UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NETFLIX, INC.,
Petitioner,

v.

VIDEOLABS, INC.,
Patent Owner

Case: IPR2023-00630
Patent No. 7,440,559 B2

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,440,559 B2

Petition Filing Date: February 23, 2023

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EXHIBIT LIST

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1002	File History of the '559 patent (Application No. 10/690,692 ("'559 patent FH")).
1003	Expert Declaration of Anthony Wechselberger.
1004	U.S. Patent Application Publication No. 2003/0023427 to Cassin filed on July 26, 2001 ("Cassin").
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1006	U.S. Patent No. 7,447,486 to Tamura filed on March 25, 2003 ("Tamura").
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I. INTRODUCTION

Netflix, Inc. ("Petitioner") respectfully requests *Inter Partes* Review of claims 1-24 of U.S. Patent No. 7,440,559 (Ex. 1001), filed on October 22, 2003 and assigned to VideoLabs, Inc. ("Patent Owner").

At its core, the '559 patent purports to cover the basic idea of controlling the flow of content to a terminal from a server. The server controls the terminal with basic status information, such as a list of content stored in the terminal, or a list of content available from the server. Based on the status information, the content flow manager can instruct the terminal to delete content from the memory of the terminal and/or download content from the source of content (*e.g.*, an origin server or digital broadcast receiver).

Unsurprisingly, this simple concept was well-known before the 2003 filing date of the '559 patent. For example, independent claims 1, 7, 13 and 19, and dependent claims 2, 4, 8, 10, 14, 16, 20 and 22 are anticipated by Cassin, which predates the '559 patent by two years but was never considered by the Patent Office. The remaining claims contain minor variations, all of which were well-known in the art at the time of the purported invention. In addition, claims 1-24 are rendered obvious by the combination of Cassin and Huston and by Huston alone. Huston also predates the '559 patent and was never considered by the Patent

Office. Thus, as described further in this Petition, the prior art renders every claim of the '559 patent anticipated or obvious and therefore unpatentable.

As demonstrated below, there is a high likelihood that Petitioner will prevail with respect to each of the challenged claims and, therefore, Petitioner respectfully requests that the Board institute trial.

II. DISCRETIONARY ANALYSIS FOR REVIEW

There is no reason for the Board to discretionarily deny this petition. Petitioner hereby stipulates that, if the Board grants institution, it will not assert in a parallel district court proceeding a ground that was raised in this proceeding. When a petitioner presents such a stipulation, "the PTAB will not discretionarily deny institution in view of parallel district court litigation." *USPTO Director's Memorandum: Interim Procedure For Discretionary Denials In AIA Post-Grant Proceedings With Parallel District Court Litigation*, 3, 7 (June 21, 2022); *Sand Revolution II, LLC v. Cont'l Intermodal Grp. – Trucking LLC*, IPR2019-01393, Paper 24, 11-12 (PTAB June 16, 2020).

A. *Fintiv* Factors

On balance, the *Fintiv* factors weigh against denying institution of trial in this matter. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential).

For example, while no motion to stay pending IPR has yet been filed in the Delaware district court case,[1] *Fintiv* factor one is neutral given that courts commonly stay cases upon IPR institution. *VMWare, Inc. v. Intell. Ventures II LLC*, IPR2020-00859, Paper 13 at 12 (PTAB Nov. 5, 2020) (finding factor one neutral, even though Petitioner had not previously sought a stay, and despite Patent Owner's argument that the district court judge was "unlikely" to issue a stay pending IPR institution).

Fintiv factors two (trial date), three (investment in proceedings), and four (overlap of issues) all weigh against the Board's exercising its discretion to deny institution. The Delaware district court case is in its infancy: there have been no infringement or invalidity contentions, or claim construction exchanges or briefing; the initial case management conference has yet to be held; a claim construction hearing has not been calendared; and the trial date has yet to be set. Petitioner filed a partial motion to dismiss, including for lack of patentable subject matter under 35 U.S.C. § 101, on June 10, 2022. Exs. 1019-1022. A hearing on that motion was held on February 9, 2023, and a decision is pending.

Fintiv factor five is neutral because Petitioner and Patent Owner are the same parties as in the district court. *Weatherford U.S. v. Enventure Global Tech.,*

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[1] *See VideoLabs, Inc. v. Netflix Inc.*, Case 1:22-cv-00229 (D. Del.).

Inc., IPR2020-01684, Paper 16 at 11–13 (PTAB Apr. 14, 2021). *Fintiv* explained that "it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding." *Fintiv*, IPR2020-00019, Paper 11 at 11. Here, Petitioner filed this Petition even before that, as Patent Owner has yet to serve contentions fully identifying the purportedly infringed claims. Accordingly, Petitioner has been diligent in pursuing its Petition; this too weighs against the Board's exercising its discretion to deny institution.

Finally, *Fintiv* factor six (other circumstances) weighs against denying institution. This Petition is strong on the merits and demonstrates that all claims of the '559 patent are rendered anticipated or obvious.

Considering the *Fintiv* factors overall, institution would best serve the efficiency and integrity of the system.

B. *Becton Dickinson/Advanced Bionics/General Plastics* Factors

Denying institution under 35 U.S.C. § 325(d) would not be appropriate here, because the grounds and arguments relied on by this Petition were not previously presented to the Patent Office. None of the relied-upon art was considered during prosecution. This is the only IPR that has ever been filed against the challenged claims.

Because this is Petitioner's first petition against the '559 patent, the *General Plastic* factors do not weigh against institution. *See General Plastic Indus. Co. v.*

Canon Kabushiki Kaisha, IPR2016-01357, Paper 19, 16 (PTAB Sept. 6, 2016) (precedential).

III. PATENT OVERVIEW[2]

A. Background of Delivery and Downloading of Multimedia Content from Remote Devices

Downloading content from a remote device through a network was well-known before 2003. By 2000, following the dot-com boom of the late 1990s, the popularity of the Internet increased, and users were turning from traditional media sources, such as television and newspaper, to the Internet to receive media content. Ex. 1007, 1:12-16. A user may go to media servers containing information from various content providers. *Id*., 1:16-19. For example, techniques for transmitting/receiving data via a cellular phone were developed well before 2003, so that users can experience content with a large amount of data, such as video and music, on their cellular phones. Ex. 1006, 1:17-20.

Those in the art recognized that, by 2003, servers could provide to a remote client, automatic delivery of multimedia content, such as entertainment content.

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[2] This background, and the Grounds of Unpatentability herein, are further supported by the Declaration of Petitioner's expert, Anthony Wechselberger, who has over twenty-five years of experience related to video transmission and reception. (Ex. 1003.)

Ex. 1007, 1:29-34; Ex. 1009, Abstract; *see also* Ex. 1010, Abstract. Prior to the ’559 patent, it was a known problem that transmission of content was limited by bandwidth and connection rates of mobile devices. Ex. 1013, 1:42-57. A common goal was to improve network efficiency from a transmitter to a terminal. *Id*. Further, deleting content from a device that was expired was well-known and common sense. *See, e.g.,* Ex. 1015, [0024, 259]; Ex. 1003, ¶¶12-14,33-34.

B. Summary of the Alleged Invention of the ’559 Patent

The ’559 patent, filed on October 22, 2003, claims no other priority. Ex. 1001.

The ’559 patent is purportedly directed to an improved system and associated terminal, method and computer program product for controlling the flow of content. *Id*., 2:57-62. As the ’559 patent acknowledges, “[d]igital broadband data broadcast networks [were] known,” including the goal to achieve “efficient delivery of digital services.” *Id*., 1:58-67, 2:8-11. The specification of the ’559 patent admits that the concept of downloading content to mobile terminals was well-known in the art, including when to deliver new pieces of content to the mobile terminal and what new pieces of content to deliver. *Id*., 2:25-39. The ’559 patent alleges that “current techniques for downloading content can suffer from inefficient content flow control between the mobile terminal and the server or content provider.” *Id*., 2:47-49.

The ’559 patent purports to solve this alleged problem using “a terminal capable of sending a content status including terminal status information” to a content flow manager, which can control the flow of content to the terminal. *Id*., 3:10-20. The “content status” includes status information regarding the terminal. *Id*., 10:60-67. The “terminal status information” includes information that accounts for user preferences, capabilities of the terminal and/or previous content stored by the terminal, and remaining storage capacity of the memory of the terminal. *See id*., 3:1-4, 12:18-30.

In addition, the ’559 patent discloses that “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.” *Id*., 3:31-36. For example, the source of content (such as origin server 24 or digital broadcast receiver 28) is associated with the network entity operating the content flow manager. *Id*., 12:37-43.

Based upon the terminal status information and/or the server status information, the content flow manager can control the flow of content to the terminal, such as by instructing the terminal to delete at least one piece of content from the memory of the terminal and/or download at least one piece of content from the source of content. *Id*., 3:18-36. For example, the content flow manager

can "designate the expired piece(s) of content as the piece(s) of content to delete from memory of the terminal." *Id*., 13:4-10.

C. The Prosecution History

The '559 patent issued from U.S. Patent Appl. No. 10/690,692 ("the '692 application"), which was filed on October 22, 2003. Ex. 1001.

During prosecution of the '692 application, the Examiner rejected claims 1-24 as being anticipated by U.S. Patent No. 5,450,482 to Chen et al. ("Chen") in a Non-final Office Action. Ex. 1002, 90. In response, the applicant amended independent claim 1, adding the limitation "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*** consumable by the terminal" *Id*., 71 (emphasis added). Similarly, the applicant amended independent claims 7, 13, and 19 to recite "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*** consumable by the terminal." *Id*., 72-75 (emphasis added).

The applicant asserted that "Chen discloses a network automatic call distribution system (ACD) for a network including a number of switches interconnecting a number of telephones and operator switches." *Id*., 78. In distinguishing the prior art, the applicant contended that "Chen discloses switch

status including a listing of switches and services available from those switches[,]" not "a server status including a listing of content available from the source, similar to the claimed invention." *Id*., 79-80 (emphasis in original). Therefore, the applicant contended, Chen purportedly did not "teach or suggest a network entity controlling the flow of content to a terminal based on terminal status information, as well as server status information for a source of content, the server status information including a listing of ***one or more pieces of content available from the source***" as recited in claim 1. *Id*., 78 (emphasis added). The applicant also argued that Chen purportedly did not disclose a terminal status including a listing of ***content stored in memory of the terminal*** as recited in claims 7, 13 and 19. *Id*., 79-80 (emphasis added).

In a Final Office Action, the Examiner maintained the rejection that claims 1-24 are anticipated by Chen. *Id*., 64-65. To overcome the prior art rejection, the applicant amended claims 1, 7, 13 and 19 to recite a terminal that is ***remote***, and argued that the cited prior art purportedly did not disclose "***multimedia*** content." *Id*., 42-47, 51-53 (emphasis added).

In response to the prior art rejection in the second Non-final Official Action, the applicant argued, without any amendment, that the cited reference, Aubault (U.S. Patent Application Publication No. 2005/0086318), did not qualify as prior art. *Id*., 22-23.

Instead of searching for or considering any other references that would qualify as prior art, the Examiner decided to allow the claims even though only a mere twenty references were identified and, of that list, only five references were cited. *Id*., 13. The ’559 patent issued on October 21, 2008. Ex. 1001.

D. Level of Ordinary Skill in the Art

A person of ordinary skill in the art at the time of the earliest available priority date (October 22, 2003) for the ’559 patent (“POSITA”) would have had a bachelor’s degree in electrical or computer engineering, or a closely related scientific field such as computer science, and two years of work experience with multimedia content transmission and management. Alternatively, any lack of experience could be remedied with additional education (*e.g.*, a master’s degree), and likewise, a lack of education can be remedied with additional work experience (*e.g.*, 4-5 years). Ex. 1003, ¶26.

IV. IDENTIFICATION OF PRIOR ART

A. U.S. Patent Application Publication No. 2003/0023427 to Cassin (“Cassin”) (Ex. 1004)

Cassin is prior art under pre-AIA § 102(a) and (e) because it was filed on July 26, 2001 and published on January 30, 2003. Cassin was not disclosed to or considered by the Patent Office during prosecution of the ’559 patent.

Cassin is directed to delivery of media content (including audio and video) via a network to a remote device. Ex. 1004, [0099]; Fig. 1. As shown in Fig. 6

below, the system for implementing media content delivery includes a server and a client, which may be implemented as a portable device, a wireless device, or a portable wireless device. *Id*., [0141]. The server and client each include software modules. *Id*., [0143-144]. The database 640 stores metadata, which is information relating to the media content available to the system. *Id*., [0146]. Cassin teaches that the media files may be stored in the content repository 645. *Id*.

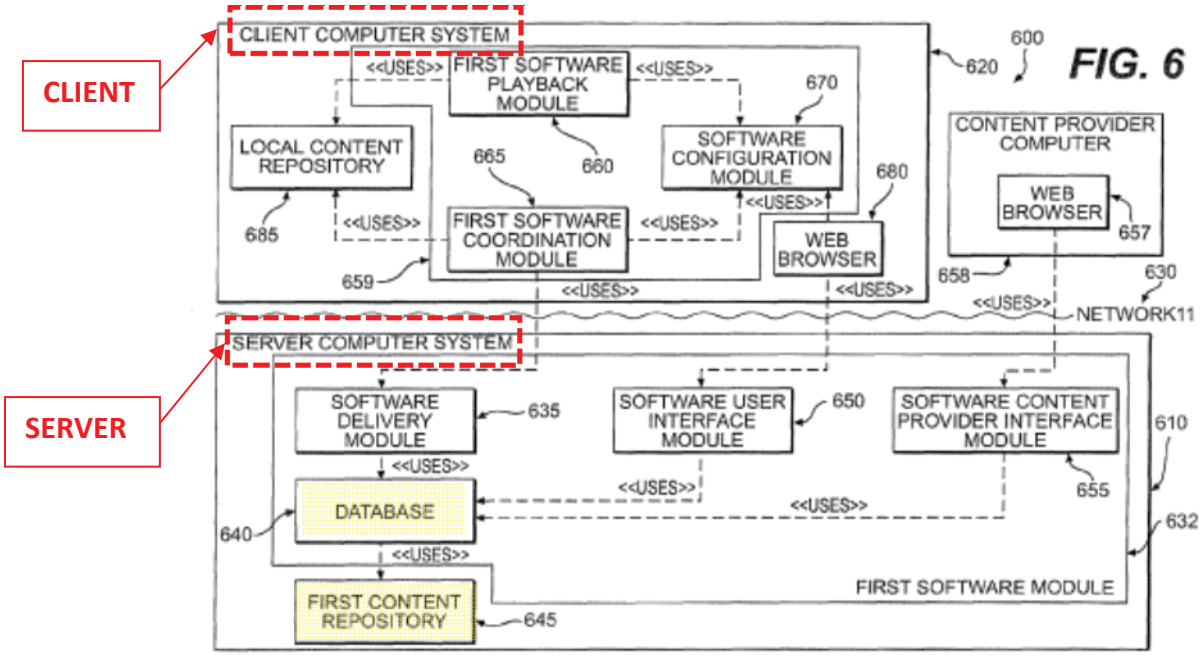


FIG. 6

Ex. 1004, Fig. 6 (annotated).

In one preferred embodiment, the remote client and server may interact in accordance with two protocols. *Id*., [0164]. The first protocol, illustrated in Fig. 8, the client sends user information to the server. *Id*. The server then uses the user information to query the database 640, which responds with a list of all content to which that user is entitled. *Id*. The server sends the list to the client, and

subsequently makes a first attempt to send a first media content item to the client. *Id*. If the client already has the media content item in its local content repository 685, the client provides an indication to the server that it already has the media content item such that the server will offer the next media item on the list. *Id*.; *see also id*., Fig. 8.

According to the second protocol, as illustrated in Fig. 9, the client sends user information to the server. Ex. 1004, [0166]. In response to the client's request, the server uses the user information to query the database 640, to which the database 640 responds with a first list of all content to which the user is entitled. *Id*. The client identifies the media content items on the first list that it does not already have in its local content repository 685, and returns a second list including only those media content items. *Id*. The server then delivers those media content items included in the second list to the client. *Id*. Ex. 1003, ¶¶35-39.

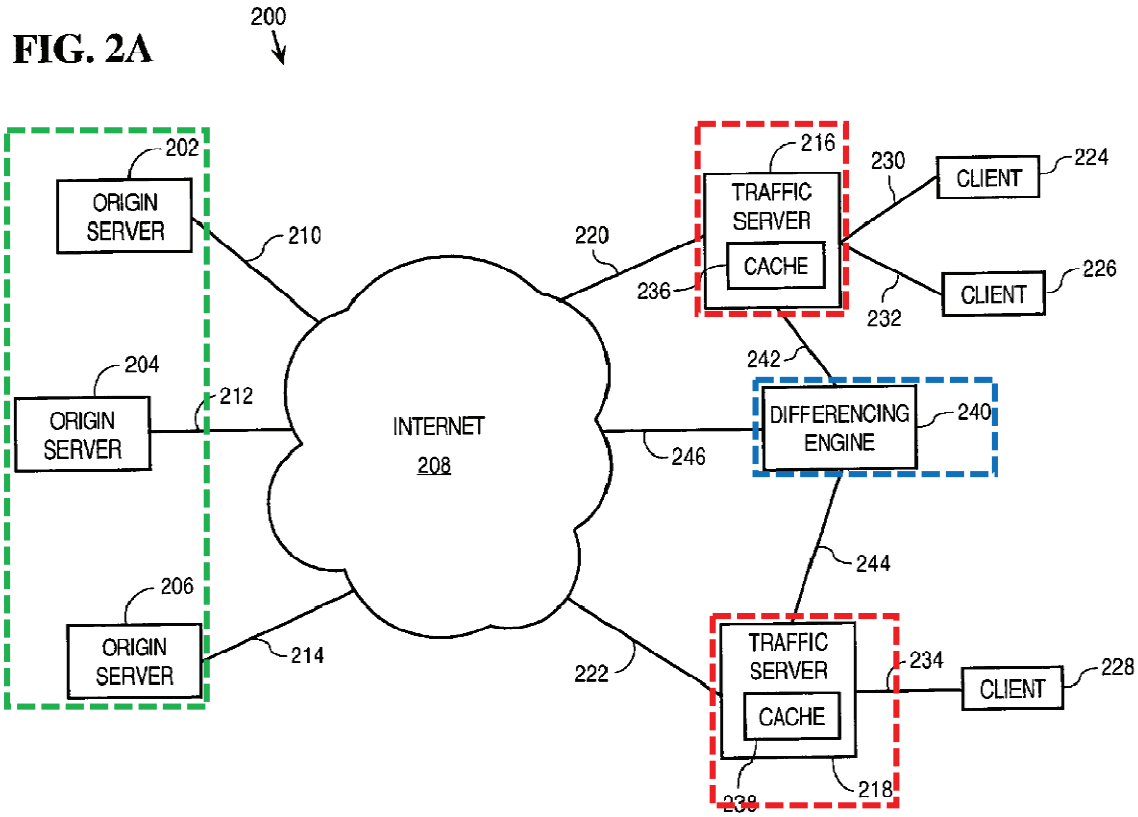
B. U.S. Patent No. 7,243,136 to Huston ("Huston") (Ex. 1005)

Huston is prior art under pre-AIA § 102(a) and 102(e) because it was filed on January 17, 2001, published on January 17, 2002, and issued on July 10, 2007. Huston was not disclosed to or considered by the Patent Office during prosecution of the '559 patent.

Huston is directed to managing content over a communications link. Ex. 1005, Abstract. As shown in Fig. 2A (reproduced below), the system includes a

differencing engine 240 (blue) that is communicatively coupled to traffic servers 216, 218 (red) via communications links 242, 244, respectively, and to Internet 208 via a communications link 246. *Id.*, 6:15-18. The origin servers 202, 204, 206 (green) host content from one or more content providers. *Id.*, 5:44-46. The differencing engine 240 may be co-located with the origin servers 202, 204, 206. *Id.*, 7:38-49.

FIG. 2A



Ex. 1005, Fig. 2A (annotated).

The differencing engine 240 is configured to selectively cause content on the traffic servers 216, 218 to be refreshed, *e.g.*, to be deleted from the traffic servers 216, 218 and/or replaced with newer versions of the deleted content from the

origin servers 202, 204, 206. *Id*., 6:18-26. To delete content from the traffic servers 216, 218, the differencing engine 240 can issue one or more "delete" commands to the traffic servers 216, 218. *Id*., 6:33-41. The selection of content to be deleted from the traffic servers 216, 218 may be determined by comparing the versions of content stored on caches 236, 238 with the versions of the corresponding content stored on the origin servers 202, 204, 206. *Id*., 6:42-48. To determine differences between content stored on the traffic servers 216, 218 and the origin servers 202, 204, 206, Huston discloses that the differencing engine 240 may request from the origin servers 202, 204, 206 information about the versions of data stored on the origin servers 202, 204, 206 that are also stored on the traffic servers 216, 218. *Id*., 6:66-7:5. Ex. 1003, ¶¶40-42.

C. Other Evidence Regarding the State of the Art

The prior art in Exhibits 1006-1015 further reflects the state of the art, level of ordinary skill in the art, common knowledge in the art, and/or common sense in the art, and is therefore also relevant to the background of the '559 patent and the invalidity analysis herein. Ex. 1003, ¶43.

V. IDENTIFICATION OF CHALLENGES AND RELIEF REQUESTED

Petitioner requests cancellation of all claims of the '559 patent based on the following 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

VI. CLAIM CONSTRUCTION

The Board construes claims "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b)." 37 C.F.R. § 42.100(b). Under this standard, the words of a claim generally are given their "ordinary and customary meaning," which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

For this IPR, Petitioner applies the plain and ordinary meaning of all claim terms and contends that no claim terms require specific construction to resolve the

unpatentability issues presented herein.[3] *See, e.g.*, *Aurobindo Pharma USA, Inc. v. Andrx Corp.*, IPR2017-01648, Paper 34, 11 (PTAB Dec. 28, 2018) (citing *Nidec Motor Corp. v. Zhongshan Borad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017)). Ex. 1003, ¶¶55-56.

Patent Owner apparently agrees with this approach. In a related district court proceeding, Patent Owner applied the plain and ordinary meaning of all claim terms without requiring specific construction while the opposing party proposed a construction for one term, "download." There, the parties fully briefed the construction of the disputed term. *Starz Entm't, LLC v. VL Collective IP, LLC*, Amended Joint Claim Construction Chart, page 7 (Dkt. 80), Case No. 1:21-cv-01448 (D. Del.)(Ex. 1016)(hereinafter "*Starz*"). A claim construction order has issued, as summarized in the table below. *Starz*, Claim Construction Order, page 3 (Dkt. 88), Case No. 1:21-cv-01448 (D. Del.)(Ex. 1023).

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[3] Petitioner does not, however, waive any argument in any litigation. The parallel Delaware district court case is in its infancy, and there have been no claim construction exchanges or briefing. Petitioner does not set forth here arguments regarding claim construction disputes not properly addressed in this forum, such as those related solely to non-infringement, indefiniteness, lack of written description, and inoperability. 35 U.S.C. §§101 and 112.

Claim Term	Patent Owner's Proposed Construction	Opposing Party's Proposed Construction	Claim Construction Order
"download" [Claims 2, 4]	No construction necessary Alternatively, if the Court decides to construe the term, "transfer to the terminal"	Plain and ordinary meaning, i.e., "Copy and store in memory of the terminal for subsequent use"	"copy and store in memory of the terminal for subsequent use"

Similarly, in another related district court proceeding involving the '559 patent, neither Patent Owner nor the opposing party offered a specific construction for any claim term from the patent. *VideoLabs, Inc. v. Amazon.com, Inc.*, Opening Claim Construction Brief filed by Defendants, page 1 (Dkt. 48), Case No. 6:22-cv-00079 (W.D. Tex.)(Ex. 1017)(hereinafter "*Amazon.com*") ; *Amazon.com*, Patent Owner's Response Claim Construction Brief, pages 2-30 (Dkt. 63), Case No. 6:22-cv-00079 (W.D. Tex.)(Ex. 1018).

Nevertheless, the asserted prior art references teach all of the elements of the challenged claims under any of the above-discussed constructions, as set forth *infra* in Section VII. Ex. 1003, ¶¶57-58.

VII. GROUNDS OF UNPATENTABILITY

A. Ground 1: Cassin Anticipates Claims 1, 2, 4, 7, 8, 10, 13, 14, 16, 19, 20, and 22

Cassin anticipates claims 1, 2, 4, 7, 8, 10, 13, 14, 16, 19, 20, and 22. Similar limitations of the claims will be grouped together for purposes of this and other grounds in this petition. Ex. 1003, ¶48.

1. 1[pre]: "An apparatus comprising:"

7**[pre]: "An apparatus comprising:"**

13[pre]: "A method for controlling a flow of content, the method comprising:"

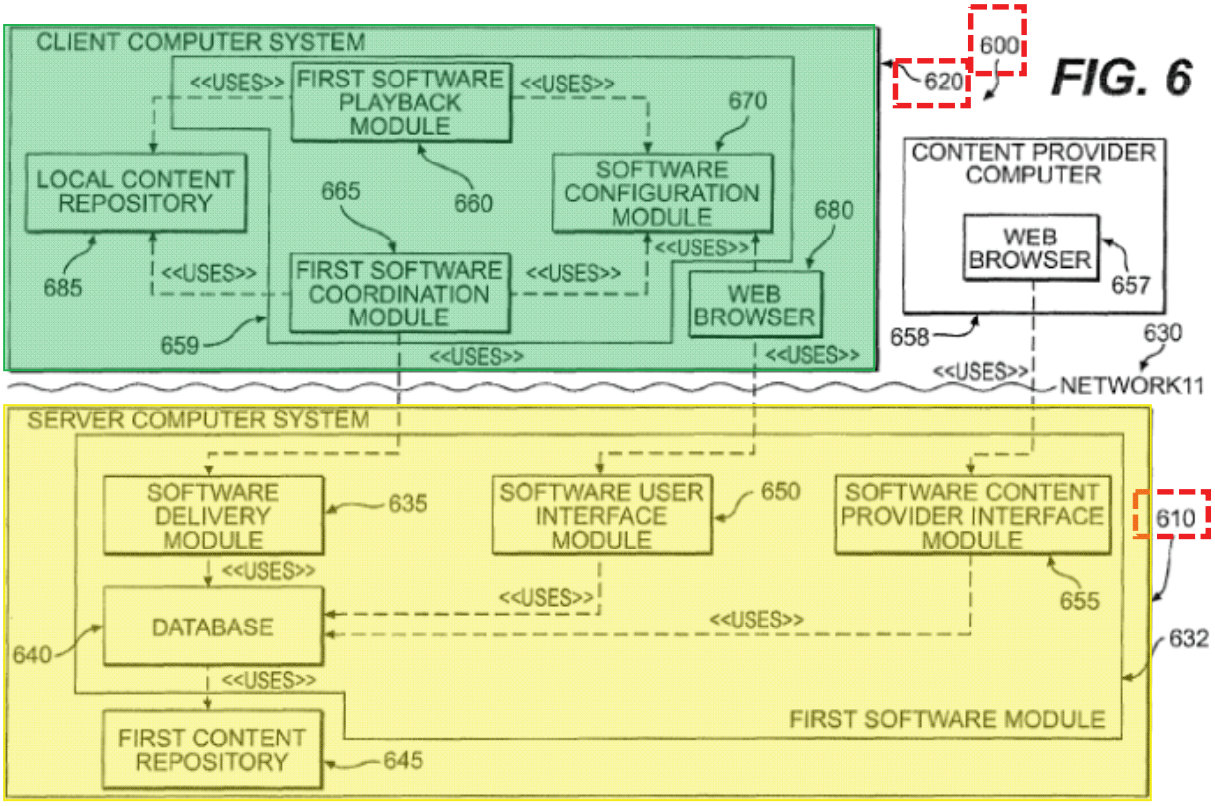
19[pre]: "A computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:"

To the extent the preambles are limiting, Cassin discloses the subject matter of each preamble for independent claims 1, 7, 13, 19. Ex. 1003, ¶¶62,85-86,104,122-123.

For example, Cassin discloses a system and method for implementing a media content delivery and playback scheme that controls the flow of content (which satisfies claim 13[pre]) for the reasons described below. Ex. 1004, [0140].

System 600 includes a server computer system 610 that has a server computer with a first processor, as shown in yellow in Fig. 6 below, which is the claimed apparatus in claim 1. Ex. 1004 [0140], Fig. 6. The processor of the server computer executes instructions including a first software module 632, which may

be stored in a storage device associated with the server computer, which is the claimed computer-readable storage medium in claim 19. *Id*., [0142]. The system also includes a client computer system 620 that has a client computer with a processor, as shown in green in Fig. 6 below, which is the claimed apparatus in claim 7. *Id*., [0140], Fig. 6 (green); Ex. 1003, ¶63.



Ex. 1004, Fig. 6 (annotated).

2. 1[a][1]: "a processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information, and"

7[a][1]: "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,"

13[a]: "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"

19[a]: "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; and"

Cassin discloses the subject matter for these limitations. Ex. 1003, ¶¶64-70,87-95,105-111,125-127.

As depicted in Fig. 6, Cassin discloses that the client computer (the "terminal") has a second software module that includes a first software coordination module 665 ("a controller") that coordinates the exchange of information with the server computer. Ex. 1004, [0151], Fig. 6. The second software module also has a local content repository 685, or "a memory," to store media "content" in the form of media files. *Id*., [0156], Fig. 6. The local content repository 685 may be a storage device, such as a hard drive or random access memory. *Id*.

The server computer, as illustrated in Fig. 6, is a "network entity" "remote" from the client computer and has "a processor" that executes instructions including

a first software module 632. *Id*., [0142]. Within the first software module 632 is database 640, that stores information related to the system in the form of metadata, including descriptions of packages, series, and episodes. *Id*., [0146], Fig. 6. Multimedia content in the form of media files are stored in the first content repository 645 associated with the server computer system 610, and the contents of the first content repository 645 may be accessed via database 640. *Id*.

Cassin discloses how system 600 is configured to control the flow of content according to two protocols. *Id*., [0164-0168], Figs. 8, 9. Under both protocols, the client computer first contacts the server computer to request a connection, and the server computer accepts and establishes the connection. *Id*. The client computer sends user information to the server and can also request a list of content from the server that should be delivered. *Id*. User information from the client and the request for a list of content from the server are "content status including terminal status information." *Id*., [0010, 0012, 0164-168].

The server computer receives the user information and/or the client's request for a list of content from the server that should be delivered and queries database 640 based on the user information. *Id*., [0164, 0166], Figs. 8, 9. The database responds with a listing of all content to which the user is entitled. *Id*. The server computer sends the listing to the client, to which the client computer may respond with further "content status including terminal status information." *Id*.

According to the first protocol, the server computer then attempts to send the first media content item on the list to the client computer. *Id*. If the client computer has the media content item already stored in the memory of its local content repository 685, then the client computer sends an indication, which is "a content status including terminal status information," to the server computer that it currently has the media "content" item stored. *Id*. ("If the client computer does have the media content item, then in step 870, the client computer provides an indication to the Server computer that it currently has the media content item"). The indication can include a list of the media content items already stored on the client computer (*i.e.*, a "listing of at least one piece of content stored in a memory of the terminal"). *Id*., [0133-137, 164]; Cls. 131-133; Cl. 130 (reciting a device that "receives from the remote device a second indication that the remote device will accept the media content delivery unless the remote device already has the media content"); Cl. 132 (reciting 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.") Cls. 130-132. Once the server receives the indication that the client computer already has the media content item, then the server computer will offer the next media item on the list to be downloaded by the client computer. *Id*.

According to the second protocol, after the server computer sends to the client the content listing to which the user is entitled, the client computer identifies those media content items on the listing that it does not already have in its local content repository 685. *Id*., [0166]. The client computer then sends to the server computer a list of those media content items that it does not have. *Id*. The client's list of content items that it does not have, (sent to the server computer) is another "content status including terminal status information." *Id*. The server computer then delivers those media content items from the client's list to the client. *Id*.

3. 1[a][2]: "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,"

Cassin discloses the subject matter for this limitation. Ex. 1003, ¶71.

As discussed above in section VII.A.2, which is incorporated by reference herein, the server computer system has a first content repository 645, that stores multimedia content in the form of media files, which is accessed via database 640. Ex. 1004, [0146]. After the server computer receives user information and/or the client's request for a list of content, the server then queries database 640 based on the user information. *Id*., [0164, 0166], Figs. 8, 9. The server then receives from the database a list of all content to which the user is entitled, which is "server status information regarding a source of content." *See id*. The list from the database identifies at least one piece of media content available from the first content

repository 645, which is "comprising a listing of at least one piece of content available from the source." *Id*.

4. 1[a][3]: "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"

7[a][2]: "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"

13[b]: "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,"

19[b]: "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,"

Cassin discloses the subject matter for these limitations. Ex. 1003, ¶¶72-76,96-97,112-115,128.

As discussed above in section VII.A.2, which is incorporated by reference herein, the server computer is configured to receive "content status" from the remote client computer, which includes user information, a request for a list of media content that should be delivered, an indication from the client computer informing the server computer that the client computer already has the media

content item stored in its memory, and/or a list of media content items that the client does not have. Ex. 1004, [0164, 0166]. The indication can include a list of the media content items already stored on the client computer. *Id*., [0133-0137, 0164, 0166], Cls. 130-132. The server computer also receives "server status information," which is the list of all content to which the user is entitled from the server computer's content repository 645 via database 640. *Id*., [0146, 0164, 0166].

The server is configured to send a "response to the content status" and "server status information," and "control the flow of content" to the client computer by sending the client computer the list of content the user is entitled and then attempting to send the first media content item on the list to the client. *Id*. If the client computer has the first media content item on the list, then the client computer sends an indication to the server computer that it currently has the first media content item stored in its local content repository 645 (*i.e.*, "content status"). *Id*.; *see also id.*, [0012, 0085, 0133-0137, 0164], Cls. 130-132. In that case, the server computer's "response to the content status," is to "control the flow of content" to the client computer by not delivering the first media content item to the client computer. *Id*.

The server computer then goes to the next media content item on the list (*i.e.* the second media content item). *Id*. If the indication does not include the second media content item, then the server computer "control[s] the flow of content" to

the client computer by "instruct[ing]" the client computer to download the second media content item. *Id*.; *see also id*., [0165]. In other words, the client computer is configured to receive "a response" from the server computer to download the second media content item "based upon the terminal status information" and "server status information." *Id*., [0164, 0166]. These steps are repeated for each content item on the list. *Id*.

According to the second protocol, after the server computer sends to the client the content listing to which the user is entitled, the client computer identifies those content items on the listing that it does not already have in its content repository 685. *Id*., [0166]. The client computer then sends to the server computer a list of those content items that it does not have. *Id*. The client list that is sent to the server computer is another "content status including terminal status information." *Id*. The server computer then "control[s] the flow of content" to the client by delivering from its first content repository 645 via database 640 those content items from the client's list, *i.e.*, the server computer "instructs" the client computer to download the media content items. *Id*.

5. 1[b]: "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."

7[b]: "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."

13[c]: "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."

19[c]: "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."

Cassin discloses the subject matter for these limitations. Ex. 1003, ¶¶77,98,116,129.

Both the server computer's database and first content repository 645 and the client computer's local content repository 685 are configured to store a "piece of content," including various types of "multimedia content," including "music, videos and multimedia programming . . . types of programming include, for example, stock reports, news items, emergency reports, cartoons, movies, data reports, product reports and detailing, talk shows, music programs . . . ." *Id*., [0151]; *see also*, *e.g.*, *id*. [0146, 0152, 0156].

6. 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."

8: "An apparatus according to claim 7, wherein the controller is configured to receive a response that instructs the controller 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 a source of content."

14: "A method according to claim 13, wherein sending a response comprises sending a response 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 a source of content."

20: "A computer-readable storage medium according to claim 19, wherein the second executable portion is configured to send a response 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 a source of content."

Cassin discloses the subject matter for these limitations. Ex. 1003, ¶¶78-80,99-100,117-119,130.

The client computer's local content repository 685 is "a memory." Ex. 1004, [0156], Fig. 6.

As discussed above in sections VII.A.1-VII.A.5, which are incorporated by reference herein, the server computer uses the information in the indication received from the client computer and "instructs" the client computer to download a media file from the server computer's first content repository 645, *i.e.*, "download at least one piece of content from a source of content." The server sends "a response" and the client is configured to receive the "response" to download a media content item based on the indication, which is content status. *Id*.; *see also* Ex. 1004, [0164 ("After the media content item has been successfully

downloaded"), 0166]. Cassin's server delivering content to the client satisfies the *Starz* district court's construction of "download" and the plain and ordinary meaning of "download."

7. **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."**

10: "An apparatus according to claim 8, wherein the controller is configured to receive a response that instructs the controller to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

16: "A method according to claim 14, wherein sending a response comprises sending a response that instructs the terminal to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

22: "A computer-readable storage medium according to claim 20, wherein the second executable portion is configured to send a response that instructs the terminal to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

Cassin discloses the limitations in claims 4, 10, 16, and 22 and incorporates by reference sections VII.A.1-VII.A.6. Ex. 1003, ¶¶81-83,101-103,120-122,131.

The server's content repository 645, which can be accessed via database 640 has "at least one piece of content." Ex. 1004, [0146]. After the server queries database 640 based on the user information, the server receives from the database a listing of all content from the first content repository to which the user is entitled, which is "server status information comprising a listing of at least one piece of available content from the source." *Id*., [0164, 0166], Figs. 8, 9.

Based on the indication from the client computer, as described in section VII.A.4, the server's "processor" is configured to deliver content to the client (the "terminal") by instructing the client to download at least one media file from content repository 645 that was identified in the listing, *i.e.*, the server's processor "instructs the terminal to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source." *See* Section VII.A.4; *see also id*. [0164, 0166], Figs. 8, 9.

The client's "controller" is the first software coordination module 665, that is configured to receive a response from the server computer to download at least one media file from content repository 645 that was identified in the listing, *i.e.*, the client's "controller is configured to receive a response that instructs the controller to download at least one piece of content from the source based upon

server status information comprising a listing of at least one available piece of content from the source." *Id*. Ex. 1004, [0164, 0166].

B. Ground 2: Cassin and Huston Render Obvious Claims 1-24

Cassin, together with Huston and the knowledge of a POSITA, renders obvious claims 1-24. Ground 2 is not duplicative of Ground 1 because it is the only Ground based on Cassin and Huston.

Cassin teaches all of the elements of claims 3, 5, 6, 9, 11, 12, 15, 17, 18, 21, 23, and 24 except for sending a response that "instructs the terminal to delete at least one piece of content from the memory" of the terminal. As discussed below, Huston teaches instructing a terminal to delete at least one piece of content from the memory of a "terminal." *See infra* Section VII.B.3.

Cassin already discloses manual and automatic delete functions. Ex. 1004, [0169]. Specifically, Cassin discloses that to delete a media content item, the user would manually select the content to delete from the client device, and press the DELETE key on the keyboard. *Id*. Cassin further discloses that log files on the client computer can be automatically deleted. *Id*., [0170-0171]. Every time a user clicks one of the discrete control functions (*e.g.*, "PLAY," "STOP," "PAUSE"), that action is recorded to a statistics log file stored on a storage device (*e.g.*, hard drive) associated with the client computer. *Id*., [0171]. The server computer queries the client computer at the end of each session to determine whether a log file is

present. *Id*. If the log file is present, the client computer uploads it to the server computer, where it is stored in database 640. *Id*. Once the log file is successfully uploaded, Cassin teaches that the log file is then deleted from the client computer's storage device. *Id*. *See*, *e.g.*, Ex. 1003, ¶142.

While Cassin does not expressly disclose that the server computer instructs the client to delete multimedia content, Huston teaches this feature. *See infra* Section VII.B.2.g. A POSITA would have been motivated to combine Cassin's media content delivery system with Huston's teachings with a reasonable expectation of success, as discussed below.

1. Motivation to Combine Cassin and Huston

There are compelling reasons to combine the relevant content delivery features from Cassin and Huston. A POSITA would have found it obvious to combine Cassin's teachings of a media content delivery system with Huston's teachings of having a differencing engine to determine whether there is content to delete from the remote client and sending a command to delete such content.

First, Cassin provides motivation to add to the media content delivery system the delete functionality in Huston. Specifically, Cassin teaches the use of a digital rights management scheme that takes into account a content provider's rules and the identity of the user. Ex. 1004, [0178, 0182]. For example, Cassin teaches that it would be advantageous to also manage how long media content items

remain available to its users. Ex. 1004, [0178, 0180, 0182]. In order to control how long media content is available to a user under a digital rights management scheme, a POSITA would have looked to Huston to determine how to update the remote client using user information to enforce that the media content is either no longer available to a particular user or is expired. Specifically, Huston recognizes that there is an issue with leaving stale or expired content on the client and provides a solution for updating the available content by deleting any old versions of content. Ex. 1005, 3:37-44. To address the goal of automatically deleting and updating content (*Id*., Abstract), Huston discloses using a differencing engine to update/delete content on a client. Similarly, Cassin teaches using a software delivery module for providing content from a database or content repository to a client computer. Ex. 1004, [0110]; Ex. 1003, ¶204.

Second, controlling the flow of traffic from the Internet or through a network and digital rights management were well-known concepts. Ex. 1004, [0099-0100] (disclosing methods for controlling delivery of media content over a communication channel); Ex. 1005, 5:42-67 (disclosing mechanisms for controlling the flow of traffic, *i.e*., content, between the origin servers 202, 204, 206 and the traffic server 216, 218); Ex. 1006, 20:23-32 (disclosing removing the metadata of downloaded content). Additionally, automatically deleting outdated content or files from a remote device was also well-known. Ex. 1004, [0171]; Ex.

1003, ¶202. "Common sense teaches . . . that familiar items may have obvious uses beyond their primary purpose." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 198, 415-16 (2007); *see also Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) ("[T]he knowledge of [a skilled] artisan is part of the store of public knowledge that must be consulted when considering whether a claimed invention would have been obvious.").

Third, a POSITA would have looked to Huston because it is analogous art to Cassin. Cassin generally discloses that its invention relates to the "distribution of media content" over a "communication channel to facilitate playback of the media content through a remote device." Ex. 1004, [0003, 0005]. Huston similarly discloses "managing and providing content to users." Ex. 1005, 1:14-15. Huston further elaborates that there "is a need for an approach for providing content to users that provides greater control to content providers over which content is made available to users." *Id*., 3:60-64. Huston discloses using a differencing engine that is "configured to selectively cause content to be refreshed in a cache" to facilitate managing content to users. *Id*., Abstract. Both Cassin and Huston are directed to controlling delivery of content to a remote device over a network. *See* Ex. 1004, [0007, 0099]; Ex. 1005, 5:60-62; Ex. 1003, ¶203.

Fourth, Cassin provides motivation to add to the media content delivery system the delete functionality in Huston. Specifically, Cassin teaches the use of a

digital rights management scheme that takes into account a content provider's rules and the identity of the user. Ex. 1004, [0178, 0182]. For example, Cassin teaches that it would be advantageous to also manage how long media content items remain available to its users. Ex. 1004, [0178, 0180, 0182]. In order to control how long media content is available to a user under a digital rights management scheme, a POSITA would have looked to Huston to determine how to update the remote client using user information to enforce that the media content is either no longer available to a particular user or is expired. Specifically, Huston recognizes that there is an issue with leaving stale or expired content on the client and provides a solution for updating the available content by deleting any old versions of content. Ex. 1005, 3:37-44. To address the goal of automatically deleting and updating content (*Id*., Abstract), Huston discloses using a differencing engine to update/delete content on a client. Similarly, Cassin teaches using a software delivery module for providing content from a database or content repository to a client computer. Ex. 1004, [0110]; Ex. 1003, ¶204.

2. Reasonable Expectation of Success

A POSITA would have had a reasonable expectation of success in modifying Cassin with Huston's teachings at least because of their overlapping functionality and both disclose systems for improving content delivery to a remote client device. Specifically, modifying Cassin to include functionality for the server

to send delete commands to delete content in the repository of the client computer, as disclosed in Huston, is simply using a known technique (deleting content) to improve a similar device in the same way. Cassin already discloses a delete function that can be manually used and how to automatically delete log files. Ex. 1004, [0169, 0171], 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. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 198, 415-16 (2007). It would have been obvious and straightforward to a POSITA to implement Huston's "delete" function to Cassin's content delivery system and have a reasonable expectation of success. Ex. 1003, ¶205.

3. Detailed Claim Analysis

a. 1[pre]: "An apparatus comprising:"

7[pre]: "An apparatus comprising:"

13[pre]: "A method for controlling a flow of content, the method comprising:"

19[pre]: "A computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising:"

Section VII.A.1 is incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶133,156,173,190.

b. 1[a][1]: "a processor configured to receive, from a terminal located remote from the apparatus, a content status including terminal status information, and"

7[a][1]: "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,"

13[a]: "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"

19[a]: "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"

Section VII.A.2 is incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶134,157-161,174-179,191.

Cassin discloses several types of "content status including terminal status information." When the server sends to the client the listing of content to which the client is entitled, the server attempts to deliver the first media content item on the list to the client computer. Ex. 1004, [0164]. In response, the client sends an indication to the server computer, which can be a list of media content items currently stored, which is "a content status including terminal status information," *Id*. Based on the express disclosures at paragraphs [0133-0137, 0164, 0166] and

claims 130-133, this indication includes a listing of the media content items already stored on the client computer's local content repository 685, which is "a content status including terminal status information comprising a listing of at least one piece of content stored in [a/the] memory" of the terminal. *Id*., Claims 130-133, [0133-137, 0164].

A POSITA would have understood that the indication sent by the client to the server comprises a listing of media content item(s) that is stored in the client's repository, is "a content status including terminal status information comprising a listing of at least one piece of content stored in [a/the] memory" of the terminal. A POSITA would have also understood that a list can include an identification of one piece of content. A POSITA would have additionally understood that the indication sent from the client is a "content status" sent to the server, so that the server can deliver "at least one piece of content" to the client computer that is not identified in the indication from the client computer.

According to the second protocol, after the server computer sends to the client the content listing to which the user is entitled, the client computer identifies those media content items on the listing that it does not already have in its local content repository 685. *Id*., [0166]. Rather than send a listing of files the client computer does not already have, *id.*, [0166], it would have been obvious for a POSITA to try to identify, based on the list sent from the server computer, the

media content items the client has in its repository and put that information in a listing, which is sent as a "content status" to the server computer, so that the server computer can deliver to the client the media files that are not in the listing.

Further, Cassin in view of Huston discloses these limitations. Providing a list of content stored in a remote device was well-known in the art. For example, Huston discloses a differencing engine (the "network entity") and traffic servers ("terminals"), which are computer systems that include "a processor" and "a memory." *Id*., 16:12-29. Traffic servers 216, 218 are configured with caches 236, 238, respectively, that provide local storage for content, which can be any type of local storage. *Id*., 6:1-5. Huston specifically discloses that the differencing engine 240 instructs the traffic servers to delete content after the differencing engine compares the versions of content stored on caches 236, 238 of the traffic servers 216, 218 with the versions of the corresponding content stored on the origin servers 202, 204, 206. Ex. 1005, 6:42-51, Fig. 2A. In order to compare 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 ("network entity"). *See* Ex. 1005, Fig. 2A. The

differencing engine 240 may be co-located with the origin servers 202, 204, 206.

Ex. 1005, 7:38-49.

c. 1[a][2]: "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,"

Section VII.A.3 is incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶136.

d. 1[a][3]: "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"

7[a][2]: "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"

13[b]: "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,"

19[b]: "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,"

Section VII.A.4 is incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶137-138,162-164,180-182,192.

In Cassin, after the client sends the indication to the server that it currently has the first media content item stored in content repository 645, then the server does not deliver the first media content item for the client to download. Ex. 1004, [0012, 0085, 0133-0137, 0164], Cls. 130-133.

The server then goes to the next media content item on the list (*i.e.* the second media content item). Ex. 1004, [0012, 0085, 0133-0137, 0164], Cls. 130-133. If the indication does not include the second media content item on the list, then the server "control[s] the flow of content" to the client computer by instructing the client to download the second media content item, and 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 ("network entity") controlling the flow of content by instructing the client (the "terminal") to download the media content ("one or more actions") from the server based upon the indication.

e. 1[b]: "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."

7[b]: "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."

13[c]: "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."

19[c]: "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."

Section VII.A.5 is incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶139,165,183,193.

f. **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."**

8: "An apparatus according to claim 7, wherein the controller is configured to receive a response that instructs the controller 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 a source of content."

14: "A method according to claim 13, wherein sending a response comprises sending a response 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 a source of content."

20: "A computer-readable storage medium according to claim 19, wherein the second executable portion is configured to send a response 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 a source of content."

Sections VII.B.2.a-VII.B.2.e and VII.A.6, are incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶140,166,184,194.

g. 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."

9: "An apparatus according to claim 8, and wherein the controller is configured to receive a response that instructs the controller 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."

15: "A method according to claim 14, and wherein sending a response comprises sending a response 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."

21: "A computer-readable storage medium according to claim 20, wherein the second executable portion is configured to send a response 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."

See discussion in sections VII.B.2.a-VII.B.2.f, which are incorporated by reference herein. Cassin in view of Huston discloses these limitations. Ex. 1003, ¶¶141-147,167-185,195.

While Cassin does not explicitly disclose that the server sends a response that "instructs the terminal [or controller] to delete at least one piece of content from the memory of the terminal," Cassin discloses use of a graphical user interface 700 where the end user can manually delete media content from the remote client device and a log file that can be automatically deleted after it is uploaded to the server computer as discussed in section VII.B.1. Ex. 1004, [0169, 0171]; *see also id*., Figs. 12-14.

It would have been obvious to modify Cassin in view of Huston, which teaches this limitation. Specifically, Huston discloses that the differencing engine 240 causes content to be deleted from the remote traffic servers 216, 218 by issuing one or more "delete" commands to the traffic servers 216, 218. Ex. 1005, 6:33-41, Fig. 2A. The differencing engine 240 selects the content to be deleted by comparing the versions of content stored on caches 236, 238 of the traffic servers 216, 218 ("the listing of at least one piece of content stored in the memory of the terminal") with the versions of the corresponding content stored on the origin servers 202, 204, 206. Ex. 1005, 6:42-51, Fig. 2A. Therefore, the differencing engine 240 (including a processor 404) is configured to send a response to the

traffic servers 216, 218 (the terminals) with instructions to delete certain content. Ex. 1005, 6:33-41, 16:12-29.

A POSITA would have been motivated to combine Huston with Cassin. *See supra* Section VII.B.1. First, a POSITA would have been motivated to consult references such as Huston when implementing the technologies in Cassin. For example, both Huston and Cassin are directed to sending and controlling the flow of content to a remote device over a network. Ex. 1004, [0007, 0099]; Ex. 1005, 5:60-62. Second, a POSITA would have had a reasonable expectation of success in making the combination. *See supra* Section VII.B.2. Third, Cassin teaches that it would be advantageous to also manage how long media content items remain available to its users. Ex. 1004, [0178, 0180, [0182]. It would have been obvious to a POSITA to look to Huston to determine how to update the remote client to enforce that the media content is no longer available to a particular user or is expired by using user information. Huston recognizes that there is a problem with leaving stale or expired content on the client and provides a solution for updating the available content by deleting any old versions of content. Ex. 1005, 3:37-44. Finally, a POSITA would have recognized the delete function in Huston to be an advantageous and predictable way to extend the existing functionality in Cassin, *e.g.*, facilitating the existing deletion functions controlled by the server (similar to

how log files are automatically deleted from the client computer) instead of being manually implemented by the user. Ex. 1004, [0169]; Ex. 1005, 6:33-51.

h. 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."

10: "An apparatus according to claim 8, wherein the controller is configured to receive a response that instructs the controller to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

16: "A method according to claim 14, wherein sending a response comprises sending a response that instructs the terminal to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

22: "A computer-readable storage medium according to claim 20, wherein the second executable portion is configured to send a response that instructs the terminal to download at least one piece of content from the source based upon server status information comprising a listing of at least one available piece of content from the source."

Sections VII.B.2.a-VII.B.2.f. and VII.A.7 are incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶148,168,186,196.

i. 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."

11: "An apparatus according to claim 8, wherein the controller is configured to send the content status such that the network entity determines if the memory of the terminal includes at least one piece of content to delete, and wherein the controller is configured to receive a response that instructs the controller to delete at least one piece of content when the network entity determines that the memory of the terminal includes at least one piece of content to delete."

17: " A method according to claim 14 further comprising:

> **determining if the memory of the terminal includes at least one piece of content to delete,**
>
> **wherein sending a response comprises sending a response that instructs the terminal to delete at least one piece of content when the memory of the terminal is determined to include at least one piece of content to delete.."**

23: "A computer-readable storage medium according to claim 20 further comprising:

> **a third executable portion configured to determine if the memory of the terminal includes at least one piece of content to delete,**
>
> **wherein the second executable portion is configured send a response that instructs the terminal to delete at least one piece of content when the second executable portion determines**

the memory of the terminal includes at least one piece of content to delete."

See discussion in sections VII.B.2.a-VII.B.2.g, which are incorporated by reference herein. Cassin in view of Huston discloses these limitations. Ex. 1003, ¶¶149-153,169,187,197.

As discussed above in section VII.B.2.g, Cassin discloses a delete feature that can be used by the user to delete media content. *See, e.g.,* Ex. 1004, [0169].

It would have been obvious to modify Cassin in view of Huston, which teaches this limitation. Cassin discloses that the client is configured to send a "content status," *e.g.*, a list of media content files it has in its repository, to the server. *See* Section VII.B.2.b. Huston discloses that the differencing engine 240 causes content to be deleted from the remote traffic servers 216, 218 by issuing one or more "delete" commands to the traffic servers 216, 218. Ex. 1005, 6:33-41, Fig. 2A. The differencing engine 240 selects the content to be deleted by comparing the versions of content stored on caches 236, 238 of the traffic servers 216, 218 ("determin[ing] the memory of the terminal includes at least one piece of content to delete" from the received content status) with the versions of the corresponding content stored on the origin servers 202, 204, 206. Ex. 1005, 6:42-51, Fig. 2A. A POSITA would have understood that the traffic servers ("terminals") would send to the differencing engine ("network entity") a "content status" that includes the version of content stored in its cache.

In response, Huston discloses that the differencing engine 240 is configured to selectively cause content to be deleted from the traffic servers 216, 218 based on the comparison, which is "determin[ing] if the memory of the terminal includes at least one piece of content to delete" and instructing the terminal "to delete at least one piece of content." *Id*., 6:21-25; *see also* Ex. 1004, [0164, 0166].

j. 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."

12: "An apparatus according to claim 11, wherein the controller is configured to send the content status such that the network entity further determines if the source includes at least one available piece of content for the terminal to download, wherein the controller is configured to receive a response that further indicates if the source includes at least one available piece of content, and wherein the controller is further configured to download the at least one available piece of content when the network entity determines that the source includes at least one available piece of content."

18: "A method according to claim 17 further comprising:

determining if the source includes at least one available piece of content for the terminal to download,

wherein sending a response comprises sending a response that further instructs the terminal to download at least one available piece of content when the source is determined to include at least one available piece of content."

24: "A computer-readable storage medium according to claim 23, wherein the third executable portion is further configured to determine if the source includes at least one available piece of content for the terminal to download, and wherein the second executable portion is configured to send a response that further instructs the terminal to download at least one available piece of content when the second executable portion determines the source includes at least one available piece of content."

Sections VII.B.2.a-VII.B.2.j and VII.A.7s are incorporated by reference herein, and Cassin discloses these limitations. Ex. 1003, ¶¶154-155,170-172,188-189,198-200.

Based on the indication received from the client computer, the server determines whether there are media content items available in the first content repository 645, accessed via database 640, to be downloaded by the client, which is "determin[ing] if the source includes at least one available piece of content for the terminal to download." Ex. 1004, [0164]. When the first content repository 645 (the "source") has "at least one available piece of content," Cassin discloses that the server will offer a media content item on the list that is available to the client. *Id*. If the client computer does not have the media content item, for example it is not a media content item identified in the indication, then "the client computer

accepts the media content item from the server computer." Ex. 1004, [0164]. The accepted media content items are downloaded and stored in the local content repository 685 (*e.g.*, "memory") on the client. *Id*., [0099, 0156, 0164, 0165]. A POSITA would understand this disclosure as instructing the client (the "terminal") to download the media content item.

C. Ground 3: Huston Renders Obvious Claims 1-24

Huston, together with the knowledge of a POSITA, renders obvious claims 1-24. Ground 3 is not duplicative of Grounds 1 and 2 because it is the only Ground based on Huston alone.

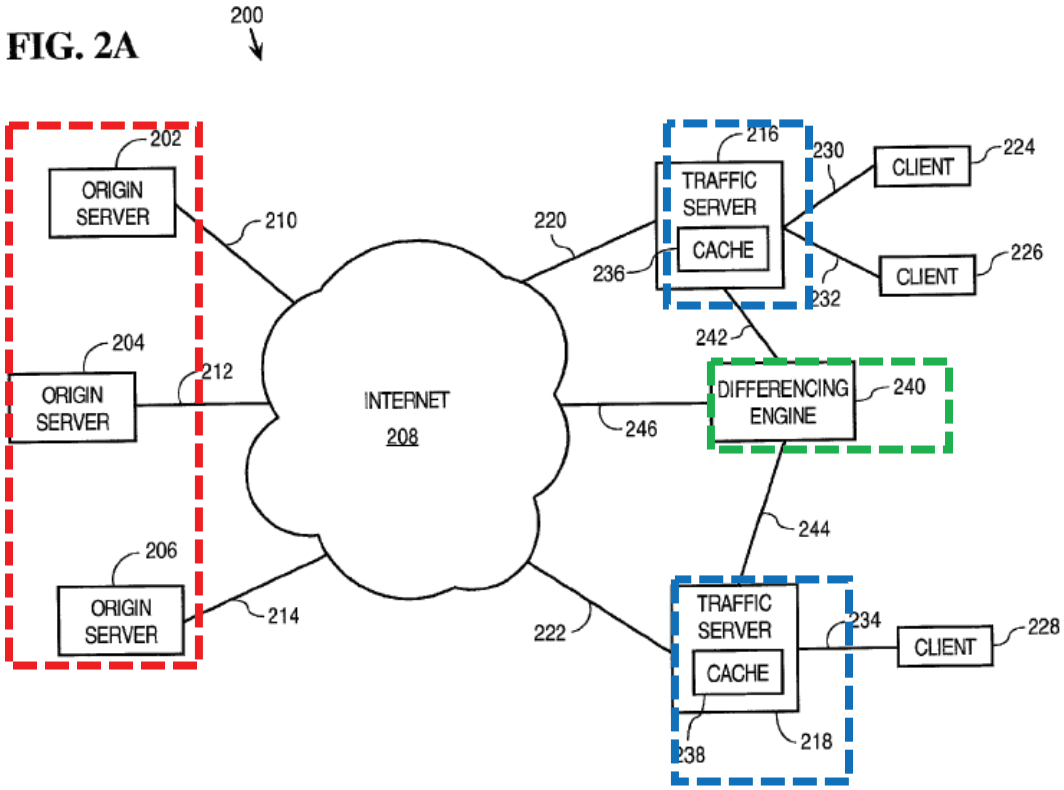
1. Claims 1, 7, 13, 19:[4]

Huston discloses these limitations. Ex. 1003, ¶¶207-213.

As shown in Fig. 2 below, Huston discloses methods that control the flow of traffic ("content") between the origin servers 202, 204, 206 (red) and the traffic server 216, 218 (blue) ("apparatus" in claim 7 and "terminal" in claims 1, 7, 13, 19) using a remote differencing engine 240 (green) ("apparatus" in claim 1, "network entity" in claims 7, 13, 19). Ex. 1005, Abstract, 1:35-42, 5:42-67, 6:15-25, 6:33-7:9, 7:38-49, 8:5-9, 16:43-56.

[4] The complete claim language for each claim is provided in the Ground 2 analysis.

Traffic servers 216, 218 have caches 236, 238, which can be any type of local storage device ("memory"). *Id.*, 6:1-5, 16:12-29. The content stored on the traffic servers 236, 238 may be content specific to a particular client. *Id.*, 8:5-9. One or more sequences of one or more instructions contained in a main memory 406, which is the claimed "computer-readable storage medium" in claim 19, may be used for executing the differencing engine 240. Ex. 1005, 16:61-64; 7:38-49, 16:43-56. The differencing engine 240 may be co-located with the origin servers 202, 204, 206, and includes a processor 404. Ex. 1005, 7:38-49, 16:12-29.



Ex. 1005, Fig. 2A (annotated).

Huston discloses that the differencing engine 240 receives the content available on the origin servers 202, 204, 206 ("server status information regarding a source of content"), and controls the flow of content to the caches 236, 238 of the traffic servers 216, 218 based on this information. Ex. 1005, 6:42-7:9. A POSITA would have understood that when the differencing engine receives the content available on the origin servers, the information sent from the origin servers to the differencing engine can be an identification or a "listing of at least one piece of content available from the source."

One way in which the differencing engine 240 controls the flow of content on traffic servers 216, 218 is by selecting content to be deleted. Ex. 1005, 6:42-48. Differencing engine 240 compares the versions of content stored on caches 236, 238 on the traffic servers 216, 218 with the versions of the corresponding content stored on the origin servers 202, 204, 206. *Id*.; *see also id*. Fig. 2A. In order to compare the versions of content, a POSITA would have understood that the differencing engine would receive a communication from the traffic servers 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 and compare it with

information received from the origin servers ("server status information regarding a source of content").

The differencing engine 240 "causes content to be deleted from the traffic servers 216, 218 by issuing one or more 'delete' commands to traffic servers" (*i.e.*, "one or more actions") to thereby "control the flow of content" to the traffic servers 216, 218 based upon the "terminal status information" and "server status information" Ex. 1005, Fig. 2A, 1:35-42, 6:33-7:9, 6:33-41; *see also* Section VII.C.2. The differencing engine 240 therefore "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 serve status information."

The "content" disclosed in Huston "broadly refers to almost any type of information or data . . . without limitation," which could include "streaming media objects," or "media content." Ex. 1005, 1:35-42, 12:42-44, 15:39-44. A POSITA would have understood that the "content" disclosed in Huston includes "multimedia content."

2. Claims 2, 8, 14, 20:

Huston discloses these limitations. Ex. 1003, ¶¶214-216.

Huston discloses that the differencing engine 240 causes content to be deleted from the traffic servers 216, 218 by issuing one or more "delete" commands to the traffic servers 216, 218 (instructing the traffic servers) to delete

content from the traffic servers' caches 236, 238 in response to the "content status" described in Section VII.C.1, incorporated by reference herein. Ex. 1005, 6:33-41, 6:44-48. A POSITA would understand that a "delete" command is an instruction to "delete at least one piece of content from the memory of the terminal."

Huston discloses that the differencing engine 240 retrieves new content from the origin servers 202, 204, 206 and stores it in the traffic server's cache 236, 238. Ex. 1005, 7:43-49, 7:56-65. In other words, Huston discloses instructing the traffic servers 216, 218 "to download at least one piece of content from the source" (*i.e.*, the origin servers 202, 204, 206 "a source of content"). *See* Section VII.C.1 (incorporated by reference herein). Huston's differencing engine 240 storing new content in the traffic server's cache 236, 238 satisfies the *Starz* district court's construction of "download" and the plain and ordinary meaning of "download."

3. Claims 3, 9, 15, 21:

Huston discloses these limitations. Ex. 1003, ¶¶217-218.

Huston discloses that the differencing engine 240 causes content to be deleted from the traffic servers 216, 218 by issuing one or more "delete" commands to the traffic servers 216, 218. Ex. 1005, 6:33-48, Fig. 2A. The differencing engine 240 selects the content to be deleted by comparing the versions of content stored on the traffic server's caches 236, 238 (the "listing of at least one piece of content stored in the memory" of the terminal) with the versions of

content stored on the origin servers 202, 204, 206. Ex. 1005, 6:42-48. Therefore, the differencing engine 240 is configured to send "a response" to the traffic servers 216, 218 to delete content from the caches 236, 238 ("memory of the terminal") "based upon the listing of at least one piece of content stored in the memory" of the traffic servers 216, 218. *See* Sections VII.C.1-VII.C.3 (incorporated by reference herein).

4. Claims 4, 10, 16, 22:

Huston discloses these limitations. Ex. 1003, ¶¶219-220.

Huston discloses that the differencing engine 240 receives the content available on the origin servers 202, 204, 206 (*i.e.*, "server status information"), and controls the flow of content to the caches 236, 238 of the traffic servers 216, 218 based on this information. Ex. 1005, 6:42-7:9. For example, the differencing engine 240 receives information on new content from the origin servers 202, 204, 206, and instructs the traffic servers 216, 218 to download the new content (*i.e.*, at least one piece of content) from the origin servers 202, 204, 206 (*i.e.*, source) based on this new content information. Ex. 1005, 7:46-49, 11:9-22, 11:52-56; *see* Sections VII.C.1-VII.C.3 (incorporated by reference herein).

5. Claims 5, 11, 17, 23:

Huston discloses these limitations. Ex. 1003, ¶¶221-222.

Huston discloses that the differencing engine 240 selects content to be deleted by comparing the versions of content stored on the caches 236, 238 on the traffic servers 216, 218 with the versions of the corresponding content stored on the origin servers 202, 204, 206. Ex. 1005, 6:42-48, Fig. 2A. Based on this comparison of content ("determin[ing] if the memory of the terminal includes at least one piece of content to delete"), the differencing engine 240 causes older content to be deleted from the traffic server's caches 236, 238 (memory of the terminal) by issuing one or more "delete" commands to the traffic servers 216, 218 (instructing the terminal to delete). Ex. 1005, 6:33-51; *see* Section VII.C.1-VII.C.4 (incorporated by reference herein).

6. Claims 6, 12, 18, 24:

Huston discloses these limitations. Ex. 1003, ¶¶223-224.

Huston discloses that the differencing engine 240 receives the content available on the origin servers 202, 204, 206 and controls the flow of content to the caches 236, 238 of the traffic servers 216, 218 based on this information. Ex. 1005, 6:42-7:9. For example, the differencing engine 240 receives information on new content from the origin servers 202, 204, 206, and instructs the traffic servers 216, 218 to download the new content ("instructs the terminal to download at least one available piece of content") from the origin servers 202, 204, 206 ("source") based on this new content information ("determines that the source includes at least one

available piece of content for the terminal to download"). Ex. 1005, 7:46-49, 11:9-22, 11:52-56; *see also* Section VII.C.1-VII.C.5 (incorporated by reference herein).

VIII. SECONDARY CONSIDERATIONS

Petitioner is unaware of any evidence of secondary considerations that would support a finding of non-obviousness. The asserted prior art demonstrates there is no evidence of failure by others and that the features recited in the challenged claims were readily available in the prior art. Ex. 1003, ¶225.

IX. MANDATORY NOTICES

A. Real Parties-in-Interest

The real parties-in-interests here are Netflix, Inc., and Netflix Streaming Services, Inc. No other parties directed, controlled, or funded this *Inter Partes* Review proceeding (IPR).

B. Related Matters

As of the filing date of this Petition, and to the best knowledge of Petitioner, the '559 patent is the subject of the following pending civil actions:

- *VideoLabs, Inc. v. Netflix Inc.*, Case 1:22-cv-00229 (D. Del.)
- *Starz Entertainment, LLC v. VL Collective IP, LLC*, Case 1-21-cv-01448 (D. Del.)

C. Lead/Back-up Counsel

Petitioner is filing a power of attorney designating Aliza George Carrano (Reg. No. 70,637, acarrano@willkie.com) as lead counsel, and Indranil Mukerji

(Reg. No. 46,944, imukerji@willkie.com), Stephen A. Marshall (*pro hac vice* to be filed, smarshall@willkie.com), Heather Schneider (Reg. No. 56,484, HSchneider@willkie.com), as back-up counsel, all of Willkie Farr & Gallagher LLP, 1875 K Street NW, Washington, DC 20006. Petitioner has paid the required fee under 37 C.F.R. §§ 42.15(a) and 42.103 through P.R.P.S. Please assess any fee deficiency or credit to Deposit Account No. 232405.

D. Service Information

Petitioner consents to e-mail service at the addresses of lead and back-up counsel and Netflix-VL_WFG@willkie.com. Hand delivery is also available to the addresses of lead and back-up counsel.

X. GROUNDS FOR STANDING

Petitioner certifies that the ’559 patent is available for *Inter Partes* Review, and Petitioner is not barred or estopped from challenging the claims on the Grounds identified herein.

XI. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests that the Board institute *inter partes* review trial and cancel claims 1-24 of the ’559 patent as unpatentable.

Respectfully submitted,

Dated: February 23, 2023 By: *// Aliza George Carrano //*

Lead Counsel for Petitioner

CERTIFICATE OF COMPLIANCE

The undersigned certifies that this Petition complies with the applicable type-volume limitations of 37 CFR § 42.24. Exclusive of the portions exempted by 37 CFR § 42.24(a), this Petition contains 13,306 words as counted by the word processing program used for its preparation (Microsoft Word 2016) and is in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(a)(1)(i).

// Aliza George Carrano //
Lead Counsel for Petitioner

CERTIFICATE OF SERVICE

I hereby certify that on February 23, 2023, I caused a true and correct copy of the foregoing materials:

- Petition for *Inter Partes* Review of U.S. Patent No. 7,440,559
- Exhibits 1001-1023
- Table of Exhibits for Petition for *Inter Partes* Review of U.S. Patent No. 7,440,559 (Ex. 1001-1023)
- Petitioner's Powers of Attorney

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