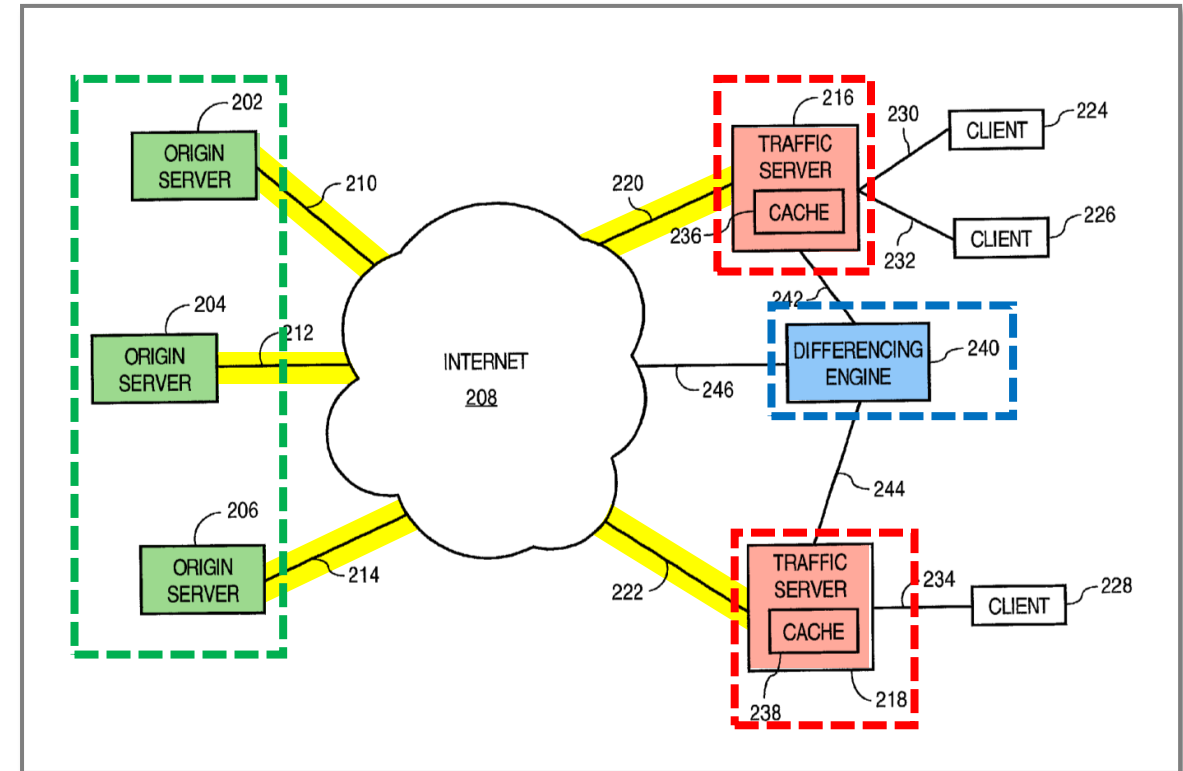
Cassin and Huston Both Teach Controlling the Flow of Content

Cassin



EX1004 (Cassin) at Fig. 6

Huston



EX1005 (Huston) at Fig. 2A

Pet. at 18-19, 21, 24-26, 33, 41, 45, 51-54, 56-57; ID at 13-14, 22; Reply at 1, 8, 10-12, 14; EX1003 ¶¶ 62-63, 67, 73-76, 85-86, 90, 97, 104, 107, 113-14, 116, 121-22, 128, 138, 144, 164, 182, 202, 208, 210-12, 220, 224.

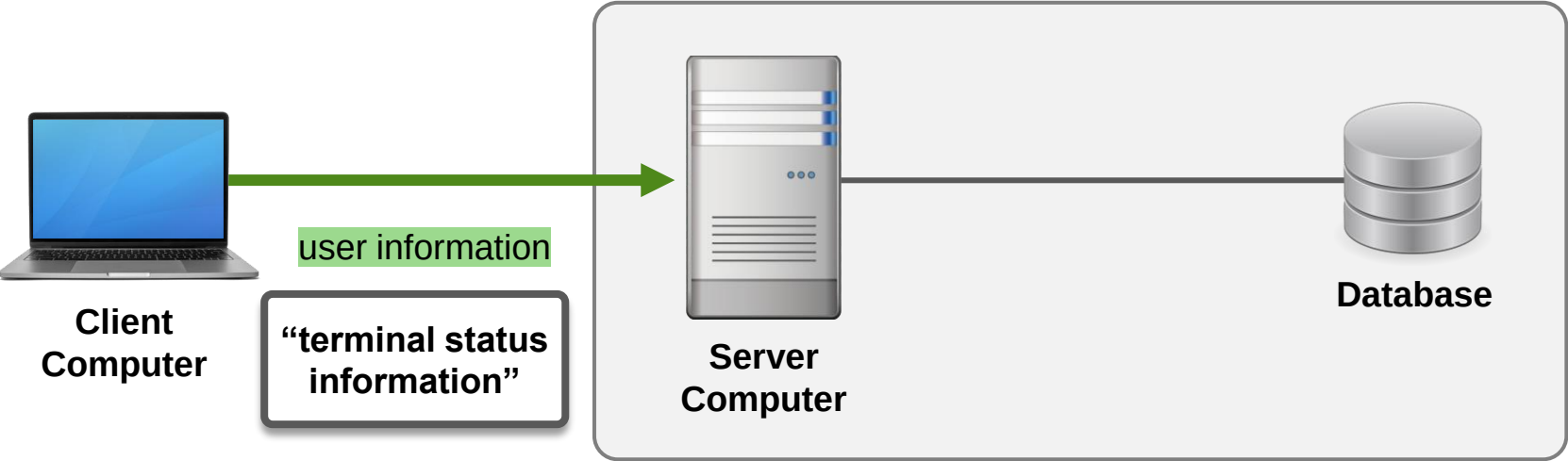
1

Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 67

Pet. at 23-27, 30-31; ID at 13, 15-16; Reply at 13, 16-17; EX1001 at 2:62-65, 3:15-20, 3:62-66; EX1003 ¶¶ 67, 71-77, 82, 102, 121-22; EX1004 at [0146], [0155], [0164]-[0166], Figs. 6, 8-9.

1

Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"

'559 Patent

broadcast networks. To facilitate control of the flow of content in accordance with embodiments of the present invention, a terminal is capable of sending a content request that includes terminal status information. A network entity, such

EX1001 ('559 Patent) at 2:62-65

mation regarding the terminal. Advantageously, the terminal status information can include information reflecting user preferences, capabilities of the terminal, previous contents stored by the terminal, and/or the use of such previous contents. Therefore, the system, and associated terminal, method

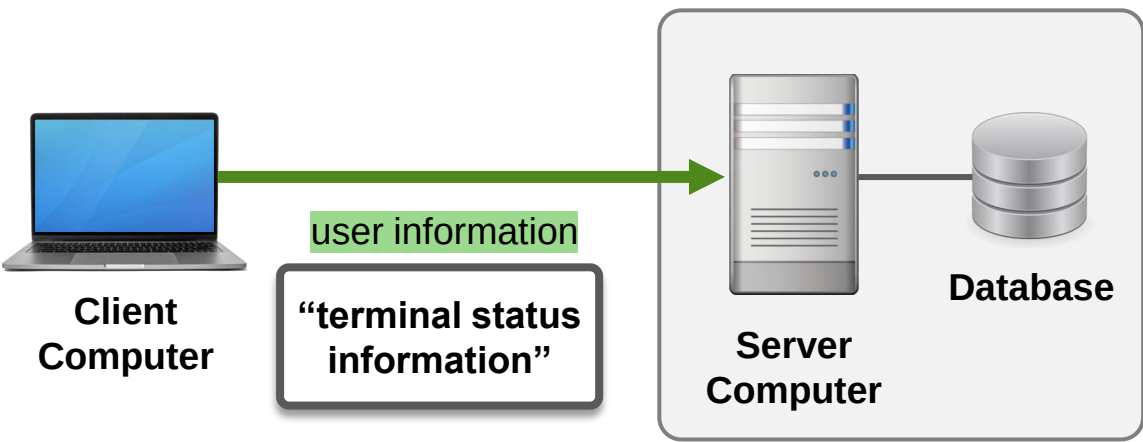
EX1001 ('559 Patent) at 3:62-66

stored in a memory of the terminal. The network entity (e.g., content flow server, origin server, digital broadcast receiver, etc.) includes a content flow manager that is capable of receiving the terminal status information. Then, based upon the terminal status information, the content flow manager can control the flow of content to the terminal. More particularly,

EX1001 ('559 Patent) at 3:15-20



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 67

1

Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"

Cassin

[0155] The client computer then transmits the user information to the server computer to facilitate the delivery of media content to the client computer.

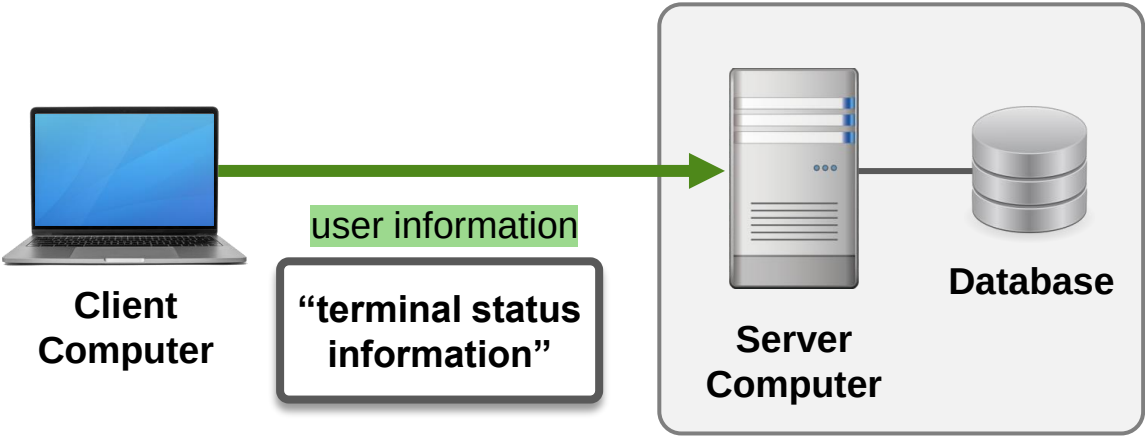
EX1004 (Cassin) at [0155]

accepts and establishes the connection. Thereafter, in step 820, the client computer sends user information to the server. Thereafter, in step 825, the server computer uses the user information to query the database 640. In step 830, the

EX1004 (Cassin) at [0164]



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 67

Pet. at 23-27, 30-31; ID at 13, 15-16; Reply at 13, 16-17; EX1001 at 2:62-65, 3:15-20, 3:62-66; EX1003 ¶¶ 67, 71-77, 82, 102, 121-22; EX1004 at [0146], [0155], [0164]-[0166], Figs. 6, 8-9.

1

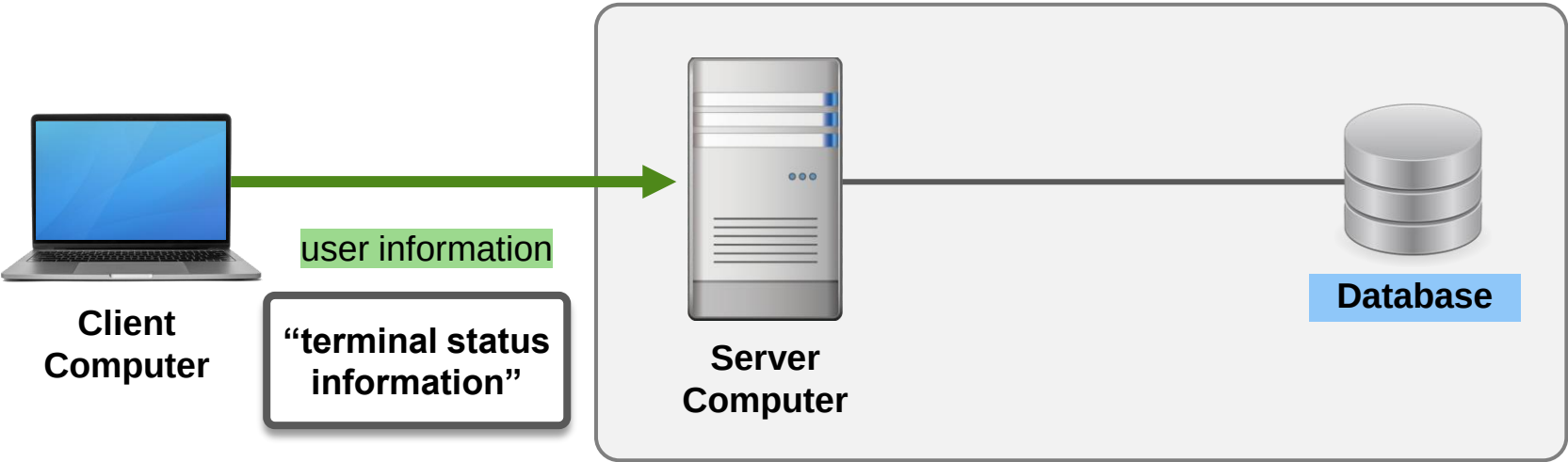
Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"

THE SERVER COMPUTER USES
INFORMATION TO QUERY DATABASE

825

EX1004 (Cassin) at Fig. 8 (excerpted)



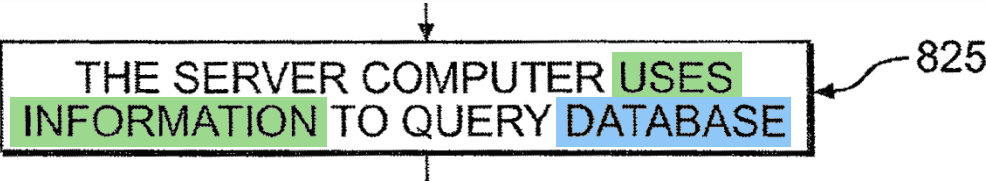
EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 23-27, 30-31; ID at 13, 15-16; Reply at 13, 16-17; EX1001 at 2:62-65, 3:15-20, 3:62-66; EX1003 ¶¶ 67, 71-77, 82, 102, 121-22; EX1004 at [0146], [0155], [0164]-[0166], Figs. 6, 8-9.

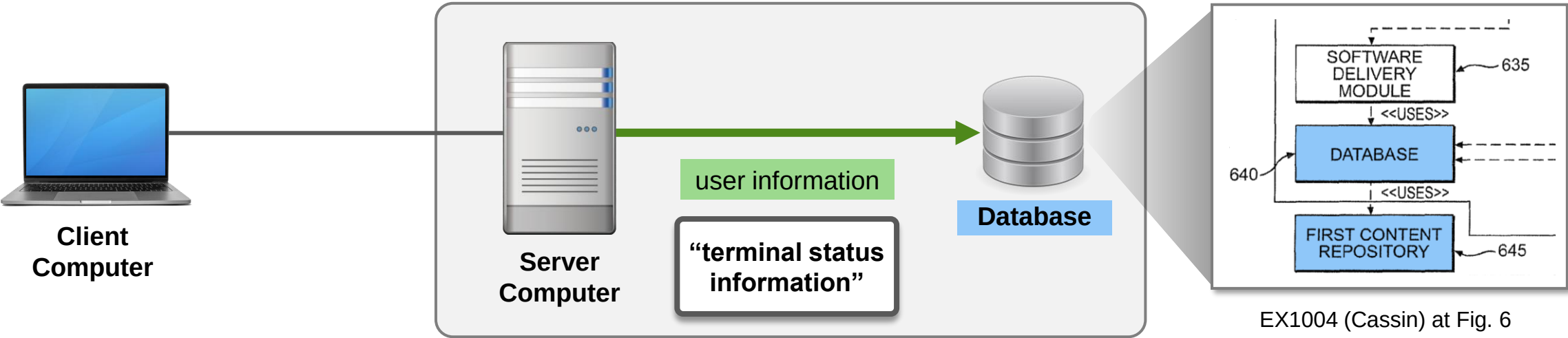
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Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1004 (Cassin) at Fig. 6

EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 23-27, 30-31; ID at 13, 15-16; Reply at 13, 16-17; EX1001 at 2:62-65, 3:15-20, 3:62-66; EX1003 ¶¶ 67, 71-77, 82, 102, 121-22; EX1004 at [0146], [0155], [0164]-[0166], Figs. 6, 8-9.

1

Cassin Teaches:

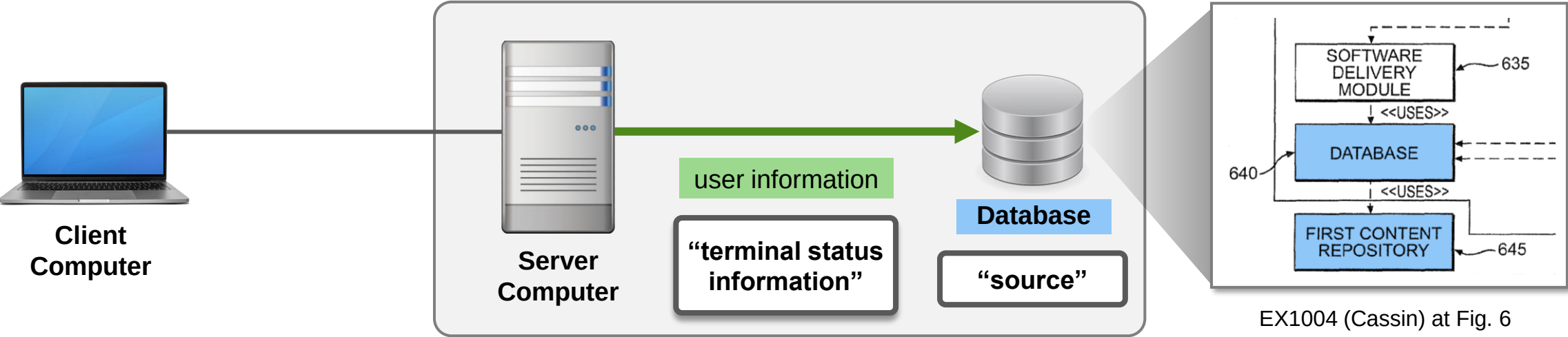
"server status information comprises a listing of at least one piece of content available from the source"

The database need not contain the media files themselves. As an alternative, the media files may be stored within a first content repository 645 associated with the server computer

EX1004 (Cassin) at [0146]

THE SERVER COMPUTER USES INFORMATION TO QUERY DATABASE 825

EX1004 (Cassin) at Fig. 8 (excerpted)



EX1004 (Cassin) at Fig. 6

EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

1

Cassin Teaches:

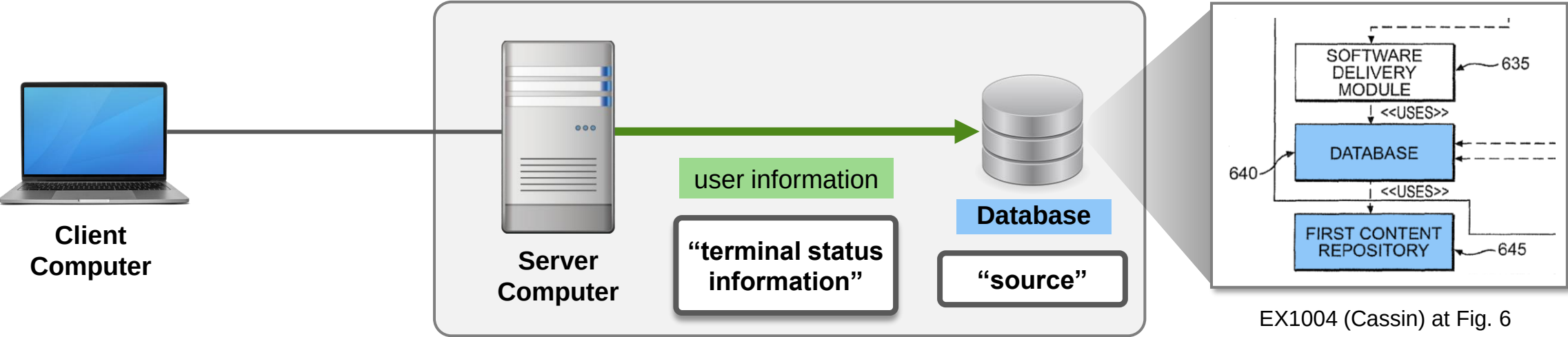
"server status information comprises a listing of at least one piece of content available from the source"

"Both the server computer's database and first content repository 645 and the client computer's local content repository 685 are configured to store various types of multimedia content including 'music, videos and multimedia programming.'"

EX1003 (Wechselberger Declaration) at ¶ 77

THE SERVER COMPUTER USES
INFORMATION TO QUERY DATABASE 825

EX1004 (Cassin) at Fig. 8 (excerpted)



EX1004 (Cassin) at Fig. 6

EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

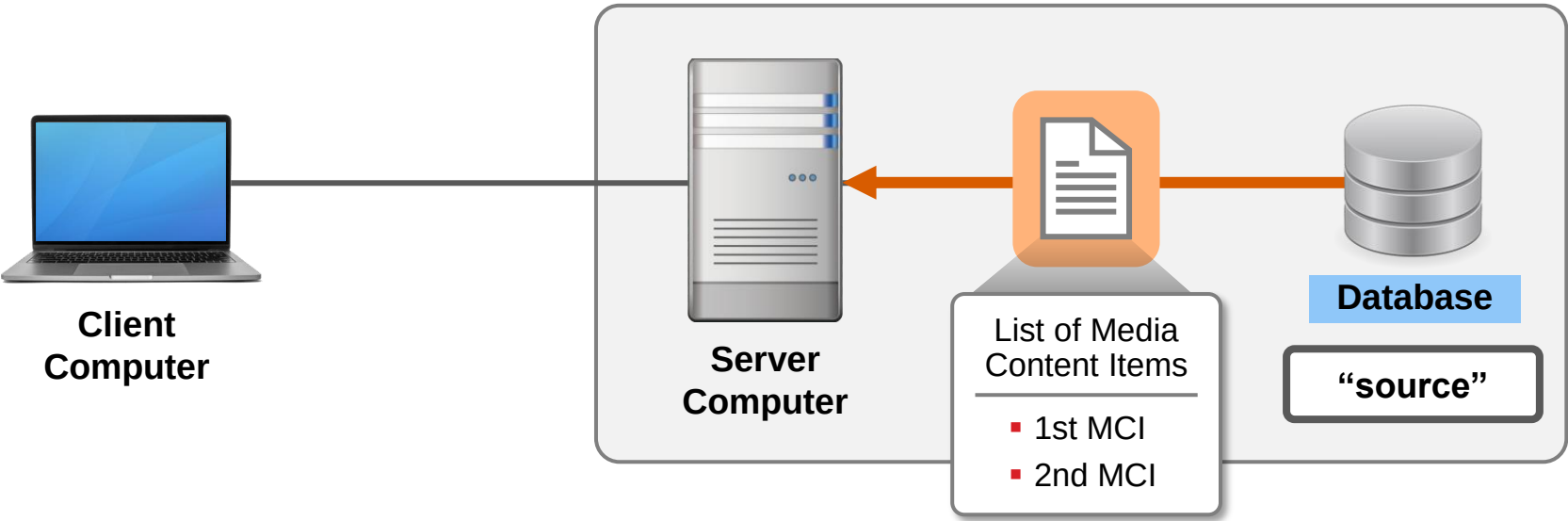
1

Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"

THE DATABASE RESPONDS WITH A LIST OF ALL MEDIA CONTENT ITEMS TO WHICH A USER IS ENTITLED

EX1004 (Cassin) at Fig. 8 (excerpted)



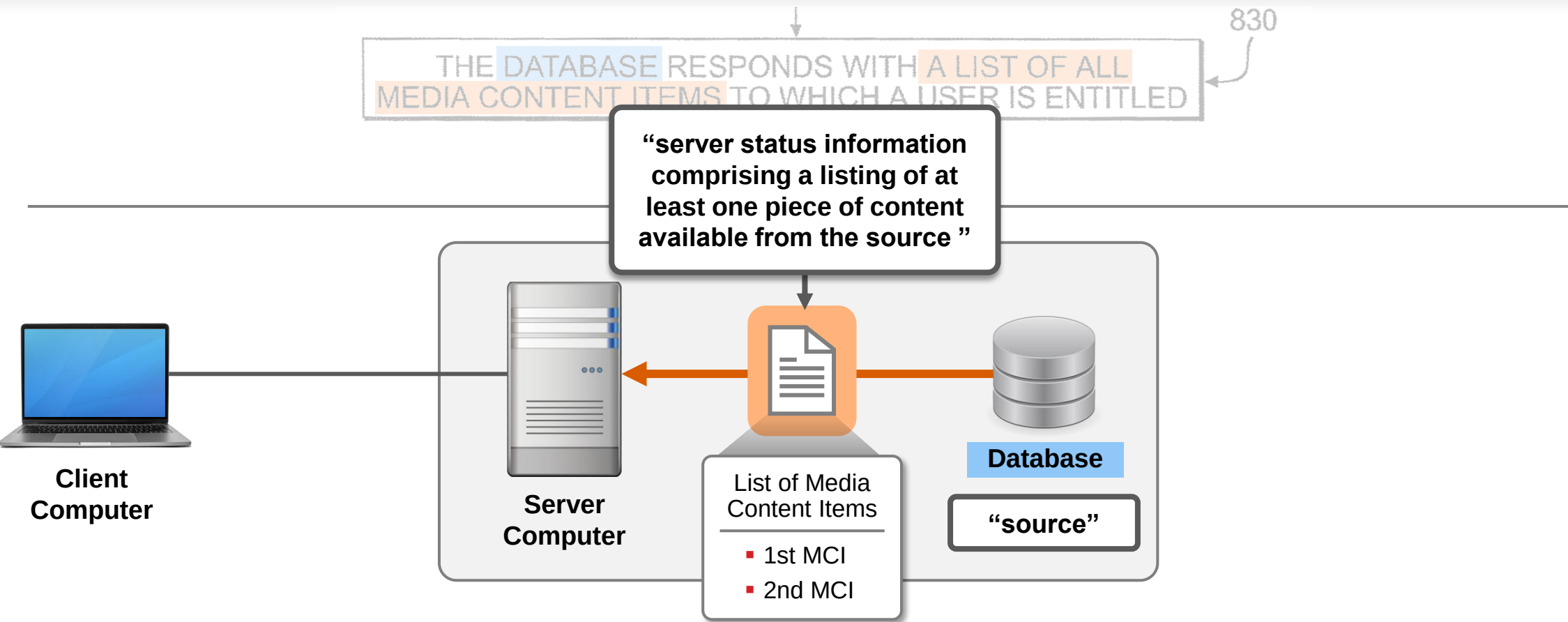
EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 23-25, 30-31; ID at 13, 15-16; Reply at 13, 16-17; EX1001 at 2:62-65, 3:15-20, 3:62-66; EX1003 ¶¶ 67, 71-76, 82, 102, 121-22; EX1004 at [0146], [0155], [0164]-[0166], Figs. 6, 8-9.

1

Cassin Teaches:

"server status information comprises a listing of at least one piece of content available from the source"



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

1 Patent Owner Disputes *Cassin's* “server status information”

Patent Owner:

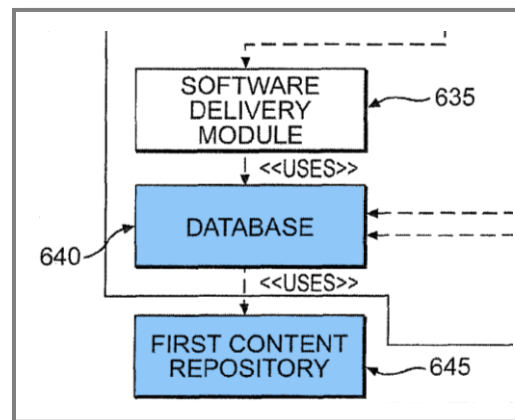
Cassin's database does not accurately reflect content from the first content repository

The database need not contain the media files themselves. As an alternative, the media files may be stored within a first content repository 645 associated with the server computer system 610. The contents of the first content repository 645 may be accessible via the database 640.

EX1004 (*Cassin*) at [0146]

form of metadata. The information must include metadata about the media content available to the system, including for example, descriptions of packages, series and episodes.

EX1004 (*Cassin*) at [0146]



EX1004 (*Cassin*) at Fig. 6

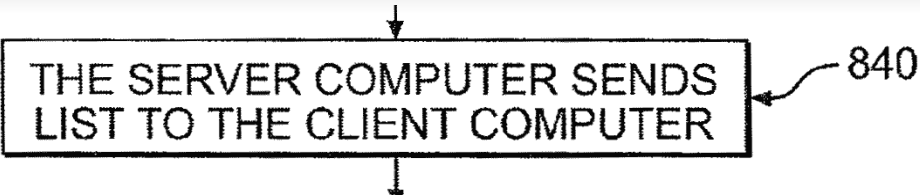
“Both the server computer’s database and first content repository 645 and the client computer’s local content repository 685 are configured to store various types of multimedia content including ‘music, videos and multimedia programming.’”

EX1003 (*Wechselberger Declaration*) at ¶ 77

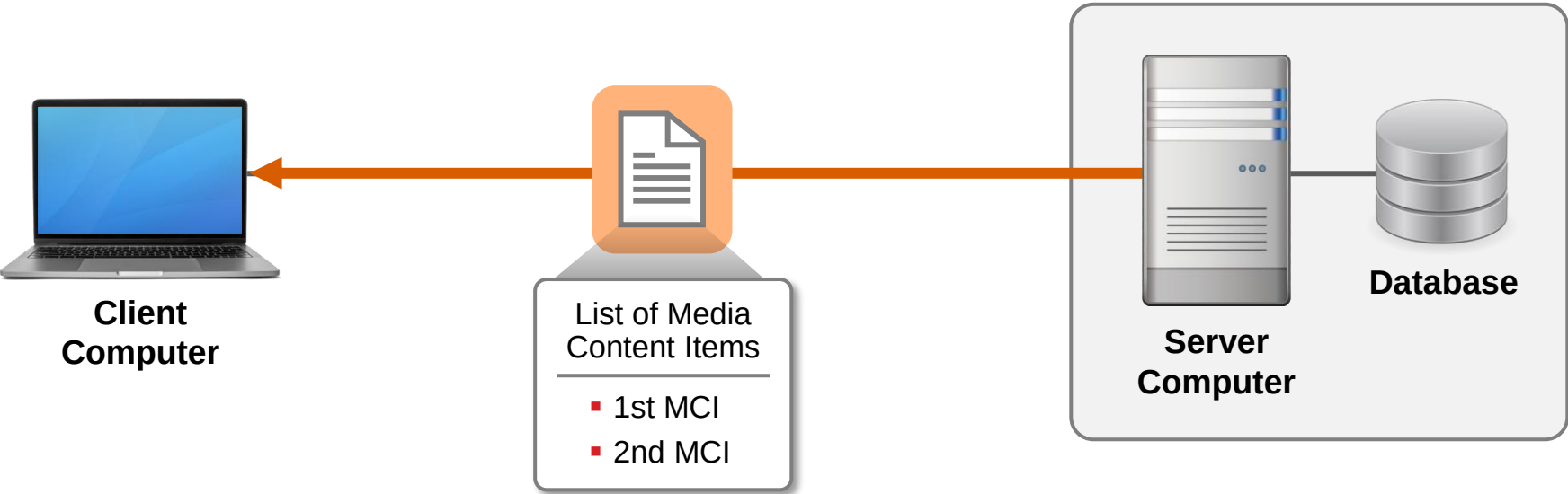
2

First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 24-26, 28-30; ID at 13-14; Reply at 10-14;
EX1003 ¶¶ 71-75, 97, 113-15, 121-22, 128; EX1004 at [0146], [0163]-[0166], Fig. 8.

2

First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

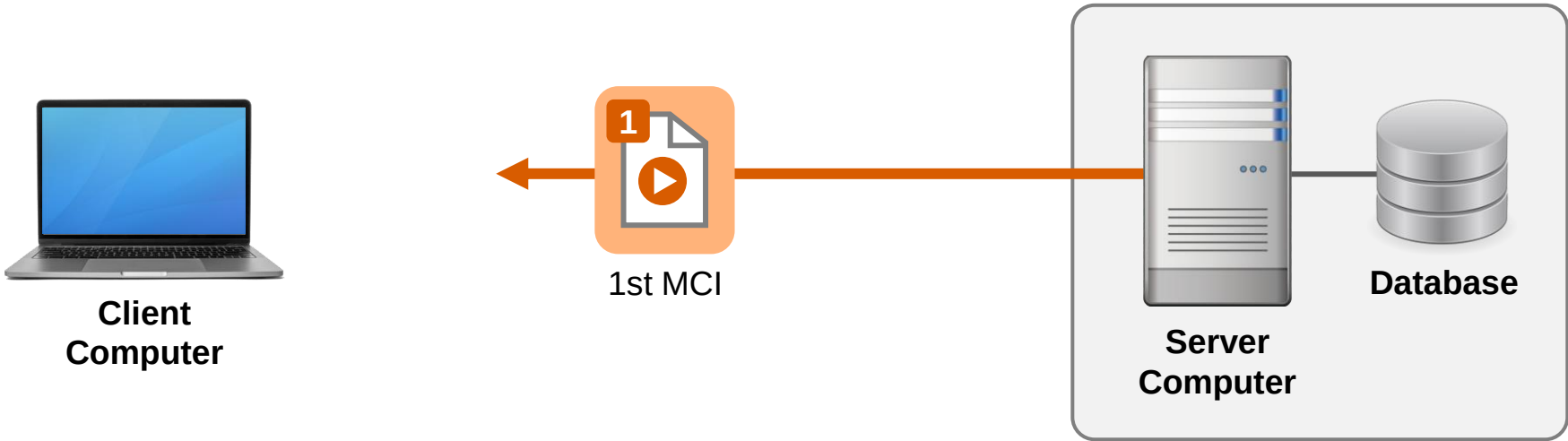
850

↓

THE SERVER COMPUTER ATTEMPTS TO SEND A FIRST MEDIA CONTENT ITEM ON LIST TO THE CLIENT COMPUTER

↓

EX1004 (Cassin) at Fig. 8 (excerpted)

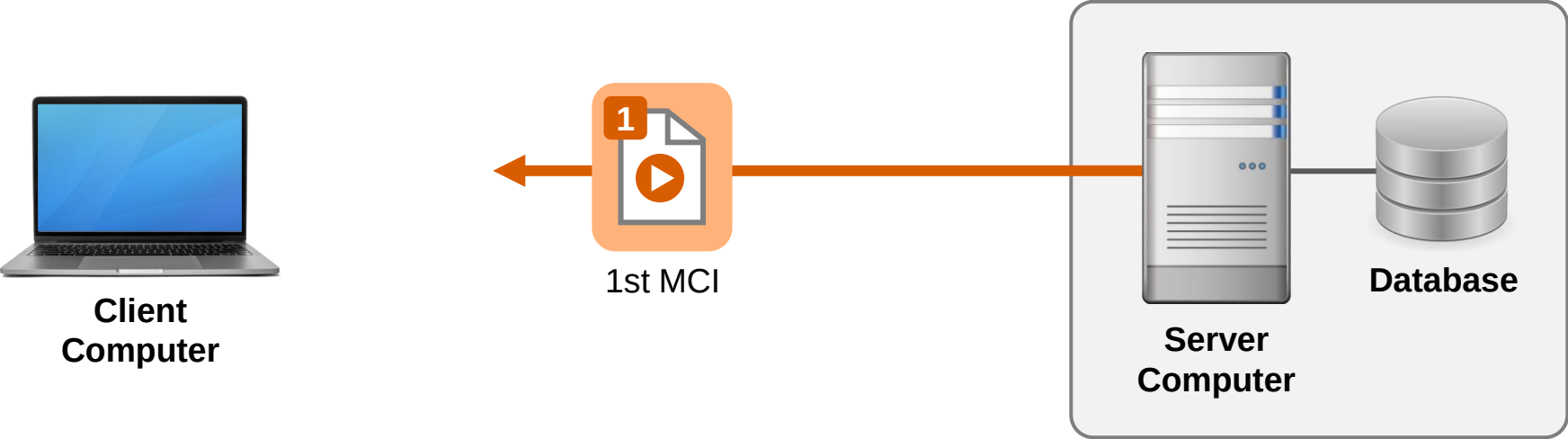
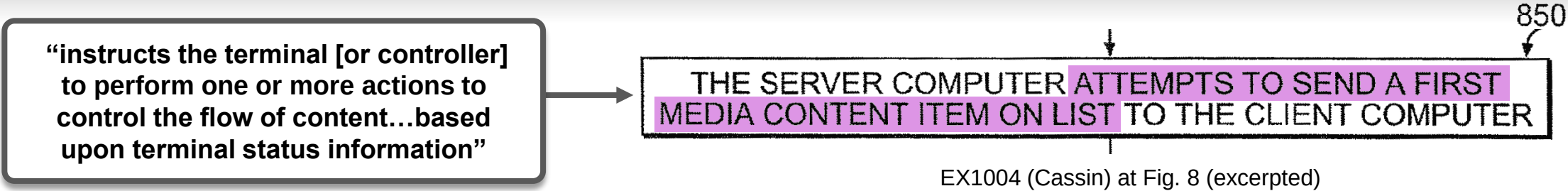


EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

2

First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

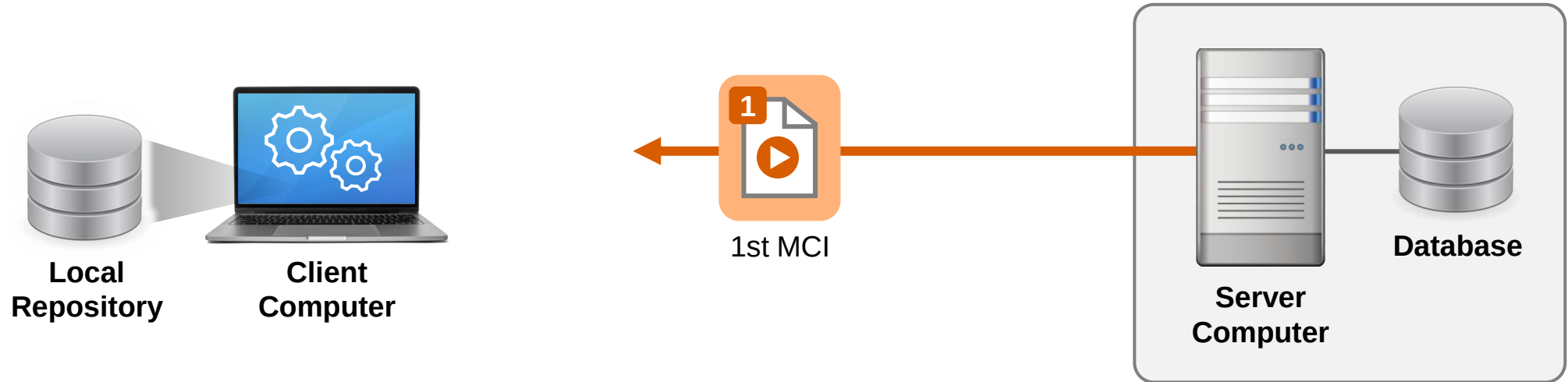
2

First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

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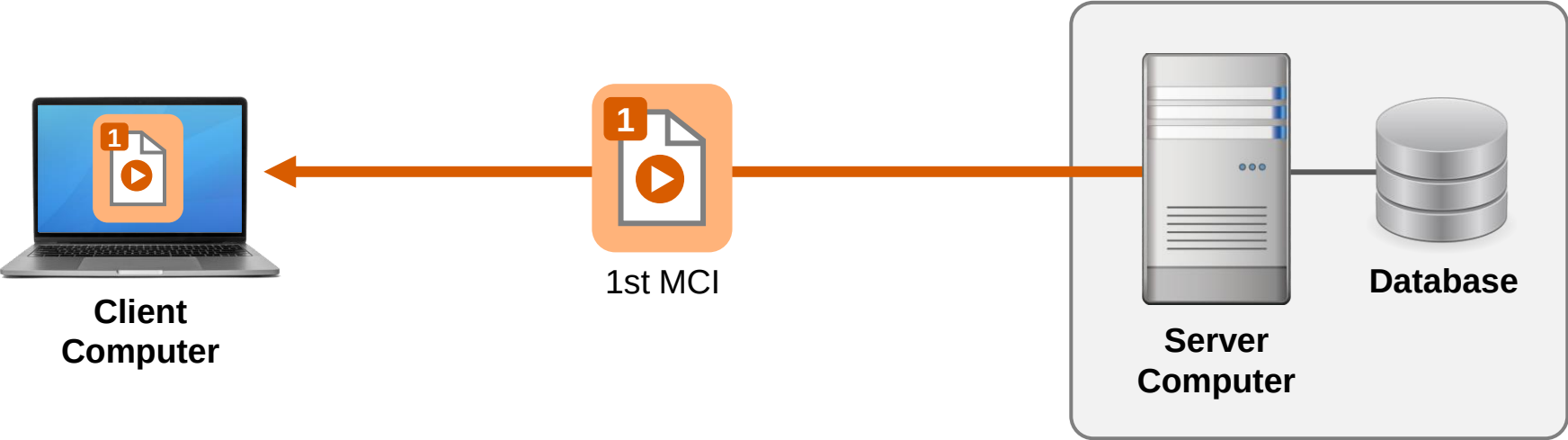
First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

THE CLIENT COMPUTER ACCEPTS THE FIRST MEDIA
CONTENT ITEM FROM THE SERVER COMPUTER IF
THE CLIENT COMPUTER DOES NOT
ALREADY HAVE THE FIRST MEDIA CONTENT ITEM

880

EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 24-26, 28-30; ID at 13-14; Reply at 10-14;
EX1003 ¶¶ 71-75, 97, 113-15, 121-22, 128; EX1004 at [0146], [0163]-[0166], Fig. 8.

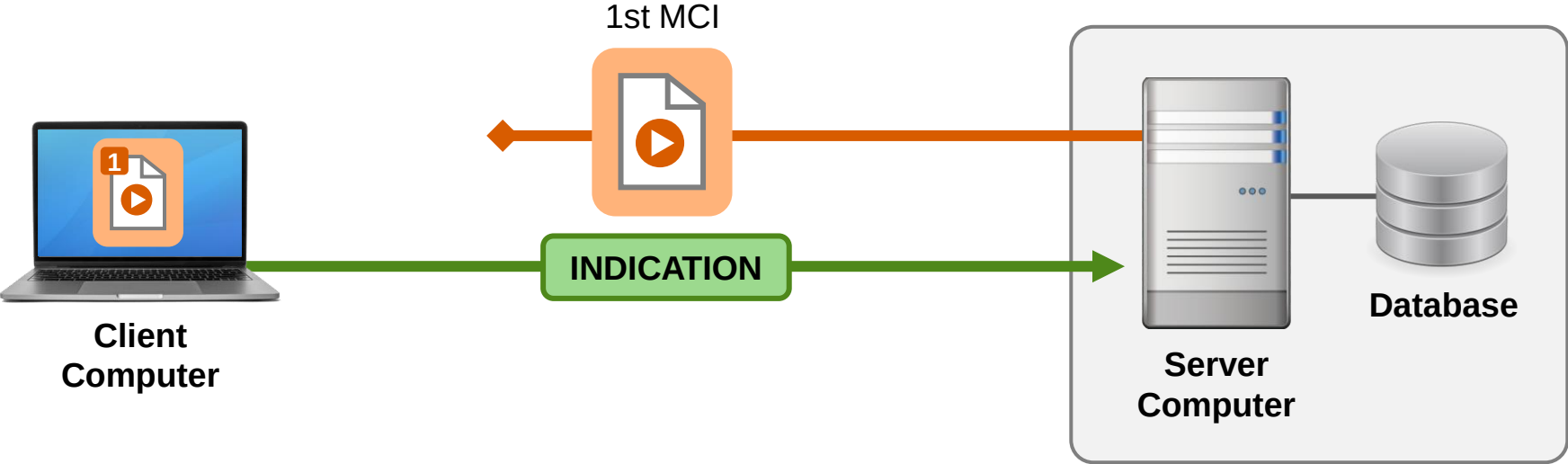
2

First Way Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

IF THE CLIENT COMPUTER HAS THE FIRST MEDIA
CONTENT ITEM, THE CLIENT COMPUTER PROVIDES
AN INDICATION TO THE SERVER COMPUTER THAT IT
CURRENTLY HAS THE FIRST MEDIA CONTENT ITEM

EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Pet. at 24-26, 28-30; ID at 13-14; Reply at 10-14;
EX1003 ¶¶ 71-75, 97, 113-15, 121-22, 128; EX1004 at [0146], [0163]-[0166], Fig. 8.

Patent Owner Disputes *Cassin's* “user information” Is “terminal status information”

Patent Owner:

- “terminal status information” is limited to information about the terminal’s contents
- *Cassin's* “user information” is not “terminal status information”

mation. Advantageously, the terminal status information can include information regarding the terminal that accounts for user preferences, capabilities of the terminal and/or previous contents stored by the terminal. Thus, in contrast to conven-

EX1001 ('559 Patent) at 3:1-4

2

Patent Owner Disputes *Cassin*’s “user information” Is “terminal status information”

Patent Owner:
Cassin’s “statistical user information” is not “user preferences”

Cassin

[0191] A fourth media content item containing a news audio program is included in the Inbox folder 710. The user decides to listen to the latest installment of the news audio program to which the user subscribes. The sponsor for this content item knows from the statistical user information gathered for that user, that the user is a woman between 35-50 years of age and making between \$25,000 to \$35,000 a year income. The dynamic advertisement insertion feature inserts the advertisement that will most likely appeal to Jane.

EX1004 (Cassin) at [0191]

THE SERVER COMPUTER USES
INFORMATION TO QUERY DATABASE

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EX1004 (Cassin) at Fig. 8 (excerpted)

'559 Patent

includes terminal status information. A network entity, such as a digital broadcast receiver, can then control the flow of content to the terminal based upon the terminal status information. Advantageously, the terminal status information can

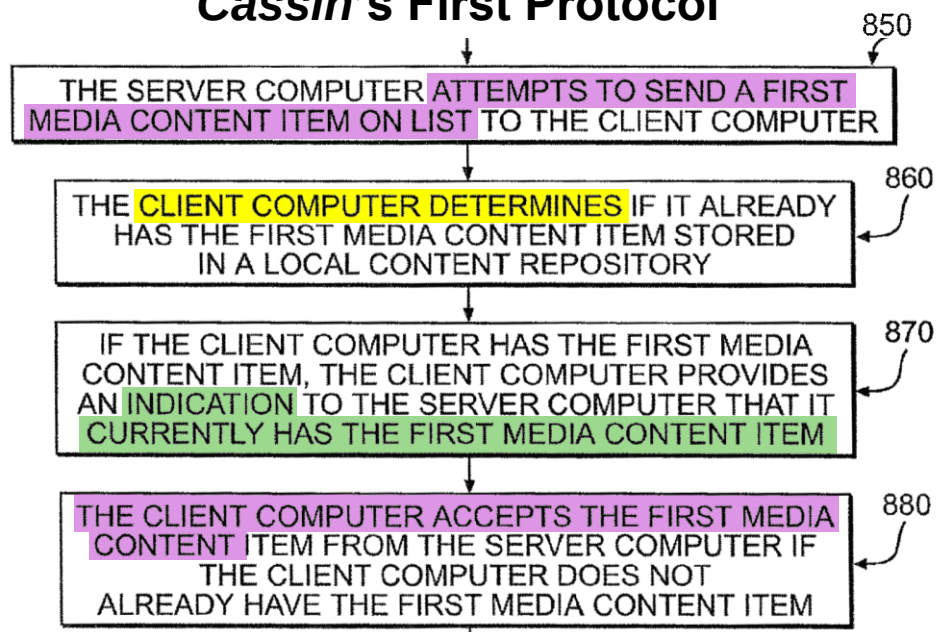
EX1001 ('559 Patent) at 2:65 – 3:1

Patent Owner Disputes *Cassin* "instructs the terminal ... based upon terminal status information"

Patent Owner:

Server sending content does not "instruct" because content is already sent

Cassin's First Protocol



EX1004 (*Cassin*) at Fig. 8 (excerpted)

'559 Patent

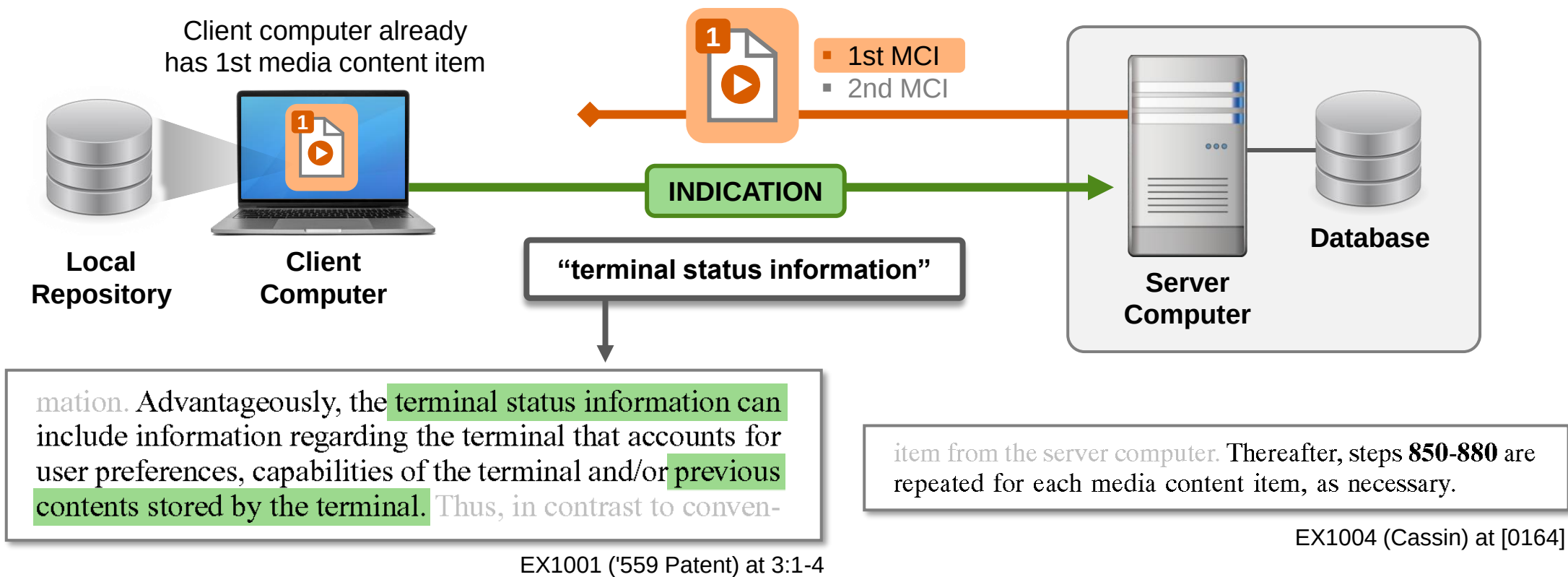
Reference is now made to FIG. 6, which illustrates various steps in a method of controlling the flow of content in accordance with one embodiment of the present invention. As shown in block 100, a method of controlling storage of content generally includes the terminal 10 downloading or otherwise receiving, at one or more points in time, one or more pieces of content from a content source, such as the origin server 24, the digital broadcast receiver 28 or the like. Upon

EX1001 ('559 Patent) at 11:54-61

2

Second Way - Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

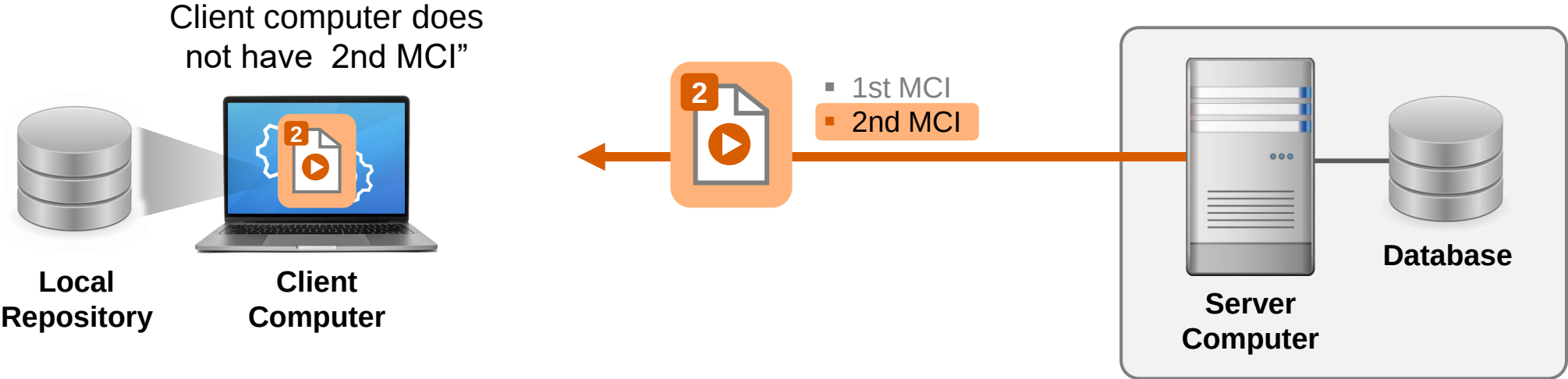
2

Second Way - Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

"instructs the terminal [or controller] to perform one or more actions to control the flow of content...based upon terminal status information"

In response to the client computer sending an "indication," the server computer will attempt to send to client computer a second media content item



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

2

Second Way - Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



Wechselberger
Petitioner Expert

In that case, the server computer instructs the client computer to download the second media content item. *Id.* In other words, the server computer is “*configured to send*” to the client, a “*response to the content status*,” which “*instructs*” to the client to download the second media content item, which satisfies the limitation of performing “*one or more actions to thereby control the flow of content to the terminal.*” The instruction to download the second media item is “*based upon the terminal status information*” (the indication) and “*the server status information*” (the list of content the client is entitled). *Id.* Thereby, the server computer controls the

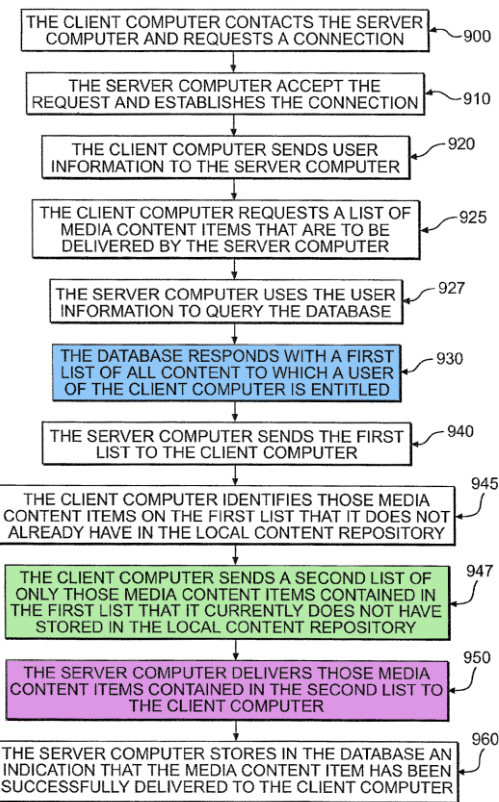
EX1003 (Wechselberger Declaration) at ¶ 74

2

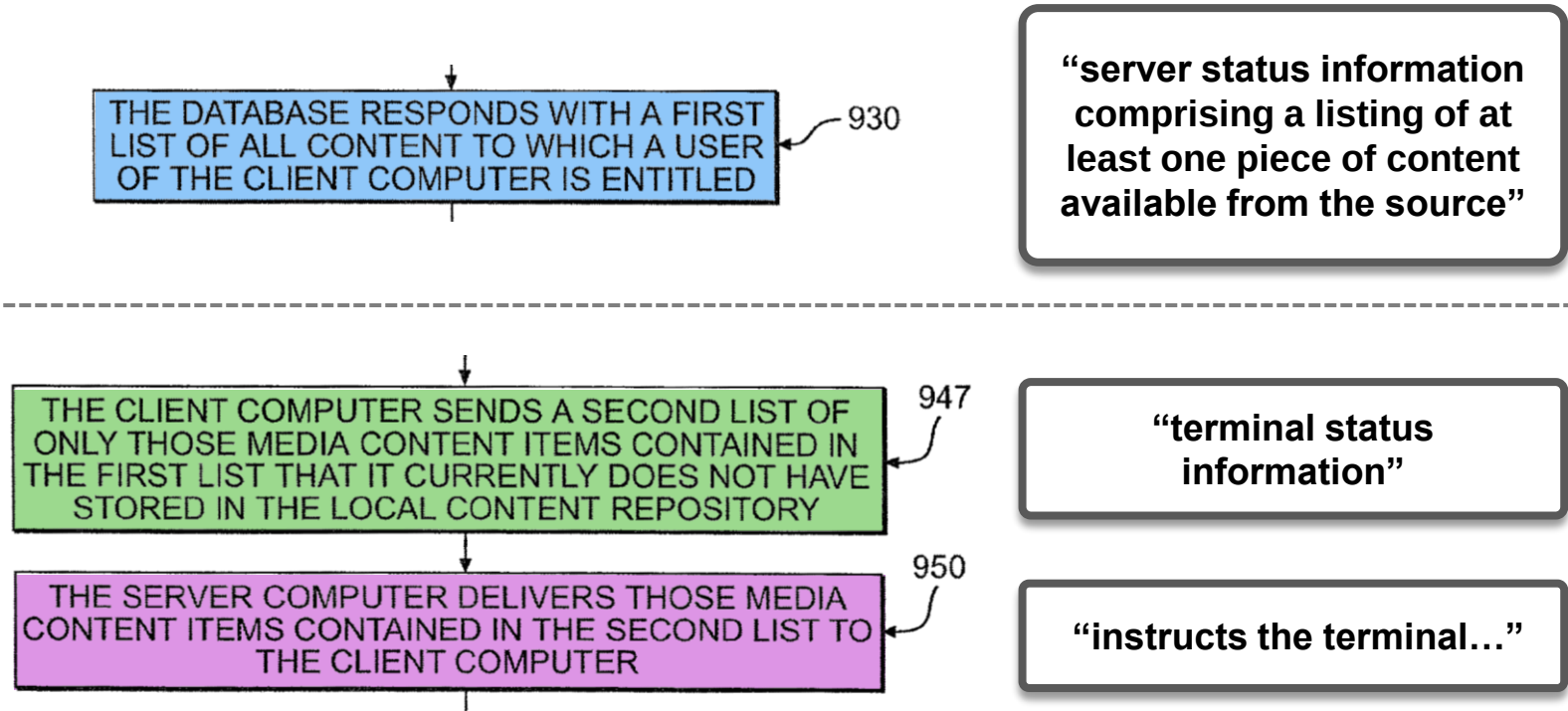
Third Way - Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

Cassin's Second Protocol



EX1004 (Cassin) at Fig. 9



2

Third Way - Cassin Teaches:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"



Wechsberger
Petitioner Expert

those media content items from the client's list. *Id.* In other words, the server computer *instructs* the client computer "*to perform one or more actions to thereby control the flow of content to the terminal,*" which in this case the server instructs the client to download those media content items from content listing to which the user is entitled that are on the client list the client sent to the server. *Id.*

EX1003 (Wechsberger Declaration) at ¶ 76

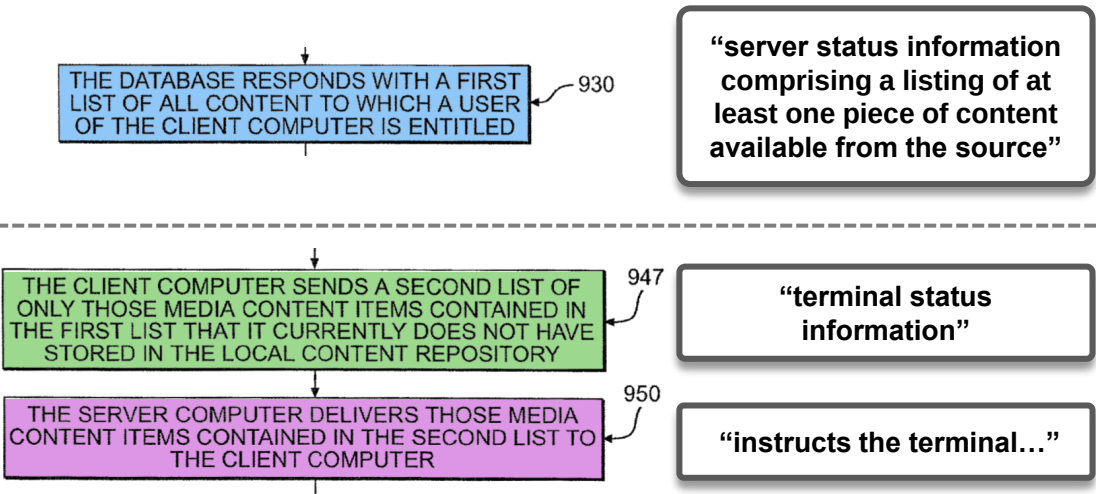
2

Patent Owner Disputes *Cassin's* Second Protocol "instructs the terminal ... based upon terminal status information"

Patent Owner:

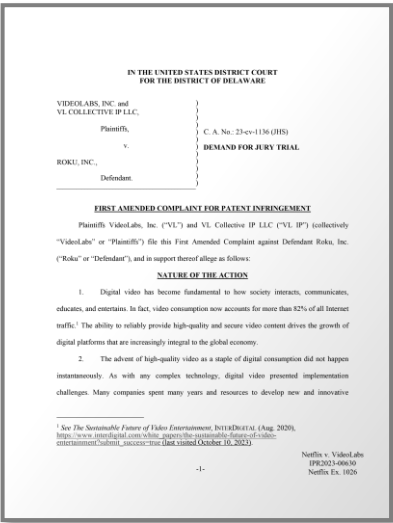
Client takes no further action after server sends media content items

Cassin's Second Protocol



EX1004 (Cassin) at Fig. 9 (excerpted)

VideoLab's Complaint: *VL v. Roku*



"terminals can now automatically be instructed to download certain content, such as when a new season of a previously watched show is released. *Id.* at 3:1-66, 11:21-30, 12:60-13:37.

EX1026 at 9

2

Fourth Way - Cassin + Huston Teach:

"a response to the content status that instructs the terminal [or controller] to perform one or more actions to thereby control the flow of content to the terminal based upon the terminal status information"

A POSITA would understand that when the server attempts to send or deliver a media content item, it is "instruct[ing] the terminal" to download



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download the second media content item. *Id.* By accepting the second media content item, the client downloads the second media content item from the server. *Id. See also id.*, [0165]. A POSITA would have understood this disclosure as "*the processor in the server control[ling] the flow of content to the terminal*" by offering the content, that instructs the client (the "*terminal*") to download the media content from the server, which is "*perform[ing] one or more actions.*"

EX1003 (Wechsberger Declaration) at ¶ 138

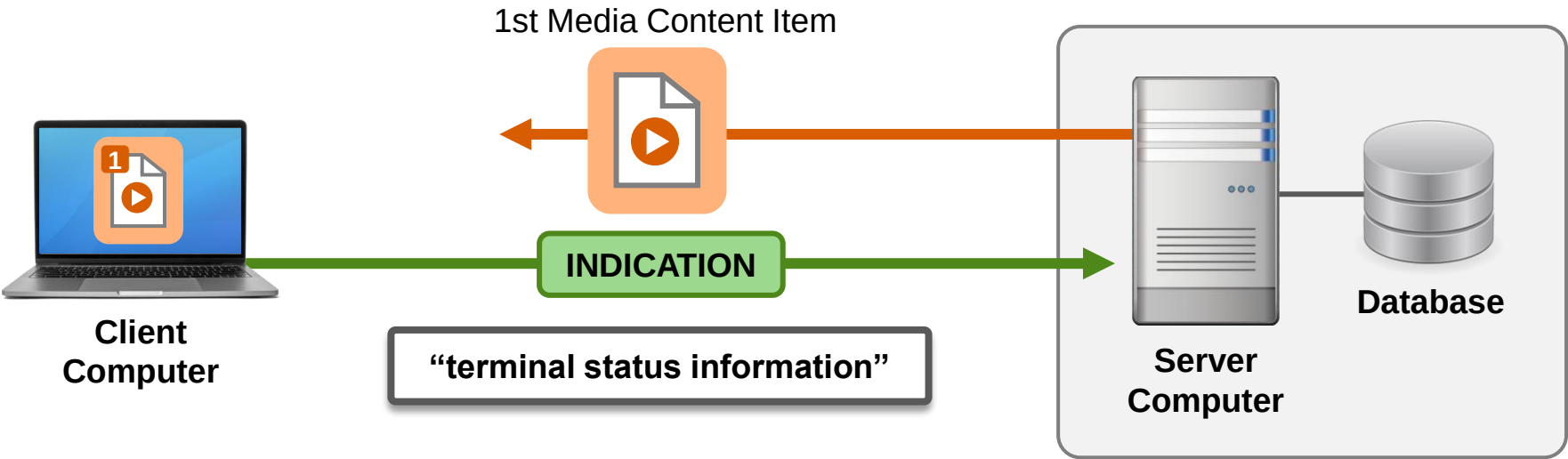
3

Cassin Teaches:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

IF THE CLIENT COMPUTER HAS THE FIRST MEDIA
CONTENT ITEM, THE CLIENT COMPUTER PROVIDES
AN INDICATION TO THE SERVER COMPUTER THAT IT
CURRENTLY HAS THE FIRST MEDIA CONTENT ITEM 870

EX1004 (Cassin) at Fig. 8 (excerpted)



EX1003 (Wechselberger Declaration) at ¶ 71; EX1004 (Cassin) at [0146], [0164], [0166]

Cassin Teaches:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

Cassin's claims demonstrate that the **"indication"** sent to the server **can** be a list of content items stored on the client computer

130. A device comprising a processor that controls asynchronous delivery of media content over a communication channel to facilitate playback of the media content through a remote device; wherein said device receives a request for a connection from the remote device; establishes the connection in response to the request, provides the remote device with a first indication that a user of the remote device is entitled to the media content, and **receives from the remote device a second indication that the remote device will accept the media content for delivery** unless the remote device already has the media content.

131. The device defined in claim 130, wherein the first indication includes a first list of a first group of media content items including at least a first media content item, which is the media content.

132. The device defined in claim 131, wherein **the second indication includes a second list of a second group of media content items** including at least a second media content item, which is the media content.

133. The device defined in claim 132, wherein the second group of media content items includes a plurality of media content items including at least the second media content item, said second group of media content items being a group of media content items **that the remote device will accept for delivery from the device.**

EX1004 (Cassin) at Claims 130, 132, 133

3

Cassin Teaches:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

Mr. Wechselberger confirms the claims demonstrate that the “**indication**” sent to the server **can** be a list of content items stored on the client computer

Id., Cls. 130-132. The scope of Claim 132 is broad, and the indication the device receives from the remote device includes a second list of media content items, which can include a listing of media content items that the client computer already has (as expressly described in paragraph [0164] of Cassin). In other words, the indication contains a listing of media content items that the client computer already has is a list of media content items that the remote device will not accept for delivery from the device.

EX1003 (Wechselberger Declaration) at ¶ 92

claim differentiation (and as I discussed in my overview of Cassin), a POSITA would have understood that Claim 133 narrows the scope of the second group of media content items to be “a group of media content items that the remote devices will accept for delivery from the device,” which necessarily means that Claim 132, which is broader than Claim 133, can include either a group of media content items that the remote devices will or will not accept for delivery from the device.

EX1003 (Wechselberger Declaration) at ¶ 93

Cassin Teaches:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

'559 Patent: **"listing"** can be one or more pieces of content

A system for controlling a flow of content includes a terminal and a network entity. The terminal is capable of sending a content status including terminal status information having a listing of one or more pieces of content stored in a memory of the terminal. The network entity includes a content flow manager that is capable of receiving the terminal status information. Then, based upon the terminal status information, the content flow manager can control the flow of content to the terminal. More particularly, for example, the content flow manager can be capable of controlling the terminal to delete at least one piece of content from a memory of the terminal, and/or download at least one piece of content from a source of content.

EX1001 ('559 Patent) at Abstract

3

Patent Owner Disputes *Cassin*'s "terminal status information comprising a listing"

Patent Owner:

- *Cassin*'s "indication" does not include a "listing"
- "indication" must be the smallest amount of data

Cassin

132. The device defined in claim 131, wherein the second indication includes a second list of a second group of media content items including at least a second media content item, which is the media content.

EX1004 (*Cassin*) at Claim 132

'559 Patent

A system for controlling a flow of content includes a terminal and a network entity. The terminal is capable of sending a content status including terminal status information having a listing of one or more pieces of content stored in a memory of the terminal. The network entity includes a content flow man-

EX1001 ('559 Patent) at Abstract



"The claims of a prior art patent are part of its disclosure."

Therasense, Inc. v. Becton, Dickinson & Co., 593 F.3d 1289, 1295 (Fed. Cir. 2010), opinion vacated then reinstated in relevant part, 649 F.3d 1276 (Fed. Cir. 2011)

3 **Cassin and Huston Teach or Suggest:**

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

Huston teaches managing and providing content to users

are illustrated and described in the context of servers. Origin servers 202, 204, 206 make content available to the Internet

* * *

From the Internet 208, content is provided to traffic servers 216, 218 over communications links 220, 222. Content is provided from traffic servers 216, 218 to clients 224, 226, 228 over communications links 230, 232, 234, respectively. Traffic servers 216, 218 are mechanisms that control the flow of traffic, i.e., content, between the Internet 208 and clients 224, 226, 228. Traffic servers 216, 218 are

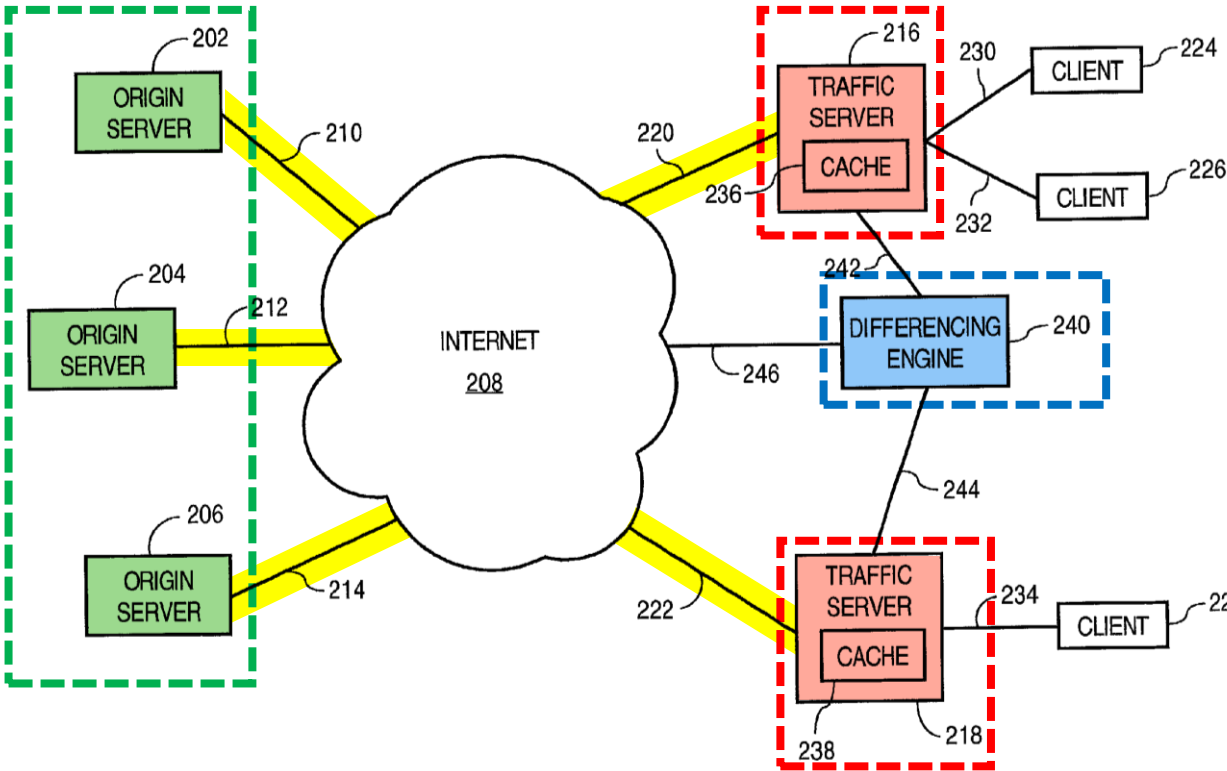
* * *

208 via a communications link 246. According to one embodiment of the invention, differencing engine 240 is configured to selectively cause content on traffic servers 216, 218 to be refreshed. More specifically, differencing engine 240 is configured to selectively cause content to be deleted from traffic servers 216, 218 and/or replaced with newer versions of the deleted content from origin servers 202, 204, 206. Traffic servers 216, 218 may initiate the retrieval of replacement content after content is deleted. Alternatively,

EX1005 (Huston) at 5:49 – 6:26

Pet. at 44-45, 53-56; ID at 22; Reply at 18-20; EX1003 ¶¶ 159-61, 211, 218; EX1005, 5:49-6:26, 6:42-55, 6:66-7:5, 7:38-49, 16:12-29, Fig. 2A; EX2003, 53:9-15, 55:22-56:9.

Huston



EX1005 (Huston) at Fig. 2A

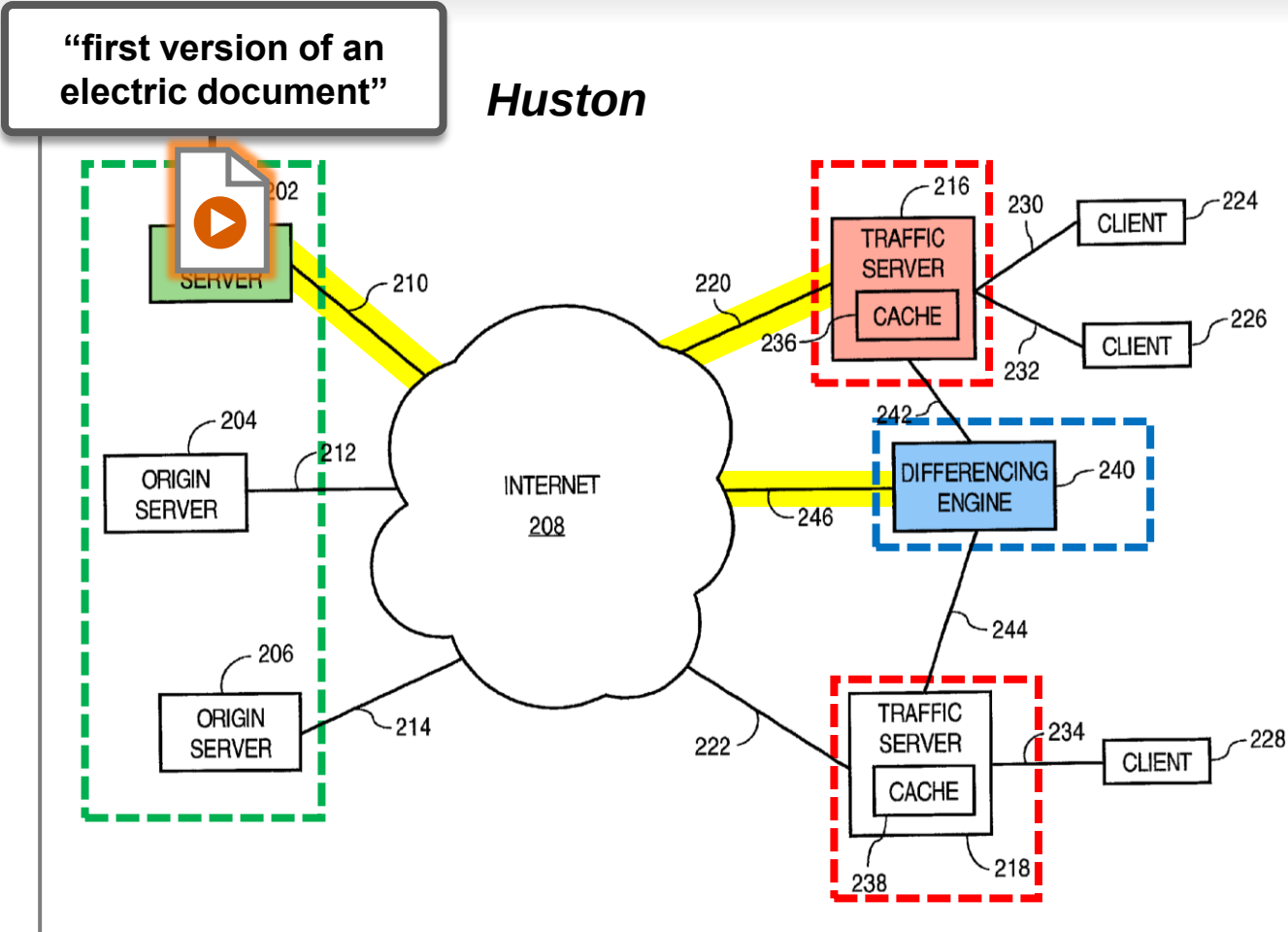
3

Cassin and Huston Teach or Suggest:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

deletion. For example, suppose that a first version of a particular electronic document is generated and stored on origin server 202. The first version of the particular electronic document is provided to traffic server 216 and stored in cache 236, for quick retrieval by clients 224, 226.

EX1005 (Huston) at 6:51-55



EX1005 (Huston) at Fig. 2A

Pet. at 44-45, 53-56; ID at 22; Reply at 18-20; EX1003 ¶¶ 159-61, 211, 218; EX1005, 5:49-6:26, 6:42-55, 6:66-7:5, 7:38-49, 16:12-29, Fig. 2A; EX2003, 53:9-15, 55:22-56:9.

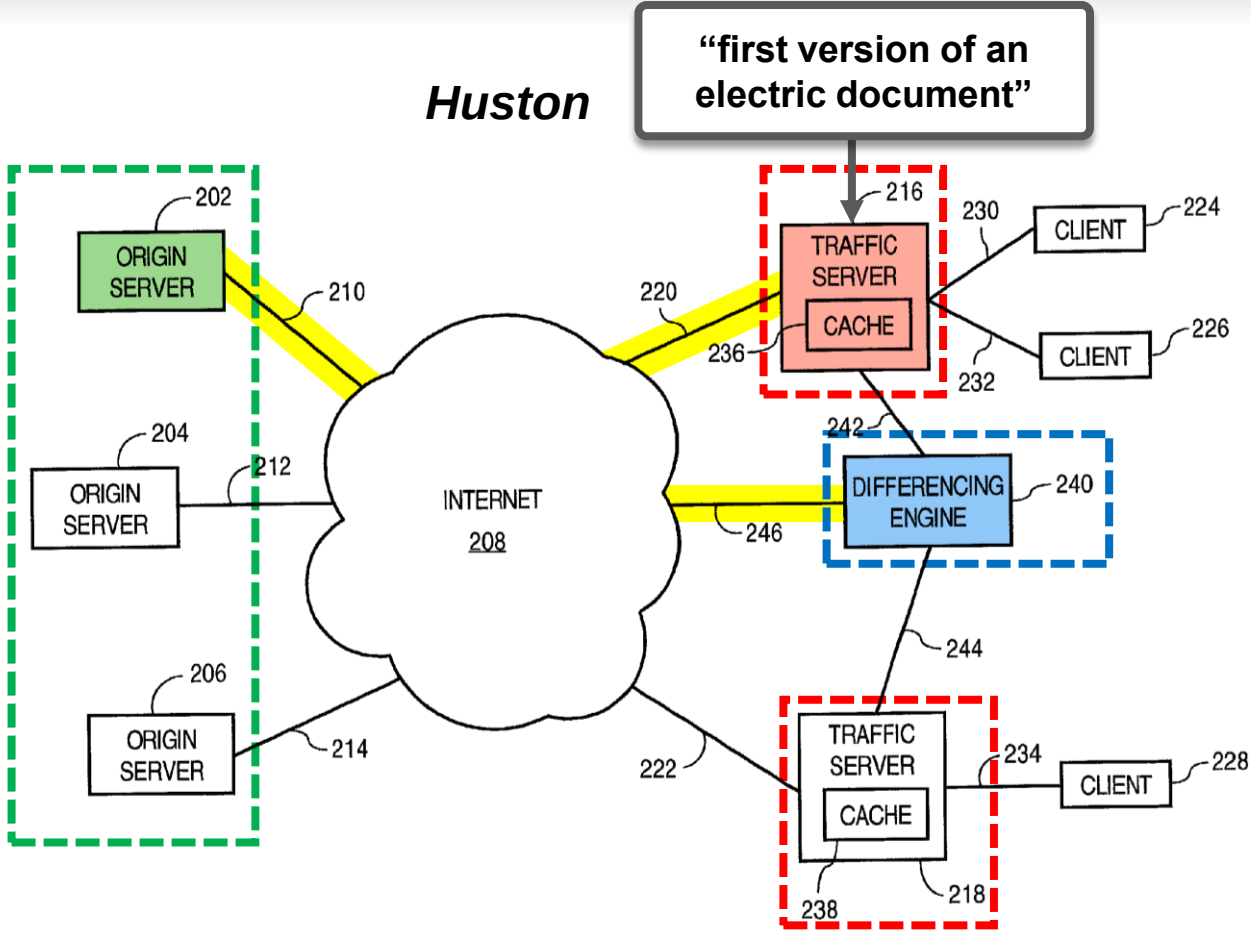
3

Cassin and Huston Teach or Suggest:

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

deletion. For example, suppose that a first version of a particular electronic document is generated and stored on origin server 202. The first version of the particular electronic document is provided to traffic server 216 and stored in cache 236, for quick retrieval by clients 224, 226.

EX1005 (Huston) at 6:51-55



EX1005 (Huston) at Fig. 2A

3 **Cassin and Huston Teach or Suggest:**

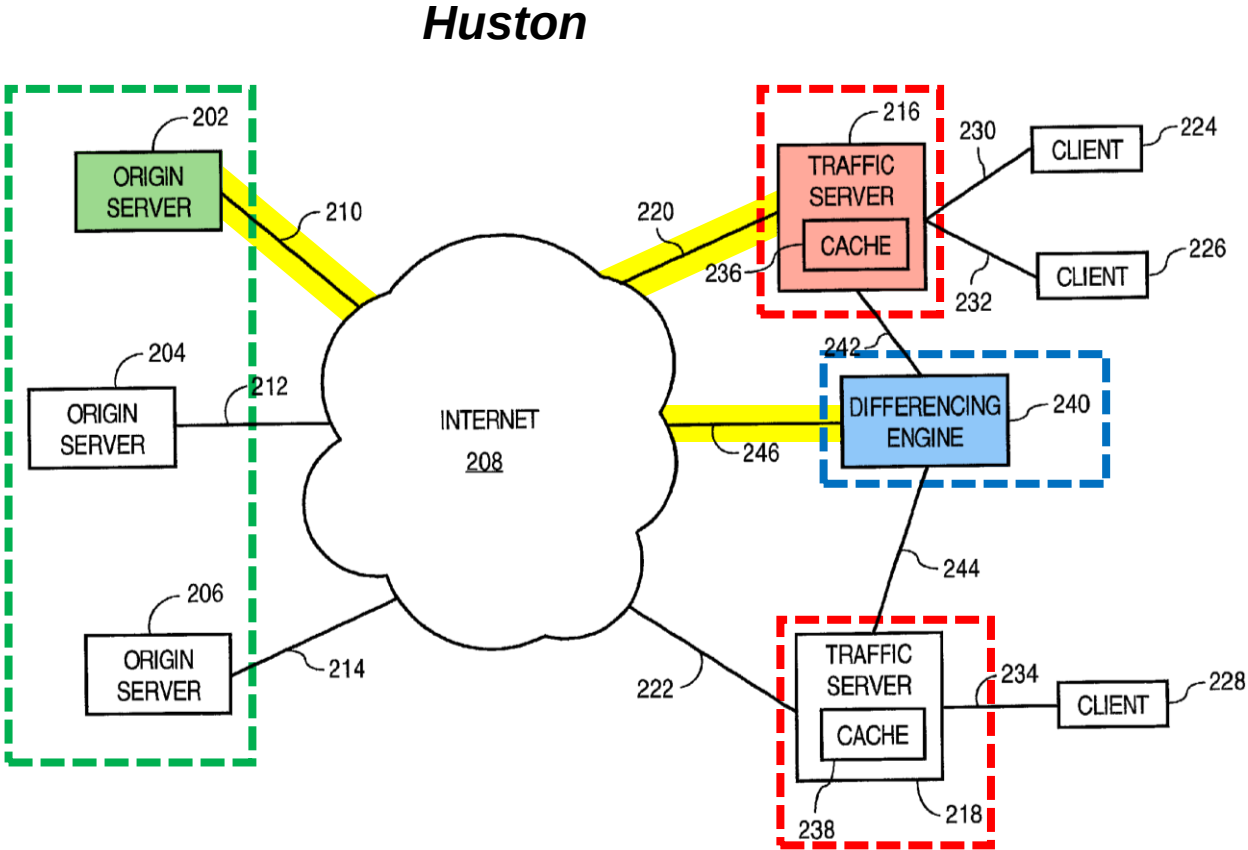
"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

The selection of content to be deleted from traffic servers 216, 218 may be determined according to a variety of selection criteria. According to one embodiment of the invention, differencing engine 240 selects content to be deleted by comparing versions of content stored on caches 236, 238 to versions of the corresponding content stored on origin servers 202, 204, 206. Versions of content on caches

EX1005 (Huston) at 6:42-48

from origin server 202. Differencing engine 240 may use a variety of techniques to determine differences between content stored on traffic servers 216, 218 and origin servers 202, 204, 206. For example, differencing engine 240 may request from origin servers 202, 204, 206 information about versions of data stored on origin servers 202, 204, 206 that are also stored on traffic server 216, 218. As another example,

EX1005 (Huston) at 6:66 – 7:5



EX1005 (Huston) at Fig. 2A

3 **Cassin and Huston Teach or Suggest:**

"terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal"

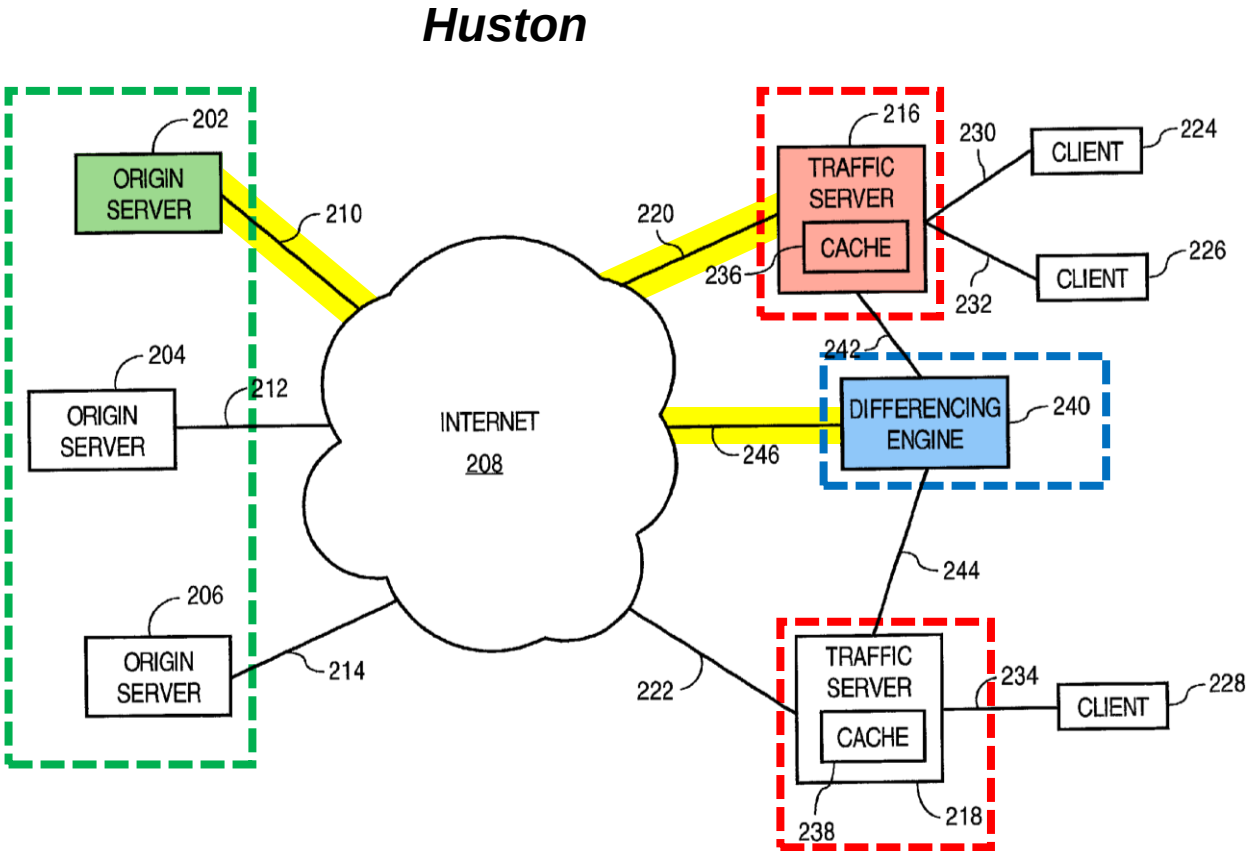


Wechselberger | Petitioner Expert

To compare the versions of content, a POSITA would have understood that the differencing engine (content flow manager “*network entity*”) would receive a communication from the traffic servers as a result of this information request identifying the versions of the content stored on the caches 236, 238. A POSITA would have understood that this communication would include a listing of at least one piece of content stored in the traffic servers, which is a “*content status including terminal status information comprising a listing of at least one piece of content stored in memory*” from the traffic servers 216, 218 (“*terminal*”) and compare it with information sent from the origin servers (“*server status information regarding a source of content*”).

EX1003 (Wechselberger Declaration) at ¶ 211

Pet. at 44-45, 53-56; ID at 22; Reply at 18-20; EX1003 ¶¶ 159-61, 211, 218; EX1005, 5:49-6:26, 6:42-55, 6:66-7:5, 7:38-49, 16:12-29, Fig. 2A; EX2003, 53:9-15, 55:22-56:9.



EX1005 (Huston) at Fig. 2A

3

Patent Owner Disputes *Cassin* and *Huston* Teaching or Suggesting "terminal status information comprising a listing"

Patent Owner:

It would not be obvious to add a "listing"

Cassin's multiple "listing disclosures"

user information to query the database 640. In step 830, the database responds with a **list** of all content to which that user is entitled. In step 840, the server computer sends the list to

EX1004 (*Cassin*) at [0164]

have in the local content repository 685. In step 947, the client computer would send a **second list** of only those media content items contained in the **first list** that it currently does not have stored in the local content repository 685. In step

EX1004 (*Cassin*) at [0166]

Huston

The selection of content to be deleted from traffic servers 216, 218 may be determined according to a variety of selection criteria. According to one embodiment of the invention, differencing engine 240 selects content to be deleted by comparing versions of content stored on caches 236, 238 to versions of the corresponding content stored on origin servers 202, 204, 206. Versions of content on caches

EX1005 (*Huston*) at 6:42-48

from origin server 202. Differencing engine 240 may use a variety of techniques to determine differences between content stored on traffic servers 216, 218 and origin servers 202, 204, 206. For example, differencing engine 240 may request from origin servers 202, 204, 206 information about versions of data stored on origin servers 202, 204, 206 that are also stored on traffic server 216, 218. As another example,

EX1005 (*Huston*) at 6:66 – 7:5

POR at 44-47; Pet. at 44-45; Reply at 18-20; EX1003 ¶¶ 159-61; EX1004 at [0164], [0166], Figs. 8, 9, cls. 130-133; EX1005 at 6:42-48, 6:66-7:5, 7:38-49, Fig. 2A; EX2003 at 53:9-15, 55:22-56:9.

3

Patent Owner Disputes *Cassin* and *Huston* Teaching or Suggesting "terminal status information comprising a listing"

Patent Owner:

It would not be obvious to add a "listing"



Wechselberger
Petitioner Expert

1005, 6:42-51, Fig. 2A. To make the comparison between the versions of content, a POSITA would have understood that the differencing engine 240 would receive an identification of the versions of the content stored on the caches 236, 238 ("*content status including terminal status information*") from the traffic servers 216, 218 ("*terminals*"), which are "*remote*" from the differencing engine 240. *See* Ex. 1005,

EX1003 (Wechselberger Declaration) at ¶ 161

4

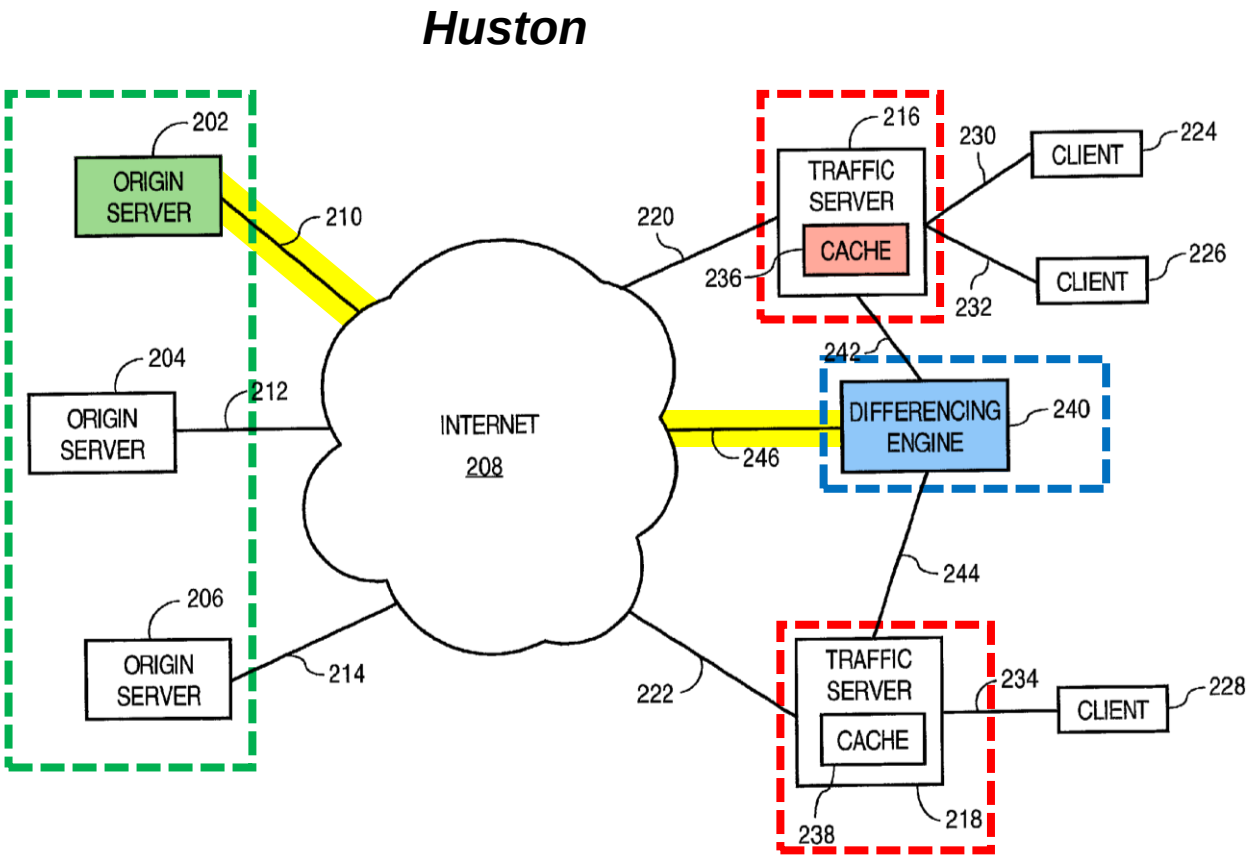
Cassin and Huston Teach or Suggest:

"instructs the terminal to delete at least one piece of content from the memory of the terminal"

Huston teaches issuing a command that instructs the terminal to delete

Deleting content from traffic servers 216, 218 may be performed using a variety of techniques and the invention is not limited to any particular technique. According to one embodiment of the invention, differencing engine 240 causes content to be deleted from traffic servers 216, 218 by issuing one or more “delete” commands to traffic servers. For example, in the context of the HTTP protocol, differencing engine 240 issues an “HTTP DELETE” command to traffic servers 216, 218 to cause content to be deleted.

EX1005 (Huston) at 6:33-41



EX1005 (Huston) at Fig. 2A

4 Patent Owner Disputes *Cassin's* and *Huston's* “instructs...to delete”

Patent Owner:

There is no “terminal status information”

described functions. Differencing engine 240 may be located elsewhere and the invention is not limited to any particular location of differencing engine 240. For example, according to one embodiment of the invention, differencing engine 240 is co-located with, or at least communicatively coupled to, origin servers 202, 204, 206. In this situation, differencing

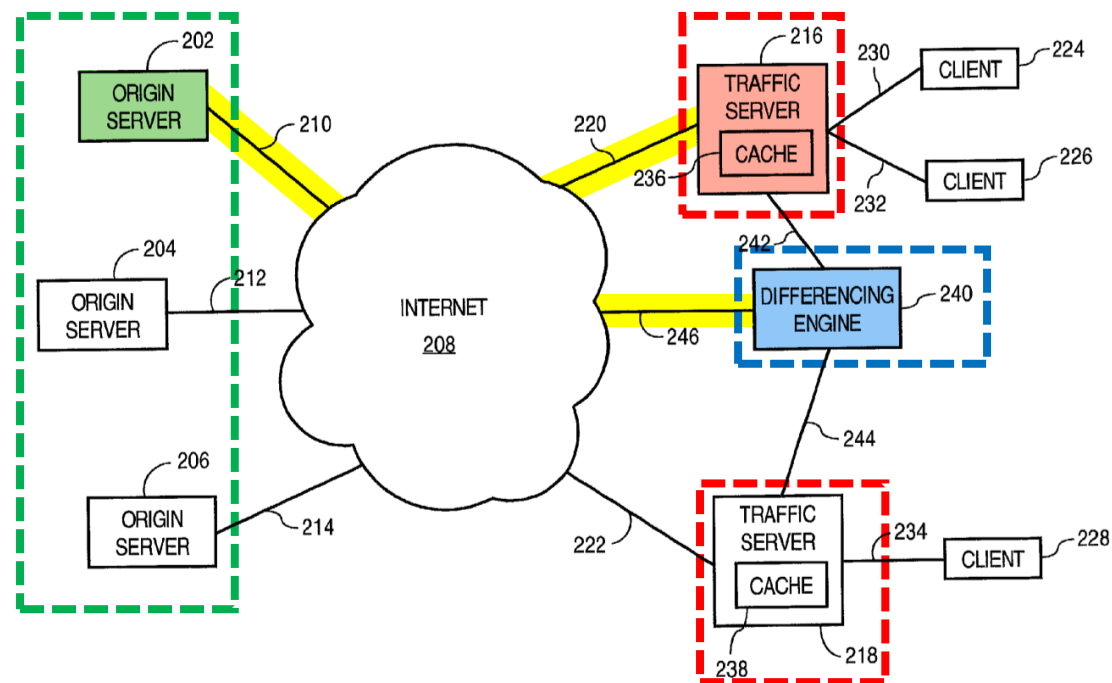
EX1005 (Huston) at 7:41-46

The selection of content to be deleted from traffic servers 216, 218 may be determined according to a variety of selection criteria. According to one embodiment of the invention, differencing engine 240 selects content to be deleted by comparing versions of content stored on caches 236, 238 to versions of the corresponding content stored on origin servers 202, 204, 206. Versions of content on caches

EX1005 (Huston) at 6:42-48

from origin server 202. Differencing engine 240 may use a variety of techniques to determine differences between content stored on traffic servers 216, 218 and origin servers 202, 204, 206. For example, differencing engine 240 may request from origin servers 202, 204, 206 information about versions of data stored on origin servers 202, 204, 206 that are also stored on traffic server 216, 218. As another example,

EX1005 (Huston) at 6:66 – 7:5



EX1005 (Huston) at Fig. 2A

5 A POSITA Would Be Motivated to Combine *Cassin* and *Huston*

- There's no dispute that *Cassin* and *Huston* are analogous
- *Cassin* provides motivation to provide delete functioning

individual episodes (“pay per view” or “PPV”). In addition to managing the how much content the end user receives, digital rights management also manages how long such media content items remain available. For example, a user may have access to a particular media content item in perpetuity, or just provide access to a particular media content item for a predetermined period of time (e.g., a single day).

EX1004 (*Cassin*) at [0182]

- *Huston* provides solution for updating content by deleting older versions

5 A POSITA Would Be Motivated to Combine *Cassin* and *Huston*

A POSITA would know how to modify *Cassin*'s server to send delete commands

- Deleting content is a known technique
- Modifying *Cassin* to “send an instruction to invoke the delete command on the client ... would have required no more than ordinary skill.”
- *Cassin* discloses a manual delete function

0171]; *see also id.*, Figs. 12-14. A POSITA would have needed to modify the server in *Cassin* to send an instruction to invoke the delete command on the client. Combining the teachings of *Cassin* and *Huston* would have required no more than ordinary skill because the combination would have been a simple addition of the delete function to achieve predictable results. It would have been obvious and

EX1003 (Wechselberger Declaration) at ¶ 205

Pane 730. To delete a media content item, a user would either drag the item using a mouse to the Trash folder 717, or select the content item and press the DELETE key on a keyboard associated with the client computer. In addition,

EX1004 (*Cassin*) at [0169]

Patent Owner's Disputes the Combination of *Cassin* and *Huston*

Patent Owner:

There is no mechanism in *Cassin* for issuing instructions

Pane 730. To delete a media content item, a user would either drag the item using a mouse to the Trash folder 717, or select the content item and press the DELETE key on a keyboard associated with the client computer. In addition,

EX1004 (*Cassin*) at [0169]

'559 Patent, Claim 1

1. An apparatus comprising:
 - 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, 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
 - 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.

'559 Patent, Claim 2

2. An apparatus according to claim 1, wherein the terminal comprises a memory, and wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to at least one of delete at least one piece of content from the memory of the terminal, or download at least one piece of content from the source.

'559 Patent, Claim 3

3. An apparatus according to claim 2, wherein the terminal status information comprises a listing of at least one piece of content stored in the memory of the terminal, and wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to delete at least one piece of content from the memory of the terminal based upon the listing of at least one piece of content stored in the memory of the terminal.

'559 Patent, Claim 4

4. An apparatus according to claim 2, wherein the server status information comprises a listing of at least one piece of available content from the source, and wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to download at least one piece of content from the source based upon the listing of at least one available piece of content from the source.

'559 Patent, Claim 5

5. An apparatus according to claim 2, wherein the processor is configured to determine if the memory of the terminal includes at least one piece of content to delete, and wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to delete at least one piece of content when the processor determines that the memory of the terminal includes at least one piece of content to delete.

'559 Patent, Claim 6

6. An apparatus according to claim 5, wherein the processor is further configured to determine if source includes at least one available piece of content for the terminal to download, and wherein the processor is configured to send, to the terminal, a response to the content status that instructs the terminal to download at least one available piece of content when the processor determines that the source includes at least one available piece of content for the terminal to download.

'559 Patent, Claim 7

7. An apparatus comprising:
a controller operable with a terminal including a memory configured to store at least one piece of content, wherein the controller is configured to send a content status including terminal status information comprising a listing of at least one piece of content stored in the memory, wherein the controller is configured to send the content status to a remote network entity, and receive a response to the content status from the network entity that instructs the controller to perform one or more actions to thereby control a flow of content to the terminal based upon the terminal status information, and
wherein the at least one piece of content stored in the memory, and the content for which the network entity is configured to control the flow, comprise multimedia content.

'559 Patent, Claim 13

13. A method for controlling a flow of content, the method comprising:

receiving, at a network entity from a terminal located remote therefrom, a content status including terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal; and sending, from the network entity 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,

wherein the at least one piece of content stored in the memory of the terminal, and the content for which the flow is controlled, comprise multimedia content.

'559 Patent, Claim 19

19. A computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:

- a first executable portion configured to receive, at a network entity from a terminal located remote therefrom, a content status including terminal status information comprising a listing of at least one piece of content stored in a memory of the terminal; and

- a second executable portion configured to send, from the network entity 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, wherein the at least one piece of content stored in the memory of the terminal, and the content for which the flow is controlled, comprise multimedia content.