IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re *Inter Partes* Review of:	)
U.S. Patent No. 8,230,101	)
Issued: Jul. 24, 2012	)
Application No.: 12/527,777	)
Filing Date: August 19, 2009	)

For: **Server Device for Media, Method for Controlling Server for Media, and Program**

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,230,101

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List of Challenged Claim Elements

Claim 1	
[1.0]	A server device for media, the server device for media comprising:
[1.1]	an internal storage device for storing digital contents, wherein the server device for media responds to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network;
[1.2.1]	a transfer control unit adapted to transfer and store part of held digital contents in the internal storage device to a network storage device,
[1.2.2]	wherein the network storage device is connected to the network and is capable of storing data,
[1.2.3]	and wherein said transfer control unit does not transfer, from the internal storage device to the network storage device, the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents from the internal storage device to the network storage device;
[1.3.1]	a list information transmission unit adapted to respond to a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player
[1.3.2]	wherein the list information lists the digital contents left in the internal storage device and the digital contents transferred from the internal storage device to the network storage device and stored in the network storage device
[1.3.3]	and wherein the list information maintains a tree structure of the digital contents in the internal storage device before transferring the digital contents to the network storage device;

[1.4]	a search unit adapted to respond to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored; and
[1.5]	a digital contents data transmission processing unit adapted to allow the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device,
[1.6]	wherein the server device for media is a media player.
Claim 2	
[2.1]	The server device for media according to claim 1, wherein said digital contents data transmission processing unit causes the network storage device to transmit the corresponding data to the server device for media, and then transmits the corresponding data received from the network storage device from the server device for media to the network player.
Claim 3	
[3.1]	The server device for media according to claim 1, wherein said digital contents data transmission processing unit transmits the corresponding data and information for identifying the network storage device to the network player, and causes the network storage device to directly transmit the corresponding data to the network player.
Claim 4	
[4.1]	The server device for media according to claim 1, further comprising a return control unit adapted to cause the digital contents corresponding to a predetermined condition among the digital contents which have been transferred to the network storage device to be returned from the network storage device to the internal storage device.
Claim 5	
[5.1]	The server device for media according to claim 1, wherein said list information transmission unit makes the list information to be

	transmitted to the network player
[5.2]	include information for identifying whether each digital content is currently stored in the internal storage device or the network storage device in the display list of the network player.
Claim 6	
[6.0]	A server device for media, the server device for media comprising:
[6.1]	an internal storage device for storing digital contents, wherein the server device for media responds to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network;
[6.2.1]	a transfer control unit adapted to transfer and store part of held digital contents in the internal storage device to a network storage device,
[6.2.2]	wherein the network storage device is connected to the network and is capable of storing data,
[6.2.3]	and wherein the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents from the internal storage device to the network storage device is transferred after obtaining permission from a user;
[6.3.1]	a list information transmission unit adapted to respond to a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player
[6.3.2]	wherein the list information lists the digital contents left in the internal storage device and the digital contents transferred from the internal storage device to the network storage device and stored in the network storage device

[6.4]	a search unit adapted to respond to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored; and
[6.5]	a digital contents data transmission processing unit adapted to allow the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device,
[6.6]	wherein the server device for media is a media player.
Claim 7	
[7.0]	A method for controlling a server device for media which is equipped with an internal storage device for storing digital contents, the method comprising the steps of
[7.1]	responding to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network;
[7.2.1]	transferring and storing part of held digital contents in the internal storage device to a network storage device,
[7.2.2]	wherein the network storage device is connected to the network and is capable of storing data,
[7.2.3]	and wherein the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents are not transferred from the internal storage device to the network storage device;
[7.3.1]	responding to a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player,
[7.3.2]	wherein the list information lists the digital contents left in the internal storage device and the digital contents transferred from the internal

	storage device to the network storage device and stored in the network storage device,
[7.3.3]	and wherein the list information maintains a tree structure of the digital contents in the internal storage device before transferring the digital contents to the network storage device;
[7.4]	responding to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored; and
[7.5]	allowing the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device,
[7.6]	wherein the server device for media is a media player.
Claim 8	
[8.1]	The server device for media according to claim 6, wherein said digital contents data transmission processing unit causes the network storage device to transmit the corresponding data to the server device for media, and then transmits the corresponding data received from the network storage device from the server device for media to the network player.
Claim 9	
[9.1]	A method for controlling a server device for media which is equipped with an internal storage device for storing digital contents, the method comprising the steps of
Claim 10	
[10.1]	The server device for media according to claim 6, further comprising a return control unit adapted to cause the digital contents corresponding to a predetermined condition among the digital contents which have been transferred to the network storage device to be returned from the network storage device to the internal storage device.

Claim 11	
[11.1]	The server device for media according to claim 6, wherein said list information transmission unit makes the list information to be transmitted to the network player include information for identifying whether each digital content is currently stored in the internal storage device or the network storage device in the display list of the network player.
Claim 12	
[12.0]	A method for controlling a server device for media which is equipped with an internal storage device for storing digital contents, the method comprising the steps of
[12.1]	responding to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network;
[12.2.1]	transferring and storing part of held digital contents in the internal storage device to a network storage device,
[12.2.2]	wherein the network storage device is connected to the network and is capable of storing data,
[12.2.3]	and wherein the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents from the internal storage device to the network storage device is transferred after obtaining permission from a user
[12.3.1]	responding to a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player,
[12.3.2]	wherein the list information lists the digital contents left in the internal storage device and the digital contents transferred from the internal

	storage device to the network storage device and stored in the network storage device,
[12.3.3]	and wherein the list information maintains a tree structure of the digital contents in the internal storage device before transferring the digital contents to the network storage device;
[12.4]	responding to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored; and
[12.5]	allowing the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device,
[12.6]	wherein the server device for media is a media player.

Exhibit List

Ex.	Description
1001	U.S. Patent No. 8,230,101
1002	Prosecution History of U.S. Patent No. 8,230,101
1003	Declaration and *Curriculum Vitae* of Mark Crovella, Ph.D.
1004	WO 2001/076192 to Sloss et al.
1005	U.S. 2006/0161635 to Lamkin et al.
1006	U.S. 2006/0101489 to Roden et al.
1007	U.S. 7,895,633 to Van Hoff et al.
1008	WO 2006/073040 to Ito et al. (certified translation)
1009	"TiVo for Dummies," Andy Rathbone, Wiley Publishing, Inc. (2004)
1010	U.S. 2002/0026563 to Chamberlain et al.
1011	U.S. 5,835,698 to Harris et al.
1012	Plaintiff's Fourth Amended Disclosure of Asserted Claims and Infringement Contentions, Appendix E-1 - Claim Chart for U.S. Patent No. 8,230,101 Against Google Cloud Content Delivery Network (CDN) and Google Products Utilizing CDN
1013	Plaintiff's Fourth Amended Disclosure of Asserted Claims and Infringement Contentions, Appendix E-2 - Claim Chart for U.S. Patent No. 8,230,101 Against YouTube and Google Products Utilizing YouTube
1014	Plaintiff's Fourth Amended Disclosure of Asserted Claims and Infringement Contentions, Appendix E-3 - Claim Chart for U.S. Patent No. 8,230,101 Against Google Home App and Compatible Google Products
1015	"Online File Storage System" by T.K. Rou, Proceedings of the 2002 Student Conference on Research and Development, IEEE (2002)
1016	Declaration and Curriculum Vitae of June Munford
1017	Microsoft Computer Dictionary, 5th ed. (excerpts)
1018	"File Structures," Folk et al., 2nd ed. (1992)

1019	2005 Service Update Guide, TiVo Inc. (2005)
1020	"Torvalds on TiVo," Forbes, March 9, 2006, *available at* https://www.forbes.com/2006/03/09/torvalds-linux-licensing-cz_dl_0309torvalds2.html
1021	WO 2006/073040 to Ito et al. (Japanese language original)
1022	Translators' Declaration for Ito
1023	Third Amended Docket Control Order

I. Introduction

Google LLC ("Petitioner") requests *inter partes* review ("IPR") of claims 1-12 (the "Challenged Claims") of U.S. Patent No. 8,230,101 (the "'101 patent").

II. Challenges (37 C.F.R. §42.104(b))

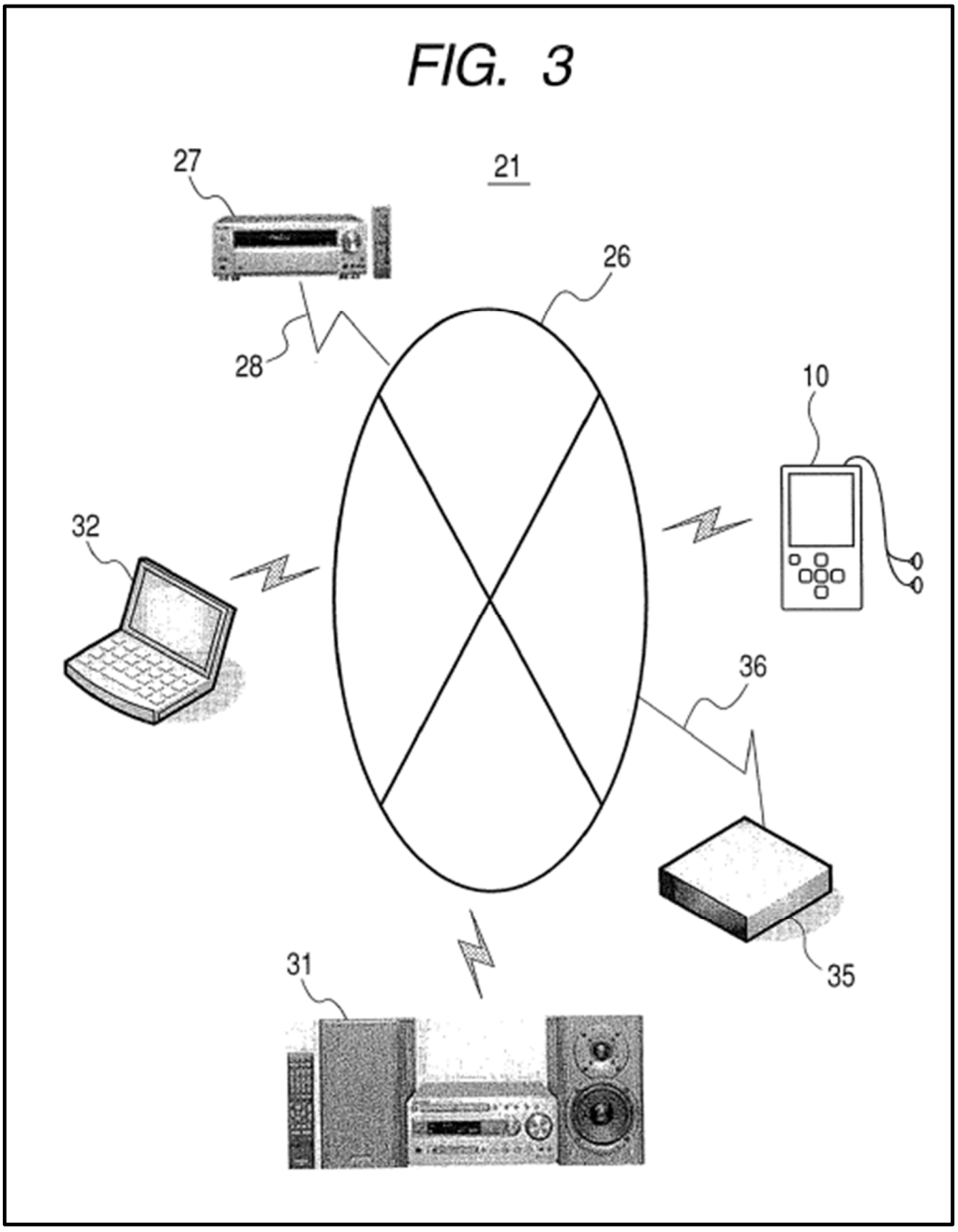
Ground	Statutory Basis	Claims	Prior Art
1	§103	1-3, 5, 7	Sloss, Lamkin
2	§103	4	Sloss, Lamkin, Rou
3	§103	6, 8, 9, 11, 12	Sloss, Lamkin, Chamberlain
4	§103	10	Sloss, Lamkin, Chamberlain, Rou
5	§103	1-4, 7	Roden, Van Hoff, Ito, Rathbone
6	§103	5	Roden, Van Hoff, Ito, Rathbone, Lamkin
7	§103	6, 8-10, 12	Roden, Van Hoff, Ito, Rathbone, Harris
8	§103	11	Roden, Van Hoff, Ito, Rathbone, Harris, Lamkin

III. Background

A. '101 Patent (Ex.1001)

The '101 patent purports to "provide a server device for media…capable of maintaining the convenience of playback in a network player, while properly dealing with the large total size of held digital content." Ex.1001, 2:6-11. The patent allows for digital content (e.g., music) to be shared and played by different network players, with digital content stored across internal and network storage (e.g., when internal storage gets full). The patent's system is shown in Figure 3's embodiment, including network 26 coupling HDD portable player 10 and network player 27, among other

components. Ex.1001, 4:13-25. The patent explains the "HDD portable player 10 functions as a server for delivering music pieces, pictures and other contents." Ex.1001, 4:13-25; Ex.1003, ¶¶36-37.



Ex.1001, Fig. 3

In one example, the patent describes "transferring and storing part of held digital contents in the internal storage device to a network storage device." Ex.1001, 2:23-26. This includes providing a list to a network player that identifies digital content left in the server device's internal storage, and digital content transferred from internal storage to the network storage device. Ex.1001, 2:27-35. The patent also discloses responding to a request to identify where digital content is stored by "searching for a location where the held digital contents are currently stored," (Ex.1001, 2:36-40), and that corresponding data can be "stream-delivered from the network storage device to the network player, if the result of the search shows the [digital contents are stored on the] network storage device." Ex.1001, 2:41-44; Ex.1003, ¶38.

The patent also purports to address a problem that, due to "copyright protection, some digital contents are adapted not to permit the overlapped part of the same content exists in a plurality of storage devices for more than several seconds in the playback time." Ex.1001, 9:26-29. According to the patent, as a result of this limitation, if the "transferring operation of such a digital content from the internal storage device 51 to the network storage device 57 is interrupted by a failure in the network 55 or the like, the original digital content cannot be recovered." Ex.1001, 9:26-35. The patent attempts to provide a solution in this case, where, if digital content cannot be recovered if a network failure occurs during transfer, that digital

content will either (1) not be transferred, or (2) will be transferred after obtaining user permission. Ex.1001, 9:36-46; Ex.1003, ¶39.

But the features recited in the challenged claims were all well-known, as shown below, by Sloss, Roden, and other references, and would have been obvious. Thus, the challenged claims should not have been allowed. Ex.1003, ¶40.

B. Prosecution

The '101 patent issued from U.S. Application 12/527,777, claiming priority to PCT Application PCT/JP2007/054603, filed March 2, 2007[1]. With the application, Applicants submitted a Preliminary Amendment to amend the claims, replacing "means for" language with "unit adapted to" language. Ex.1002, 46-52; Ex.1003, ¶41.

During prosecution, the claims were rejected as obvious multiple times (*see id.*, 432-451, 487-506, 522-538) over combinations not at issue here. After two office actions and responses (*see id.* 515-518, 547-554), the examiner conducted an interview, and proposed "merging subject matter in the preamble of the independent claims into the body of the claims" and other amendments, leading to allowance. *Id.*, 567-575; Ex.1003, ¶42.

[1] For purposes of this Petition, Petitioner applies March 2, 2007 as the priority date.

However, as this petition illustrates, the challenged claims' limitations were already known in the art. Accordingly, the examiner erred in allowing the patent. Ex.1003, ¶43.

C. Person of Ordinary Skill in the Art ("POSITA")

A POSITA in March 2007 would have been someone knowledgeable and familiar with the field of networked media devices. That person would have a bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent training, and approximately two years of experience working in the field of media device networking. Ex.1003, ¶¶31-35.

D. Claim Construction

Aside from terms construed below, for purposes of this proceeding, all terms should be given their ordinary and customary meaning.[2] *See* 37 C.F.R. §§42.100(b), 42.104(b)(3); Ex.1003, ¶¶21-22, 44-45.

[2] Petitioner does not concede that any term in the Challenged Claims meets the statutory requirements of 35 U.S.C. §112, or that the Challenged Claims recite patentable subject matter under 35 U.S.C. §101.

1. "transfer" (all claims)

The patent does not define the claim term "transfer." A POSITA would have recognized the scope of this term to include two potential meanings consistent with the claim language and specification. Ex.1003, ¶46.

First, "transfer" could mean "copying" or "caching," consistent with Patent Owner's interpretations in district court filings. For example, Patent Owner's infringement contentions state: "…data is only cached to the cloud CDN storage if it is cacheable (i.e., wherein the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents are not transferred from the internal storage device to the network storage device[])." *See* Ex.1012, 10-11, Ex.1013, 11-12 (similar). A cache is a memory storing copies of data; thus, a POSITA would have recognized that a "transfer" of content includes "copying" that content. Ex.1003, ¶47.

Second, "transfer" could also mean "moving data from one location to another," indicating just one instance of the data, being moved from one place to another, with no "copying" involved. Ex.1003, ¶48.

It is unnecessary to construe this term as the claims are unpatentable under either construction.

2. Means-Plus-Function Terms

Claims 1 and 6 recite various "unit" terms. Although there is a rebuttable presumption against invoking 35 U.S.C. §112 ¶6 when the word "means" is not in the claim, these terms are nonetheless means-plus-function terms because they do not "'recite sufficiently definite structure' or else recite[] 'function without reciting sufficient structure for performing that function.'" *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (en banc) (citations omitted). The term "unit," like the "nonce" terms in *Williamson* does not, standing alone, connote any particular structure. *Id*. at 1350. Additionally, Petitioner has identified these terms as indefinite means-plus-function terms in the parties' co-pending litigation, and, to the extent the Board determines that the claim terms discussed below involving a "unit" invoke §112 ¶6, Petitioner identifies function and corresponding structure below, in compliance with §42.104(b)(3).[3]

[3] Because "Petitioner is precluded from arguing that the claim [is] indefinite before the Board," (*Hospira, Inc. et al. v. Amgen Inc.*, IPR2021-00528, Paper 7, p.9 (Aug. 17, 2021)), Petitioner identifies structure for the purposes of this proceeding only without conceding that the identified structure is sufficient. *See also Target Corp. v. Proxicom Wireless, LLC*, IPR2020-00904, Paper 11, p.12 (Nov. 10, 2020)

a. "transfer control unit"

Function: "transferring and storing part of held digital contents in the internal storage device to a network storage device."

For purposes of this proceeding, the corresponding structure is a general purpose computer, e.g., the server device of the specification. *See EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 622-623 (Fed. Cir. 2015) ("general purpose computer lends sufficient structure [] to basic functions of a microprocessor" including "storing" data).

b. "list information transmission unit"

Function: "responding to a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player."

For purposes of this proceeding, the corresponding structure is a general purpose computer, e.g., the server device of the specification. *See id.* The limitation merely requires a computer to respond to a request for a list of stored data, which is covered by basic "receiving" and "processing" functions, thus requiring only a

(permissible for petitioner to argue claims were taught by the prior art while simultaneously pursuing district court indefiniteness argument).

general purpose computer because the computer "need not be specially programmed to perform the recited function."

c. "search unit"

Function: "responding to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored."

For purposes of this proceeding, the corresponding structure is a general purpose computer, e.g., the server device of the specification. *See id.*

d. "digital contents data transmission processing unit"

Function: "allowing the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device."

For purposes of this proceeding, the corresponding structure is a general purpose computer, e.g., the server device of the specification. *See id.*

e. "return control unit"

Function: "causing the digital contents corresponding to a predetermined condition among the digital contents which have been transferred to the network storage device to be returned from the network storage device to the internal storage device."

For purposes of this proceeding, the corresponding structure is a general purpose computer, e.g., the server device of the specification. *See id.*

IV. Ground 1: Claims 1-3, 5, and 7 are obvious under §103 over Sloss and Lamkin

A. Sloss (Ex.1004)

Sloss published October 11, 2001, and is §102(b) prior art.

Sloss teaches "an improved architecture for network data distribution." Ex.1004, 1:5-7. Sloss discloses a "multi-tiered networking architecture" including "data centers 220-222" where each includes "network servers on which various types of network content may be stored and transmitted to end users 250, including…live & on-demand multimedia streaming files." Ex.1004, 5:3-5, 5:11-14. In one example, requested content is transmitted "directly from" a source (e.g., data center) to an end user/client. *See* Ex.1004, 1:21-2:3. In Sloss's technique, after content is uploaded to a server at a data center 220-222, it may be "automatically distributed from the data center 220-222 to one or more of the intermediate POPs 230-234, and/or edge POPs 240-245…" Ex.1004, 8:13-16. Not all data is distributed: Sloss teaches that only cacheable data will be distributed, whereas non-cacheable data is not transmitted from data centers to POPs. *See* Ex.1004, 1:18-2:3; Ex.1003, ¶¶52-53.

B. Lamkin (Ex.1005)

Lamkin published July 20, 2006 and is §102(a) prior art.

Lamkin teaches "managing content" on a network. Ex.1005, Abstract. In Lamkin, "a user 224 at the client device 124 is provided a user interface that accesses

and/or shows content accessible, for example, through a CDS [content directory service] from various devices and/or local content." Ex.1005, ¶56. Lamkin's user interface also includes content "that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶87. Lamkin teaches a "media in-box user interface" that "can identify content and in some implementations present the content according to an organized structure, similar to a file structure" like a hierarchical tree structure. Ex.1005, ¶95, FIG. 6; Ex.1003, ¶¶54-56.

C. Motivation to Combine

A POSITA would have been motivated to combine the teachings of Sloss and Lamkin. It would have been obvious, beneficial, and predictable to apply Lamkin's teaching of a list showing where digital contents are stored, including whether digital contents are stored in internal or network storage, to Sloss's disclosures of network data distribution. This combination would achieve the benefits disclosed by Lamkin, of "managing content," over a "distribution network," as disclosed by Sloss and Lamkin. Ex.1005, Abstract; Ex.1003, ¶57.

Sloss and Lamkin relate to managing digital contents over a network. Ex.1004, Abstract; Ex.1005, Abstract. As such, Sloss and Lamkin are within the field of endeavor and analogous art. *See, e.g.,* Ex.1001, 1:7-12; Ex.1003, ¶58.

Sloss discloses "data centers 220-222" where each is comprised of "network servers on which various types of network content may be stored and transmitted to

end users 250, including…streaming files." Ex.1004, 5:3-5, 11-14. However, Sloss does not explicitly disclose that the contents are detailed in a "list" through "a user interface that accesses and/or shows content accessible, for example, through a CDS from various devices and/or local content." Ex.1005, ¶56; Ex.1003, ¶¶59-60.

A POSITA would have recognized that lists were a routine way to keep track of available digital contents that could be provided to end users. For example, Lamkin explicitly teaches "a simplified example of a user interface 520 [that] can include a listing of content 522." Ex.1005, ¶87. Lamkin explains that the "listing 522 includes a listing of one or more content that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶87. Thus, Lamkin explicitly discloses a flexible user interface including a listing of content that is available on various network-connected devices. Lamkin also provides an explicit motivation for providing such a list, as the list is part of its "simplified example of a user interface" and Lamkin characterizes the invention as "methods, systems and apparatuses for use in managing content" on a network, which would have motivated a POSITA to use its list teachings to manage the digital contents available to a user to provide an easy method of managing such content in other networks/systems (e.g., Sloss). Ex.1005, Abstract; Ex.1003, ¶61.

A POSITA would have recognized additional benefits of utilizing a list to manage digital contents, as Lamkin teaches, within a networked media system (e.g.,

in Sloss's context). For example, Lamkin's background acknowledges "a drastic increase in the number of consumer electronic devices capable of communicating with one or more computers or other consumer electronic devices." Ex.1005, ¶4. Lamkin acknowledges a consumer will need a way to "manage [that] media content over [said] network." Ex.1005, ¶2. Likewise, a POSITA would have recognized that nearly all operating systems kept records of files accessible within the computer on which the operating system ran, as well as records for files accessible over a network from the computer. And, such records were kept in a hierarchical file system in which a tree structure was used to represent the location of such files. Ex.1003, ¶62. Thus, Lamkin's teachings would have been well-known to a POSITA.

A POSITA would have also had a reasonable expectation of success. Given the close overlap between Sloss and Lamkin, a POSITA would have expected success implementing Lamkin's list feature for managing digital contents in Sloss, which likewise deals with digital content distributed across a networked media system. Further, contemporaneous research confirms that it was possible, predictable, and well-known to provide a list of digital contents to client devices in a streaming media context. Ex.1003, ¶64.

Further, a POSITA would have found it obvious to apply Lamkin's teachings to Sloss's disclosure of streaming media over a network because there was only a finite number of ways to keep track of and display where media is stored in a

networked media distribution system. It would have been obvious to a POSITA to use a list and tree organizational structure to inform the user where each piece of media was stored. In addition, the combination would have been obvious because it represents known potential options with a reasonable expectation of success. Ex.1003, ¶63.

D. Independent Claim 1

1. [1.0]

Sloss teaches "[a] distributed edge network architecture [] in which a **data center** serves as a primary repository for content….[C]ontent is replicated at…point of presence ('POP') sites….[E]dge POP sites communicate with the intermediate POP sites and serve as network caches, storing content as it is requested by end users." Ex.1004, Abstract, *see also* 24:4-26:20.

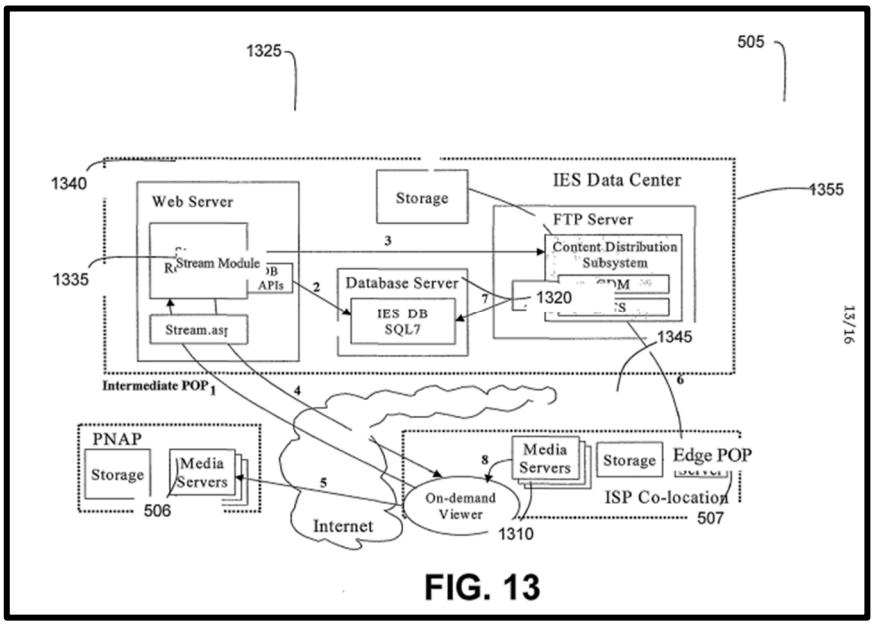
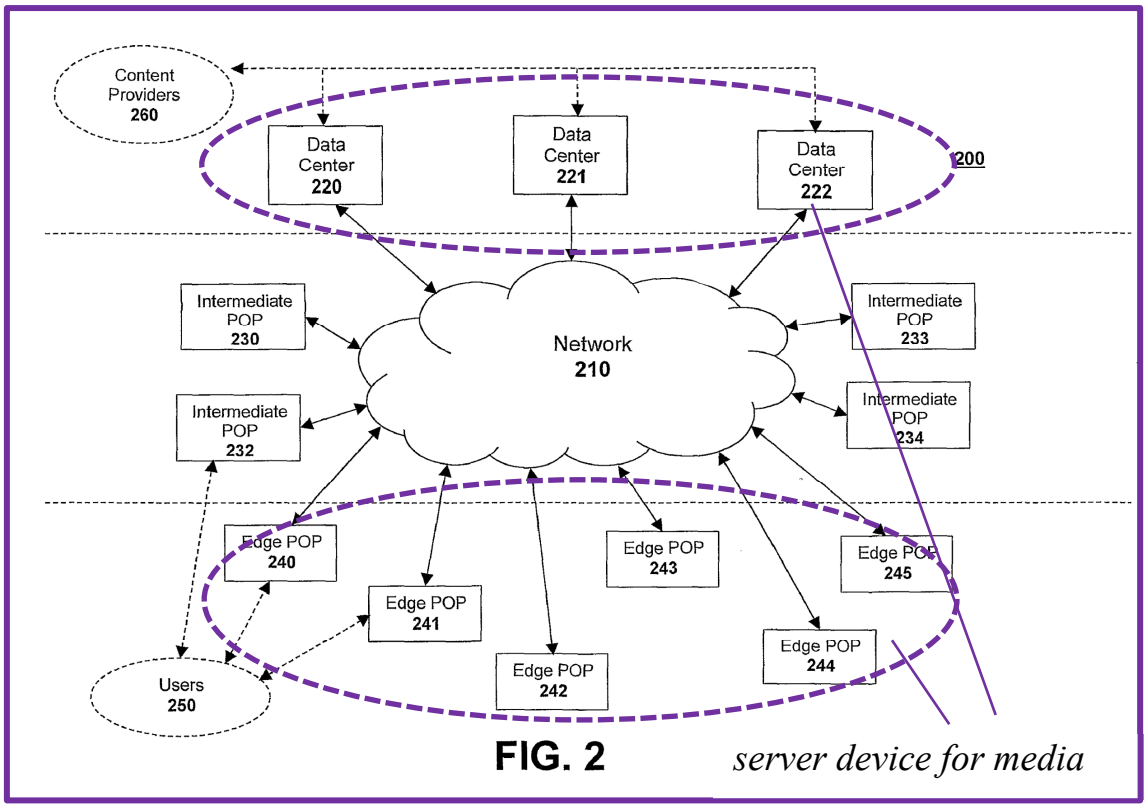


FIG. 13

Ex.1004, FIG. 13

Figure 2 shows Sloss's "multi-tiered networking architecture" including "data centers 220-222" and "edge POPs 240-245" where each data center and edge POP includes "network servers on which various types of network content may be stored and transmitted…including…multimedia streaming files." Ex.1004, 5:3-6:15. The set of servers (data centers 220-222 and edge POPs 240-245) are mapped to the claimed "*server device for media*."



Ex.1004, FIG. 2 (annotated)

Sloss also explains as background Figure 1's "traditional network caching system", including "remote Internet server 120" which teachings a POSITA would have understood as applicable to servers at data centers 220-222. Ex.1004, 1:9-2:17.

Sloss's set of servers at data centers 220-222 and edge POPs 240-245 disclose or render obvious the preamble's "*server device for media*."[4] Ex.1003, ¶¶66-69.

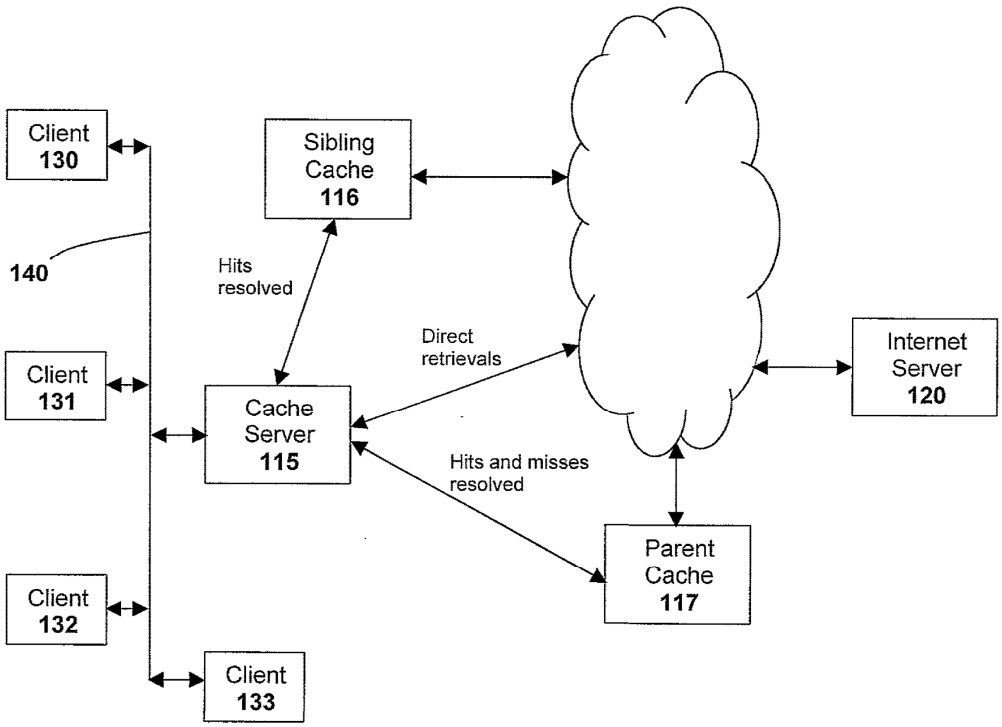


FIG. 1
(*Prior Art*)

[4] Claim language is italicized.

2. [1.1]

First, Sloss teaches "*an internal storage device for storing digital contents*." In Sloss, "data centers 220-222 serve as the primary initial repositories for network content" and are "capable of storing and transmitting vast amounts of content provider 260 data" and are thus "equipped with disk arrays." Ex.1004, 8:9-9:6. Additionally, Sloss teaches that the data center is "comprised of a plurality of servers for storing digital content." Ex.1004, 38:4 (cl.1). Further, Sloss describes "computer system 300 representing exemplary…servers" including "data storage device 327 such as a magnetic disk…for storing information." Ex.1004, 6:17-7:21. Additionally, Sloss teaches that edge POPs have "storage capacity." Ex.1004, 22:12-17. Thus, Sloss teaches "*an internal storage device for storing digital contents*."

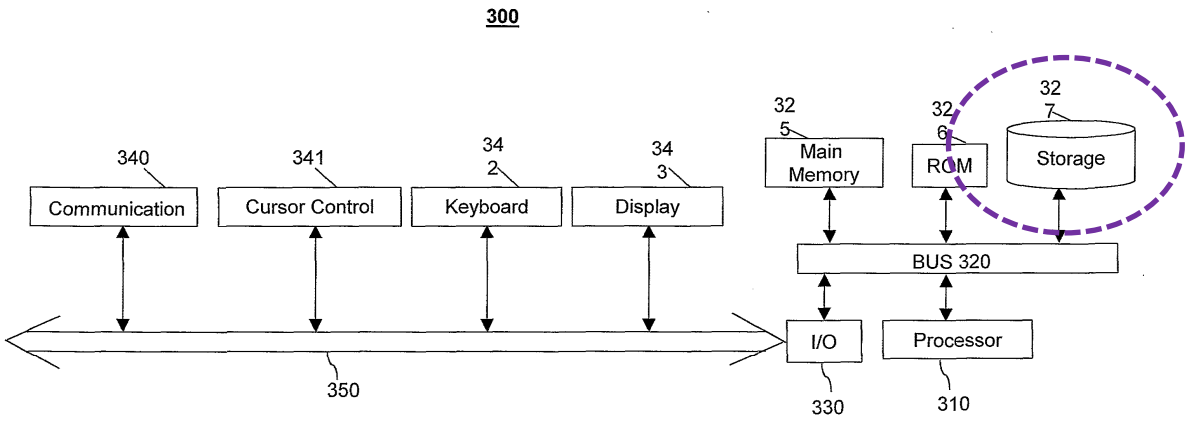


FIG. 3

Ex.1004, Fig. 3 (annotated)

Second, Sloss teaches that servers at data centers and edge POPs "*respond[] to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network*." Sloss explains that clients 130-133 (which teach a "*network player*" and which teachings are applicable to Figure 2's users) communicate "over a local area network and/or a larger network 110 (e.g., the Internet)" and "run a browser application." Ex.1004, 1:9-2:17. Sloss further explains that "[t]he browser…may be configured so that all requests for information (e.g., Web pages) are transmitted through a local cache server 115.'" Ex.1004, 1:16-18. Then, "[w]hen a client 130 requests information from a remote Internet server 120," (which teachings are applicable, e.g., to servers at data center 220-222), "local proxy cache 115 examines the request and initially determines whether the requested content is 'cacheable'." Ex.1004, 1:18-21. "If the local proxy cache 115 detects a non-cacheable request, it forwards the request directly to the content source (e.g., Internet server 120)." Ex.1004, 1:21-2:3.

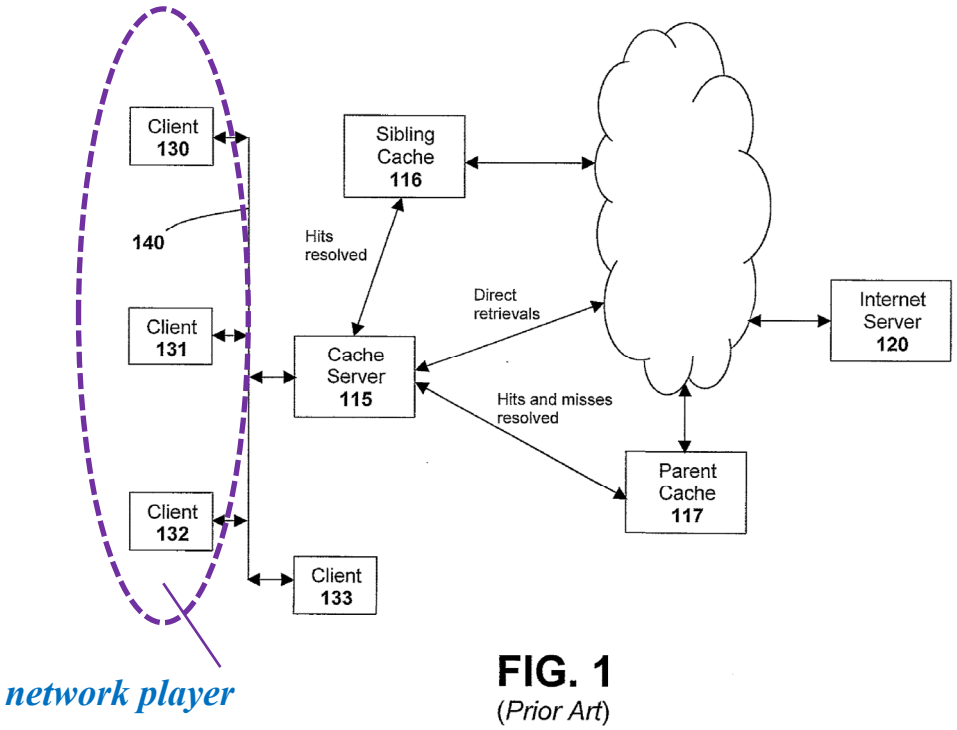


FIG. 1
(*Prior Art*)

Ex.1004, Fig. 1 (annotated)

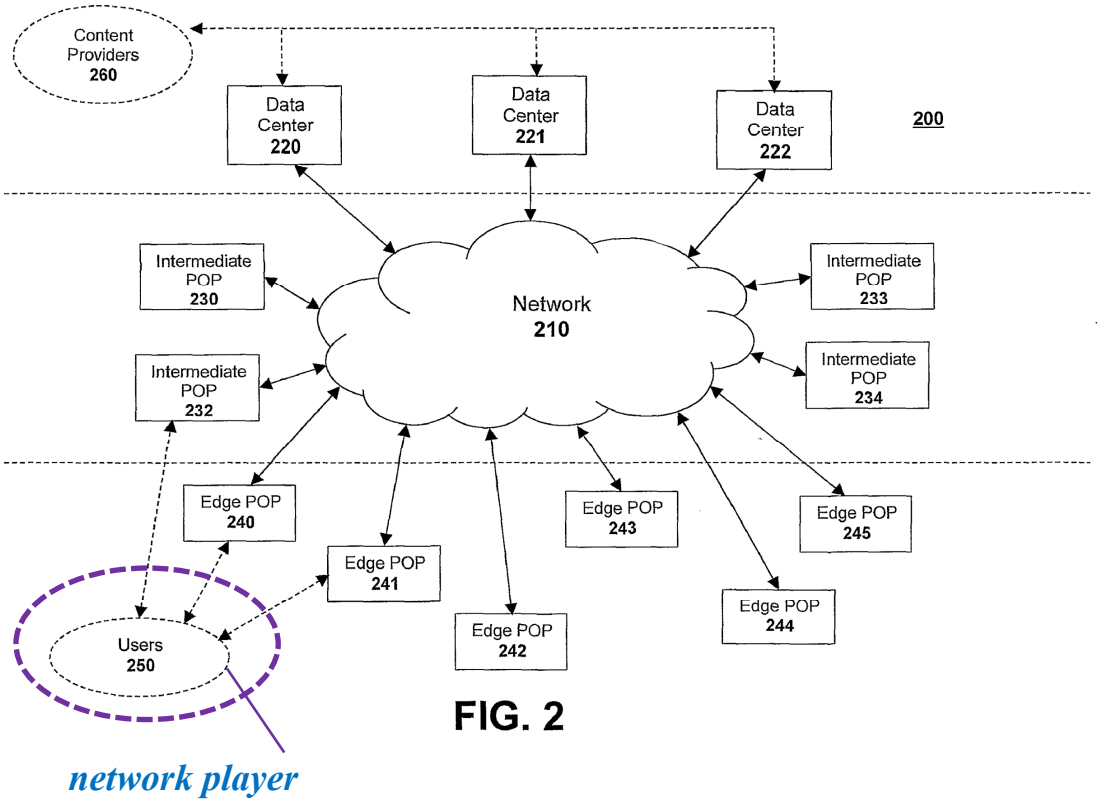


FIG. 2

Ex.1004, Fig. 2 (annotated)

Thus, Sloss teaches that a network player (e.g., a client device's browser) transmits, to a local proxy cache, a request for content, and when that request corresponds to non-cacheable content, the request is forwarded to the internet server (or a server at data centers 220-222). Thus, data centers 220-222 receive "*a data transmission request from a network player*." In response, Sloss teaches that "requested content is then transmitted directly from the source 120 to the client 130," i.e. streamed directly from the remote internet server (e.g., servers at data centers 220-222) to the network player (e.g., clients 130-133 and users 250). Ex.1004, 1:21-

2:3. Sloss explains this is "*stream-delivering*" as claimed because data centers transmit "multimedia **streaming files**." Ex.1004, 5:12-14; *see also* 8:9-18. Sloss also teaches that content cached at edge POPs may be "transmitted to the user." Ex.1004, 23:2-5.

Thus, Sloss teaches that "*the server device for media"* (servers at data centers 220-222 and edge POPs) "*responds to a data transmission request from a network player by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network*" (servers transmit data to the client device's browser over the Internet from the servers' storage). Ex.1003, ¶¶70-77.

3. [1.2.1]

First, Sloss discloses multiple "*network storage device[s]*" in its teachings of Intermediate POPs. Sloss teaches that "intermediate POPs 230-234…are comprised of groups of network servers on which various types of network content may be stored." Ex.1004, 5:9-16, 8:9-18.

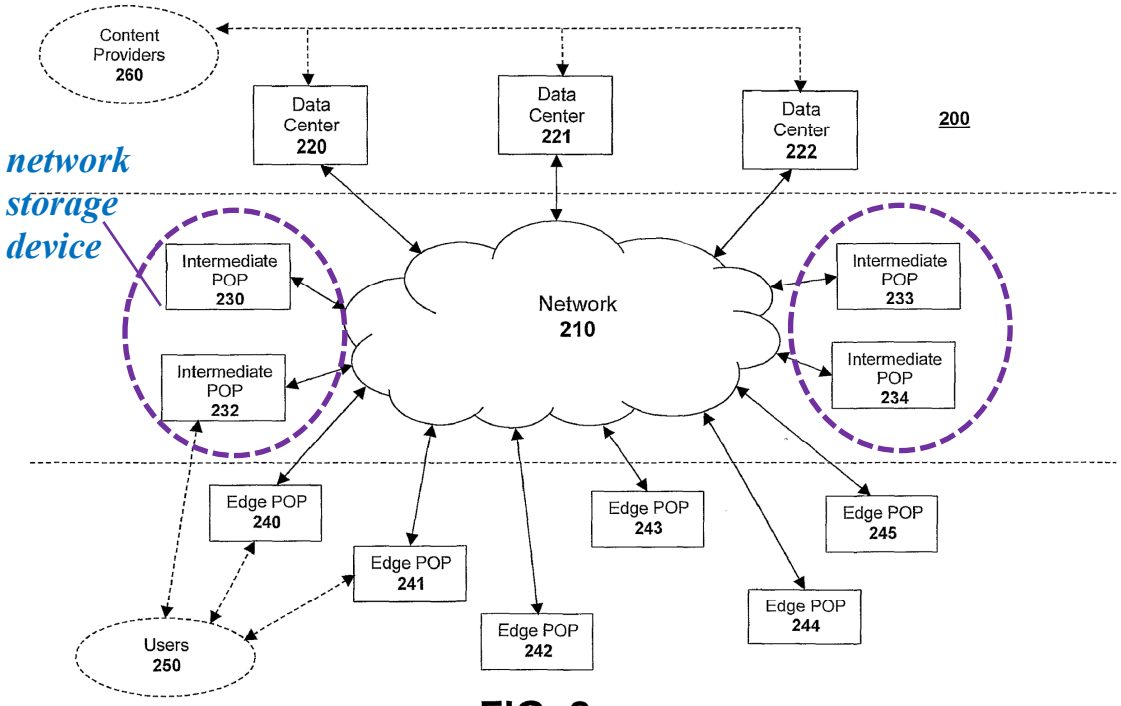


FIG. 2

Ex.1004, Fig. 2 (annotated)

Sloss also discloses data being transferred and stored from the data centers to the intermediate POPs. For example, Sloss teaches that after content is uploaded to "a streaming server located at a data center 220-222…[t]he file will then be automatically distributed from the data center 220-222 to one or more of the intermediate POPs 230-234…" Ex.1004, 8:9-18, cl.1. Thus, Sloss teaches that the data center servers "*transfer and store part of held digital contents in the internal storage device to a network storage device*" (i.e., an intermediate POP). This is consistent with Sloss's Figure 1 teachings, which detail the internet server

distributing content to a local proxy cache: "the content is retrieved from the source Internet server 120, transmitted to the client 130 **and a copy is stored locally on the proxy cache 115**." Ex.1004, 1:18-2:17. Thus, Sloss teaches transmitting data from the data centers 220 to the intermediate POPs to store that content, which corresponds to "*transfer and store part of digital contents in the internal storage device to a network storage device*."

Third, Sloss teaches "*a transfer control unit*" to perform this functionality. For example, Figure 3's computer system, which is representative of the data center servers, includes "processor 310" and "instructions to be executed by processor 310." Ex.1004, 7:1-6.

Thus, Sloss discloses or renders obvious this limitation. Ex.1003, ¶¶78-83.

4. [1.2.2]

As Figure 2 shows, intermediate POPs are connected to a network.

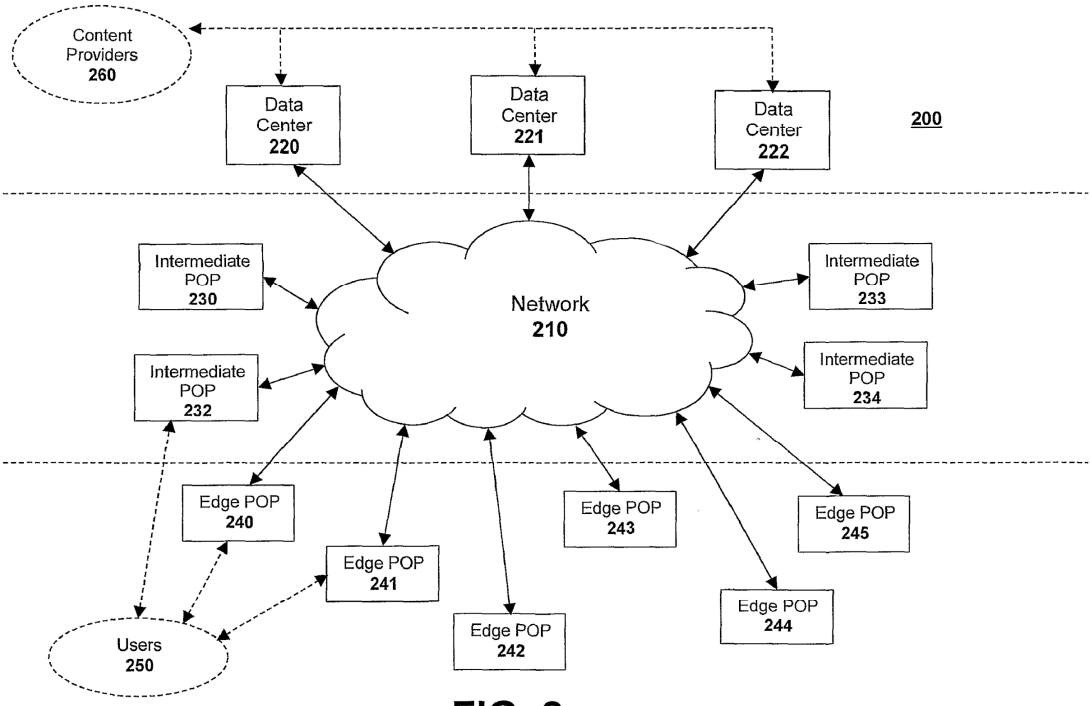


FIG. 2

Additionally, as detailed in [1.2.1], intermediate POPs "are comprised of groups of network servers on which various types of network content may be stored and transmitted." Ex.1004, 5:9-14. Thus, the intermediate POPs are "*connected to the network*" and "*capable of storing data*." Ex.1003, ¶¶84-85.

5. [1.2.3]

In describing caching procedures and Figure 1, Sloss teaches that only cacheable data is transferred to local proxy caches. Specifically, Sloss states:"[w]hen a client 130 requests information from a remote Internet server 120, the local proxy cache 115 examines the request and initially determines whether the requested content is 'cacheable' (a significant amount of Internet content is 'non-cacheable'). If the local proxy cache 115 detects a non-cacheable request, it forwards the request

directly to the content source (e. g., Internet server 120). The requested content is then transmitted directly from the source 120 to the client 130 **and is not stored locally on the proxy cache 115**." Ex.1004, 1:18-2:3; *see also* 2:4-10 (describing functionality when content is cacheable); *see also* 22:12-18 (detailing caching policy that considers "whether the requested file is non-cacheable").

Thus, Sloss teaches that the source 120 (which teachings are applicable, e.g., to data centers 220-222) "*does not transfer, from the internal storage device to the network storage device*" (from data centers to intermediate POPs) "*the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents from the internal storage device to the network storage device*" (the requested content is not stored on the equivalent of the proxy cache, e.g., the intermediate POPs, if the content is not cacheable). This is consistent with Patent Owner's interpretation of this claim language in district court filings: "While delivering the data from cloud server to various APIs, the data is only cached to the cloud CDN storage if it is cacheable (i.e., wherein the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents are not transferred from the internal storage device to the network storage device[])." *See* Ex.1012, 10-11, Ex.1013, 11-12 (similar). For patentability purposes, Patent Owner cannot argue that the claims do not cover this interpretation while simultaneously arguing its infringement theory in district court. *See, e.g.*, *Pall Corp.*

v. PTI Tech. Inc., 259 F.3d 1383, 1393 (Fed. Cir. 2001) ("The public notice function of patents requires that a patentee be prevented from expressly stating during prosecution that the claims do not cover a particular device and then later suing for infringement by that same device."); *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir. 2017) ("prosecution disclaimer ensures that claims are not 'construed one way in order to obtain their allowance and in a different way against accused infringers" and expressly extending prosecution disclaimer doctrine to IPR proceedings). To the extent the Board finds that the claim scope only allows for "transfer" to mean "move" and not "copy" or "cache," it would have been obvious to a POSITA to use Sloss's disclosure of caching copies closer to the end user, and apply that to moving copies of the data closer to where the end user is requesting it. For example, as Dr. Crovella explains, moving and copying data were well-known concepts (indeed, fundamental concepts within computing), and moving a content element (e.g., a movie) instead of copying/caching that movie would have reduced the amount of duplicate copies of the movie, and reduced the total amount of storage occupied by duplicate copies of the movie, which a POSITA would have recognized as desirable given the cost of storage.

Thus, Sloss renders obvious this limitation. Ex.1003, ¶¶86-91.

6. [1.3.1]

The combined teachings of Sloss and Lamkin render obvious this limitation.

Sloss does not explicitly teach that the data center servers can provide a list of digital contents to client devices, but this would have been well-known to a POSITA in the streaming media context of Sloss and prior to the invention. For example, Netflix's streaming service launched in January 2007, prior to the '101 patent's earliest effective filing date, and a POSITA would have known that Netflix would have been a typical content provider consistent with Sloss's disclosure, and one which provided lists of available digital content to end users (e.g., a list of available movies for an end-user to stream on their device).

Consistent with this knowledge, Lamkin teaches responding to "*a list presentation request for the held digital contents of the server device for media from the network player by transmitting list information to the network player*." For example, Lamkin teaches "managing content" on a network and teaches that "a user 224 at the client device 124 is provided a user interface that accesses and/or shows **content accessible**, for example, through a CDS [content directory service] **from various devices** and/or local content, and allows the user to select the content to be pulled to the client device to be accessed and/or recorded." Ex.1005, Abstract, ¶56. A POSITA would have understood that Lamkin's user interface is provided responsive to a request for that user interface, for example, Lamkin teaches "[u]sers can access a content user interface, for example, by selecting the content button or

option" and be provided the "user interface 520 of FIG. 5" and thus Lamkin at least renders obvious "*respond[ing] to a list presentation request*." Ex.1005, ¶204.

Lamkin's Figure 5 depicts "a simplified example of a user interface 520" where "user interface 520 can include a listing of content 522." Ex.1005, ¶87.

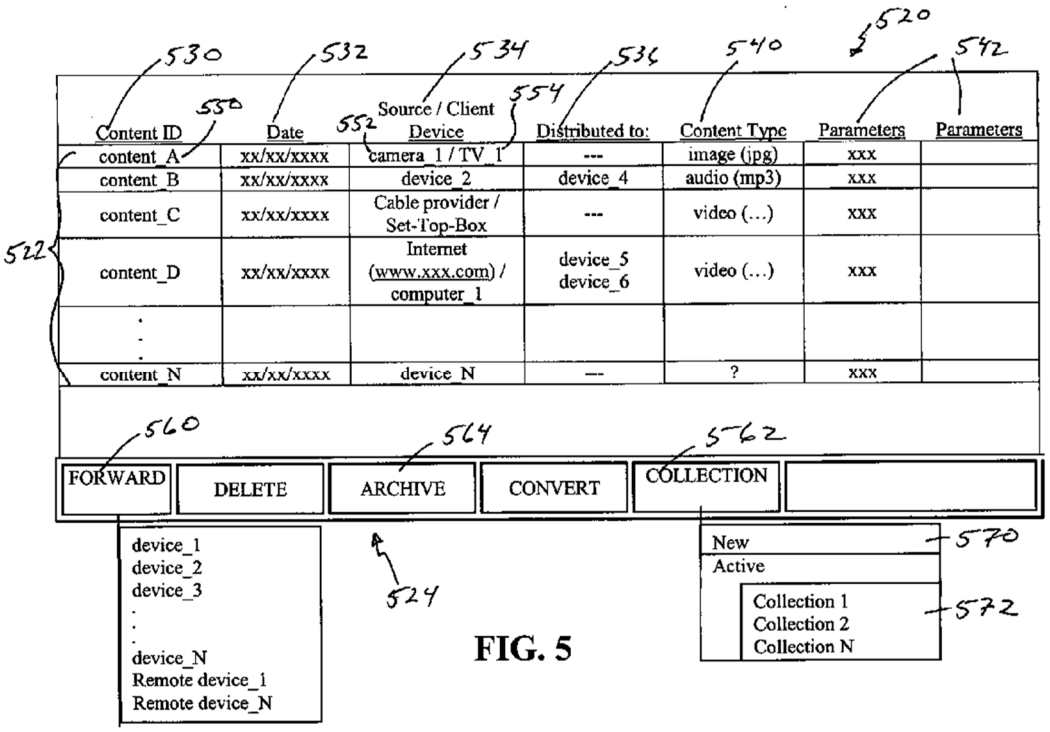


FIG. 5

Ex.1005, Fig. 5

As Figure 5 shows, "listing 522 includes a listing of one or more content that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶87. Thus, Lamkin's provision of a user interface corresponds to "*transmitting list information to the network player*." In combination with Sloss, this functionality of Lamkin would be implemented by Sloss's servers at data centers 220-222, which correspond to the recited "*list information transmission unit*."

Accordingly, Lamkin renders obvious "*a list information transmission unit adapted to respond to a list presentation request for the held digital contents of the server device for media from the network player*" (Lamkin's providing a user interface with a listing with Sloss's teachings of data centers 220-222). Ex.1003, ¶¶92-97.

7. [1.3.2]

Lamkin's user interface shown in Figure 5 "includes a listing of one or more content that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶87. In more detail, Figure 5 shows **content_C** which is available on a client device set-top-box (which may be a personal video recorder) and corresponds to one example of "*the digital contents left in the internal storage device*," e.g., content at Sloss's data centers or edge POPs. Figure 5 also shows **content_D** which has been distributed to device_5 and device_6, one of which may be, as Lamkin explains "network attached storage (NAS) 132," e.g., content at Sloss's intermediate POPs. Ex.1005, ¶85. This content item thus corresponds to one example of "*the digital contents transferred from the internal storage device to the network storage device and stored in the network storage device*" because a POSITA would have recognized network attached storage as a backup device consistent with Lamkin's disclosure of "remote storage of content" done to "archive content." Ex.1005, ¶79.

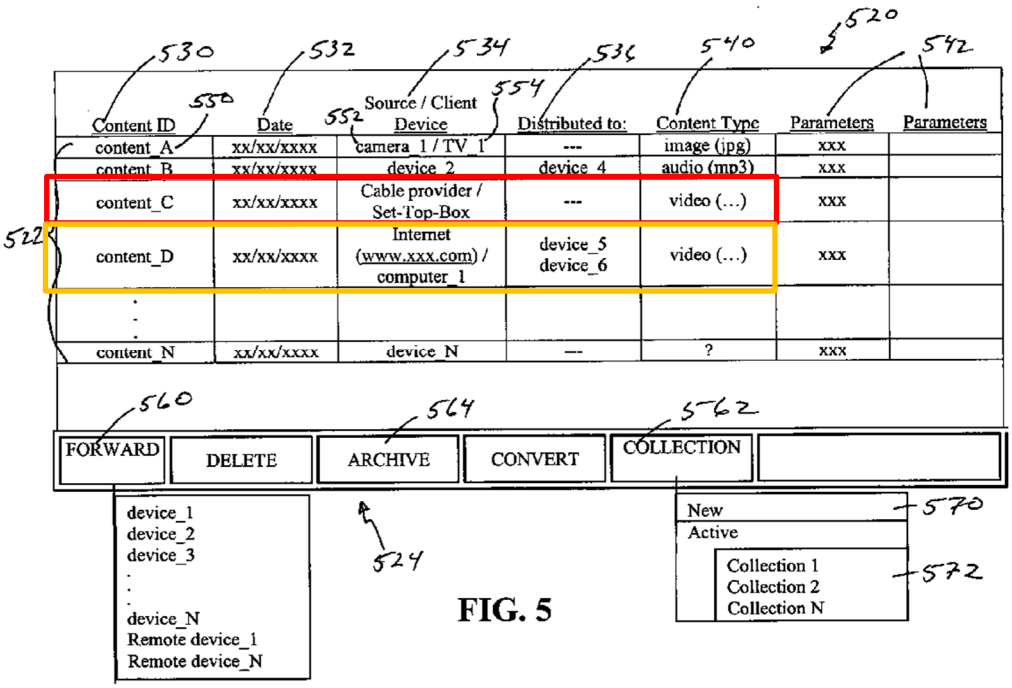


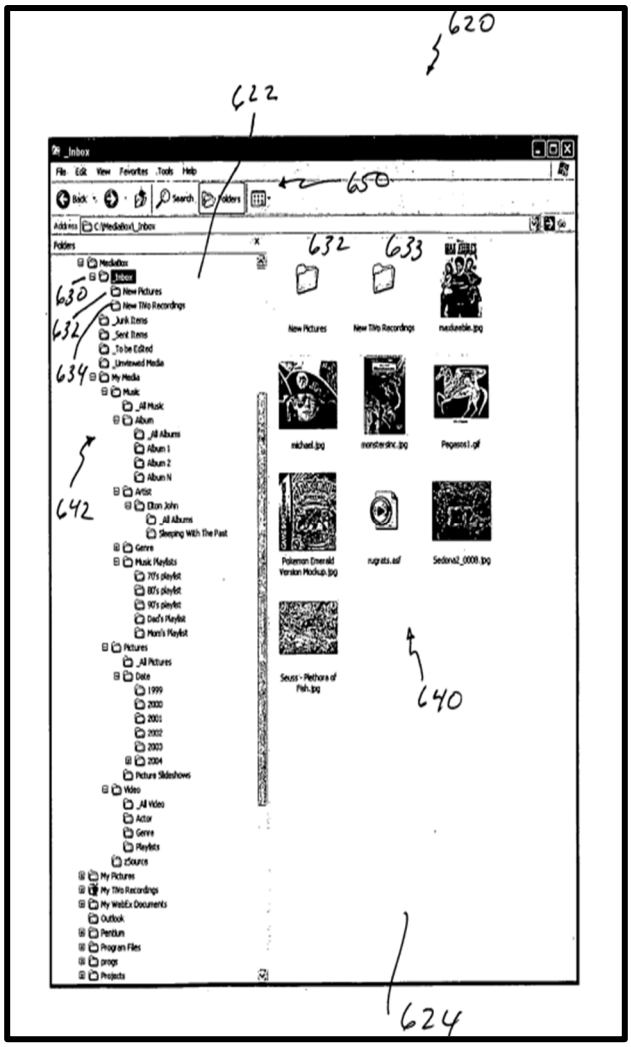
FIG. 5

Ex.1005, Fig. 5 (annotated)

Thus, Lamkin's Figure 5 user interface renders obvious "*list information*" that "*lists the digital contents left in the internal storage device and the digital contents transferred from the internal storage device to the network storage device and stored in the network storage device*." Ex.1003, ¶¶98-101.

8. [1.3.3]

Lamkin teaches that in some implementations the "user interface 520 includes…a media in-box user interface." Ex.1005, ¶94. Figure 6 shows Lamkin's "media in-box user interface" depicting a simplified example which identifies content and presents "the content according to an **organized structure, similar to a file structure**." Ex.1005, ¶95. The file structure appears as a hierarchical tree:



Ex.1005, Fig. 6

Lamkin's Figure 6 tree structure would have been recognized as common to many file systems. For example, a POSITA would have recognized that both Windows and Unix-based operating systems stored files in a hierarchical file system, in which directories/folders and files were represented by a tree structure. Confirmed by Lamkin's presentation of such a file system (e.g., a Windows file system), therefore, a POSITA would have recognized that Lamkin's devices would have "*maintain[ed] a tree structure of the digital contents in the internal storage device*"

present at all times, including "*before transferring the digital contents to the network storage device*" as recited. Ex.1003, ¶¶102-104; *see also* Ex.1005, ¶264 (teaching a tree structure).

Thus, Lamkin teaches "*the list information maintains a tree structure of the digital contents in the internal storage device before transferring the digital contents to the network storage device*." Ex.1003, ¶¶102-104.

9. [1.4]

Sloss teaches, in one example, "when a user 705 requests content stored on a particular Internet site...the request is received by a load balancer module ('LBM') 710." Ex.1004, 20:21-21:19. Sloss explains that the "LBM" may be "a module which resides at a data center (e.g., running on a Web server)" and thus the LBM corresponds to a "*search unit*" which is part of the recited "*server device*" and which receives "*a data transmission request for the held digital contents from the network player*" (e.g., the LBM receives a request for content from a user at a client device). Ex.1004, 21:4-5.

Sloss further teaches that the LBM, or "*search unit*," is "*adapted to respond to a data transmission request…by searching for a location where the held digital contents are currently stored*" as it teaches that "LBM 710 finds the most appropriate edge POP 507 and determines whether the content is available at the edge POP 507 by querying the central database 530 (i.e., the database 530 in one embodiment keeps

track of exactly where content has been distributed throughout the system). If the requested content is available at the edge POP 507, it is transmitted to the user 705. If, however, the content is not available at the edge POP 507, then the LBM 710 redirects the request to the second most appropriate POP, (e.g., intermediate POP 506 in the illustrated embodiment), which then transmits the content to the user 705." Ex.1004, 21:11-19. Thus, the LBM searches for where the requested content is stored, which corresponds to this claim language.

Accordingly, Sloss's LBM at the data center discloses or renders obvious this limitation. Ex.1003, ¶¶105-108.

10. [1.5]

Sloss teaches that, in one example, "client 130 requests information from a remote Internet server 120" and when the client's request is cacheable "it searches for a copy of the content locally" and may transmit the content from a cache. Ex.1004, 1:9-2:10. As detailed above, the intermediate POPs in Sloss are caches corresponding to the recited "*network storage device*" and thus at least this example renders obvious "*allow the corresponding data in held digital contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device*." *See also* Ex.1004, 21:16-19, Fig. 8 (850).

Sloss also teaches a streaming module through which content is transmitted to the user (i.e., "*stream-delivered*"): "distributing and **streaming multimedia**

files….The web server 1325 in this embodiment brings up a **streaming module**…to process the request." Ex.1004, 24:4-15.

Sloss's streaming module calls the stream redirector to determine the content's path (where the content is being stored, it will find a match and identify an intermediate POP server (e.g., a "*network storage device*")) and then return a streaming path that redirects the viewer/client (a "*network player*") to a media server: "**streaming module** 1335 [creates] the streaming server path to the on-demand file…redirector 1340 finds a match and correctly identifies the edge POP site 507 the viewer 1310 is connecting from. It checks the database 1320 (e.g., using database API's) to determine if the desired file exists at the viewer's edge POP site 507. If it finds a FileLocation record matching this site 507 using the FileInfo ID from the URL, it returns a streaming path that redirects the viewer to a media server 1345 colocated at the edge POP site 507. **If it doesn't find the file there (i.e., resulting in a cache 'miss'), it instead generates a path redirecting the viewer to one of the intermediate POP sites 506 where the file is known to be located**….The redirector 1340 returns the intermediate POP redirection path to the streaming module 1335 where it is inserted into the metafile and returned to the viewer's 1310 browser." Ex.1004, 24:16-25:7, 25:17-19, *see also* 23:6-14 ("intermediate POP server transmits the content to the user at 850").

Thus, Sloss renders obvious this limitation. Ex.1003, ¶¶109-113.

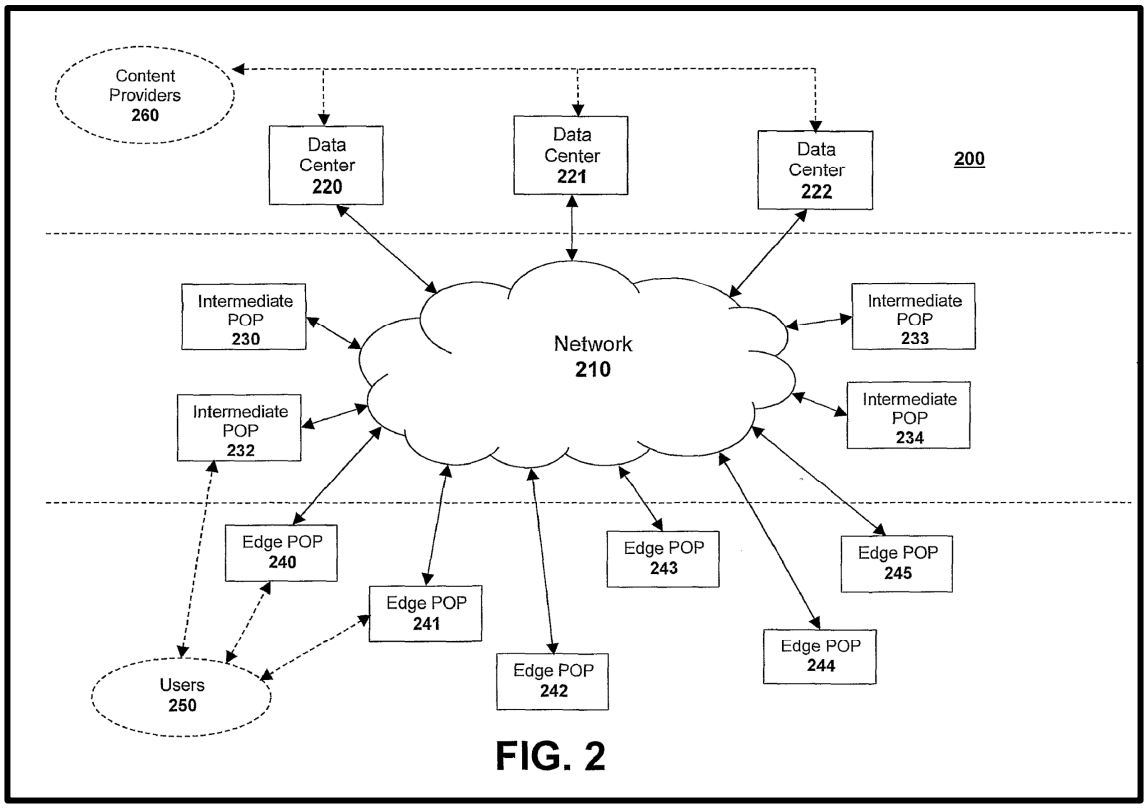
11. [1.6]

Sloss's "data centers 220-222" and "edge POPs 240-245" (i.e., the "*server device for media*") include servers which store and transmit to end users "multimedia streaming files." Sloss explains, in one example, that a redirector returns a file path to the streaming module in a metafile which is returned to the viewer's browser, at which point "[t]he viewer's 1310 browser receives the metafile and hands it over to the **streaming player (e.g., RealPlayer®, Windows®...etc)**." Ex.1004, 25:17-26:2. Thus, the data centers 220-222 and edge POPs 240-245 are "*a media player*."

This interpretation is consistent with Patent Owner's infringement allegations, where Patent Owner has argued that "Google **Cloud CDN servers** act as media players by hosting and streaming content via services like YouTube….The Google Cloud servers with integration to its services like YouTube act as a media player." Ex.1012, 32. Thus, just like Patent Owner has alleged that servers hosting content that is delivered to users constitute "*a media player*," Sloss's servers at data centers 220-222 and edge POPs 240-245 ("*the server device for media*") correspond to "*a media player*." Ex.1003, ¶¶114-115.

E. Claim 2

Sloss teaches servers at data centers 220-222 and edge POPs which correspond to the "*server device for media*."



Ex.1004, FIG. 2

The edge POP is a cache, and Sloss teaches that its method may "determine[] whether a copy of the requested content should be stored locally at the edge POP" and if so, "then the content is transferred to the edge POP site" from an "intermediate POP server" (Ex.1004, 23:6-14) and thus Sloss renders obvious "*said digital contents data transmission processing unit causes the network storage device*" (Sloss's transfer from the intermediate POP server) "*to transmit the corresponding data to the server device for media*" (content is transferred to the edge POP).

As discussed in [1.5], Sloss also teaches a streaming module through which content is transmitted to the user at the network player from the edge POP (i.e., "*from*

the server device for media to the network player"): "distributing and **streaming multimedia files** will now be described….viewer 1310 connected to the Internet through an **edge POP 507** in this example, makes a request to stream an on-demand file…. The web server 1325 in this embodiment brings up a **streaming module**…to process the request." Ex.1004, 24:4-15. Thus, Sloss renders obvious this limitation. Ex.1003, ¶¶116-118.

F. Claim 3

Sloss and Lamkin render obvious this limitation.

In the Sloss-Lamkin combination, as detailed above, Lamkin's list information transmitted to the client device includes a location of the content (e.g., the source/client device and the devices to which the content is distributed to). Thus, the combination teaches transmitting "*information for identifying the network storage device to the network player*."

The combination further teaches transmitting "*the corresponding data…to the network player…and causes the network storage device to directly transmit the corresponding data to the network player*." For example, as explained with respect to claim 1, in Sloss, if content is available at an intermediate POP (a "*network storage device*"), the content is transferred from the POP to the client device (*"to the network player*"). *See also* Ex.1004, 23:6-14 ("intermediate POP server transmits the content to the user at 850").

Thus, the combined teachings of Sloss and Lamkin render obvious this limitation. Ex.1003, ¶¶119-122.

G. Claim 5

1. [5.1]

Sloss and Lamkin render obvious this limitation.

Sloss does not explicitly teach that the data center servers or edge POPs provide a list of digital contents to the client devices, but this would have been well-known to a POSITA in the streaming media context of Sloss prior to the invention. *See* [1.3.1].

Consistent with this knowledge, Lamkin teaches "*list information to be transmitted to the network player*." For example, Lamkin teaches that "user 224 at the client device 124 is provided a user interface that accesses and/or shows content accessible, for example, through a CDS from various devices and/or local content, and allows the user to select the content to be pulled to the client device to be accessed and/or recorded." Ex.1005, Abstract, ¶56.

Accordingly, Lamkin renders obvious "*said list information transmission unit makes the list information to be transmitted to the network player*." Ex.1003, ¶¶123-126.

***2.* [5.2]**

As shown in Figure 5 and detailed above, Lamkin's user interface includes a listing of content that is available on various network-connected devices: "listing

522 includes a listing of one or more content that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶¶87. 86 ("displaying the user interface"). *See* [1.3.2]. As Figure 5 shows, the listing 522 includes "*information for identifying whether each digital content is currently stored in the internal storage device*" (e.g., content stored in a **source/client device**) "*or the network storage device*" (e.g., content **distributed to/available from another device**) "*in the display list of the network player*" (e.g., at a client device in Sloss):

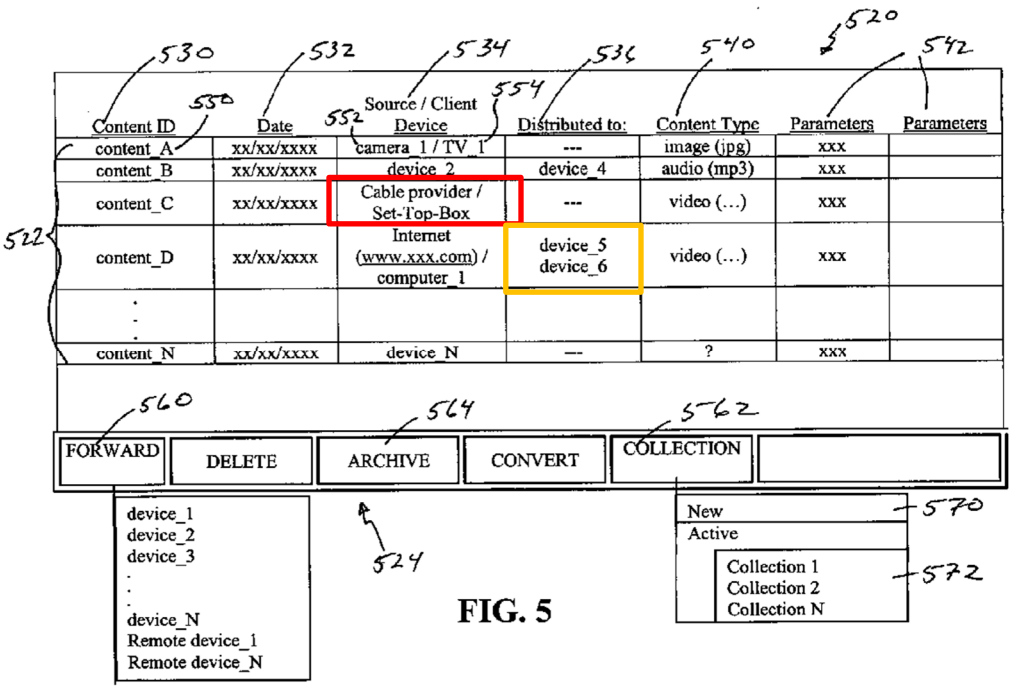


FIG. 5

Ex.1005, Fig. 5 (annotated)

Thus, Lamkin's Figure 5 renders obvious this limitation. Ex.1003, ¶¶127-129.

H. Claim 7

1. [7.0]

See [1.0].

2. [7.1]

See [1.1].

3. [7.2.1]

See [1.2.1].

4. [7.2.2]

See [1.2.2].

5. [7.2.3]

See [1.2.3].

6. [7.3.1]

See [1.3.1].

7. [7.3.2]

See [1.3.2].

8. [7.3.3]

See [1.3.3].

9. [7.4]

See [1.4].

10. [7.5]

See [1.5].

11. [7.6]

See [1.6].

V. Ground 2: Claim 4 is obvious under §103 over Sloss, Lamkin, and Rou

A. Rou (Ex.1015)

Rou, which is §102(b) prior art[5], discloses uploading and downloading contents to and from an online photo gallery (e.g., network storage): "[t]he online photo gallery facilitates the uploading of pictures from digital cameras or previously scanned image to their own sites." Ex.1015, 83. Rou also discloses tools to perform simple yet powerful functions, "by assisting user[s] in managing and organizing their remote online files with a few simple mouse clicks...Upload, Download...CopyTo, MoveTo" allowing for content to be uploaded to an online photo gallery (e.g., a network storage device) and then downloaded back to the PC (e.g., an internal storage device). Ex.1015, 84; Ex.1003, ¶¶141-142.

B. Motivation to Combine

A POSITA would have been motivated to combine Rou's teachings with Sloss and Lamkin. It would have been obvious, beneficial, and predictable to apply Rou's teachings regarding downloading data from network storage back to internal storage

[5] Rou is an IEEE paper published in 2002. Expert librarian June Munford testifies as to the public availability of Rou. *See* Ex.1016, ¶¶13-16.

to the Sloss and Lamkin combination disclosing uploading data to network storage from internal storage. Ex.1003, ¶143.

Rou is also in the field of managing digital content in a networked system, and thus is analogous art. Ex.1003, ¶144.

A POSITA would have been specifically motivated to incorporate Rou's teachings because doing so would have provided details on how to implement functionality disclosed in Sloss and Lamkin. Specifically, Rou's teachings provide detail on how data saved on the network storage device can be returned back to the internal storage, for example, if that data is to be deleted from the network storage device. Ex.1003, ¶145.

A POSITA would have also had reasonable expectation of success in making the combination. The combination does not change the intended functionality of Sloss, rather, Rou's teachings merely provide implementation details for Sloss. Accordingly, a POSITA would have found it obvious to apply Rou's teachings to Sloss because the combination merely amounts to the combination of prior art elements according to known methods. Ex.1003, ¶146.

C. Claim 4

Sloss and Rou render obvious this limitation.

Sloss teaches various "Storage Space Management" techniques implemented at the POPs (including the intermediate POPs, i.e., implemented at the "*network*

storage device"). These techniques include, for example, "file removal operations" for cached content files that have passed their expiration dates (e.g., "*digital contents corresponding to a predetermined condition among the digital contents*"). Ex.1004, 27:11-16, 16:11-21.

Although Sloss does not explicitly teach those "*digital contents which have been transferred to the network storage*" are "*returned from the network storage to the internal storage device*," when those files have passed their expiration date, this technique would have been well-known and desirable to a POSITA in the streaming media context of Sloss and prior to the invention. For example, a POSITA would have recognized that, if content was moved (and not copied) to the intermediate POP from the data center, it would need to be moved back to the data center to ensure that an instance of the content still existed.

Rou discloses such techniques, as it teaches "tools" that "perform simple yet powerful functions" including "**Upload**, **Download**" and "**CopyTo, MoveTo**." Ex.1015, 84. Rou's tools apply to a user's "remote folder." Ex.1015, 84-85. Thus, Rou teaches returning (Download), content from a remote folder ("*cause the digital contents…which have been transferred to the network storage*") to the user's local PC ("*to be returned from the network storage device to the internal storage device*"), and in combination with Sloss renders obvious this limitation. Ex.1003, ¶¶147-150.

VI. Ground 3: Claims 6, 8, 9, 11, and 12 are obvious under §103 over Sloss, Lamkin, and Chamberlain

A. Chamberlain (Ex.1010)

Chamberlain, which published in 2002 and is §102(b) prior art, teaches a "caching system and method [] that allow for the caching of web pages that have dynamic content....The caching system only caches those responses having dynamic content that are deemed cacheable." Ex.1010, Abstract.

Chamberlain's "automatic caching system can be overridden" and "further comprises a system for overriding the automatic analysis performed by the system." Ex.1010, Abstract, ¶18; Ex.1003, ¶¶151-153.

B. Motivation to Combine

A POSITA would have been motivated to combine Chamberlain's teachings with Sloss and Lamkin. It would have been obvious, beneficial, and predictable to apply Chamberlain's teachings regarding a manual override feature of an automatic caching system to the Sloss and Lamkin combination---for example, to provide a more customizable system. Ex.1003, ¶¶154-155.

Chamberlain relates to managing content over a network and is analogous art. Ex.1003, ¶156.

A POSITA would have been specifically motivated to incorporate Chamberlain's teachings because doing so would allow the user more control and specific tailoring of the system when it came to specifying digital content the user

would like to cache. As Chamberlain discloses, "the automatic caching system can be overridden," and "the caching system of the present invention further comprises a system for overriding the automatic analysis performed by the system" meaning that, even if (like in Sloss) a content item is non-cacheable, that policy can be overwritten, if the user so wishes. Ex.1010, Abstract, ¶¶18, 142 (noting that this capability "allows maximum flexibility for web site design and implementation"). Ex.1003, ¶157.

A POSITA would have also had a reasonable expectation of success in the combination. The combination does not change Sloss's intended functionality, but rather adds an additional feature of user tailoring with regard to what the system does automatically, like caching. Any modifications to Sloss to accommodate Chamberlain's teachings would have been relatively straightforward to a POSITA, as doing so would have been well-within the level of skill in the art. Accordingly, a POSITA would have found it obvious to apply Chamberlain's teachings to Sloss's methods because the combination merely amounts to applying a known technique to a method ready for improvement. Ex.1003, ¶158.

C. Claim 6

1. Limitations [6.0]-[6.2.2], [6.3.1]-[6.6] are identical to Limitations [1.0]-[1.2.2], [1.3.1]-[1.6]

Limitations [6.0]-[6.2.2], [6.3.1]-[6.6] are obvious for the same reasons discussed above for limitations [1.0]-[1.2.2], [1.3.1]-[1.6]. *See* §IV.D.

2. [6.2.3]

This is the only limitation in Claim 6 that differs from Claim 1. The combined teachings of Sloss and Chamberlain render obvious this limitation.

Sloss does not explicitly teach that non-cacheable data can be cached, i.e., that data that cannot be recovered if a network failure occurs during the transfer from internal storage to network storage, ***can*** be transferred after obtaining permission from a user, but this would have been well-known to a POSITA in the context of Sloss. For example, a POSITA would have known that many automatic systems can be overridden by user permissions.

Chamberlain explicitly teaches this, as it discloses "the automatic caching system can be overridden," and "the caching system of the present invention further comprises a system for overriding the automatic analysis performed by the system" meaning that, even if (in Sloss) a content item is non-cacheable, that policy can be overwritten/overridden by user action. Ex.1010, Abstract, ¶18.

Accordingly, Chamberlain renders obvious "*after obtaining permission from a user*" (Chamberlain's providing of a user overriding the automatic system policy), resulting in "*the digital contents...[being] transferred.*" Ex.1003, ¶¶160-163.

D. Claims 8, 9, and 11

Claims 8, 9, and 11 are obvious for the same reasons as Claims 2, 3, and 5. *See* §§IV.E-G.

E. Claim 12

1. Limitations [12.0]-[12.2.2], [12.3.1]-[12.6] are identical to limitations [7.0]-[7.2.2], [7.3.1]-[7.6]

Limitations [12.0]-[12.2.2], [12.3.1]-[12.6] are obvious for the same reasons discussed above for limitations [7.0]-[7.2.2], [7.3.1]-[7.6]. *See* §IV.H.

2. [12.2.3]

See §VI.C.2.

VII. Ground 4: Claim 10 is obvious under 35 U.S.C. § 103 over Sloss, Lamkin, Chamberlain, and Rou.

Claim 10 is obvious for the same reasons discussed above for Claim 4. *See* §V.C.

VIII. Ground 5: Claims 1-4 and 7 are obvious under §103 over Roden, Van Hoff, Ito, and Rathbone

A. Roden (Ex.1006)

Roden published May 11, 2006 and is §102(a) prior art.

Roden teaches "managing content storage and selection services over a network." Ex.1006, ¶1. Roden focuses on the ability for applications to "remove[] selected content from a content device" and "manage[] the off-site network storage system." Ex.1006, ¶24. Roden discloses that "[t]he content storage and selection application includes logic that performs functions such as determining what content will be stored locally on a user's content device and what content should be stored on the network (i.e., storage device 118)." *Id*.

Roden also discloses a user interface that may "present a list of all content in the user's library on a display screen of the content device" and the "listing of content stored locally on the device and the content stored on the network may be integrated and displayed to the user in such a way that the actual storage location of the content (e.g., content device 102-112, storage device 118) is transparent to the user." Ex.1006, ¶22. Roden also teaches that in response to "a request to access content stored in storage device 118," "the content storage and selection application grants access to the content." Ex.1006, ¶¶35-36. Roden also teaches that customers "may continue to access" media content removed to network storage "e.g., via a download over the network 120)." Ex.1006, ¶34; Ex.1003, ¶¶168-170.

B. Ito (Ex.1008)

Ito published July 13, 2006 and is §102(a) prior art. Ex.1008, [43]; *see also* Ex.1021 (Japanese), Ex.1022 (translator declaration).

Ito relates to "generating a backup of digital content." Ex.1008, ¶1. In one technique, Ito explains that "main control unit 118 transmits a backup request instructing a backup…via the transmitting and receiving unit 101," but in some instances, "main control unit 118 receives an error notification" indicating "the backup request cannot be accepted." Ex.1008, ¶¶120, 121. Subsequently, the backup process ends, and the content is not sent from an HD recorder to a backup device. Ito teaches that the HD recorder 100 may fail to communicate with the backup device

"due to a malfunction of the LAN 30" (i.e., a network failure occurs). Ex.1008, ¶60; Ex.1003, ¶¶171-172.

C. Van Hoff (Ex.1007)

Van Hoff was filed November 21, 2005 and issued February 22, 2011, and is at least §102(e) prior art.

Van Hoff teaches "secure transfer and playback of multimedia content" which "enables the secure transfer of multimedia content from a digital video recorder (DVR) to a personal computer (PC) and further to a handheld device." Ex.1007, Abstract. Van Hoff also teaches "securely transferring multimedia content between devices in a computer network." Ex.1007, 1:15-17; Ex.1003, ¶¶173-176.

D. Rathbone (Ex.1009)

Rathbone, titled TiVo for Dummies, teaches a tree structure (described as a hierarchical folder structure) for displaying and managing digital contents. For example, Rathbone explains that Series 2 TiVos "allow users to group shows into 'folders'" which can then be opened "to see all the recorded episodes of that particular show." Ex.1009, 280-281.

Rathbone published in 2004 and therefore qualifies as §102(b) prior art. Expert librarian June Munford testifies as to Rathbone's public availability. *See* Ex.1016, ¶¶9-12; *see also* Ex.1003, ¶¶177-178.

E. Motivation to Combine

A POSITA would have been motivated to combine Ito, Van Hoff, and Rathbone with Roden. Ex.1003, ¶179.

Roden, Ito, Van Hoff, and Rathbone all relate to storage and transfer of media content from various networked storage devices. As such, they are all analogous art. Ex.1003, ¶180.

It would have been obvious, beneficial, and predictable to combine Van Hoff with Roden because the combination allows for the secure transfer of media content from a TiVo DVR (a commercial embodiment of Roden's recording device) to a PC. Ex.1007, Abstract. Van Hoff is assigned to TiVo, Inc., and as such, a POSITA would have recognized its teachings were applicable to Roden, given Roden's TiVo example. It would have also been obvious, beneficial, and predictable to apply Van Hoff's teachings of stream-delivering content from a DVR to a PC to Roden's recording device 112 because a POSITA would have understood the combination to result in pulling data from the storage device 118 for streaming to the PC 101, which addresses the problem acknowledged by Van Hoff that "DVR users are forced to view recorded TV programs at a TV set connected to the particular DVR which recorded the program"; Van Hoff's teachings address this desire and thus a POSITA would have recognized an explicit teaching, suggestion, or motivation to combine Van Hoff's teachings. Ex.1007, 1:47-57; Ex.1003, ¶¶181-182.

A POSITA would have also had a reasonable expectation of success in the combination. The combination does not change Roden's intended functionality, but rather adds the capability of streaming content from a DVR (as disclosed in Roden) to a PC and further to a handheld device. A POSITA would have found it obvious to apply Van Hoff's teachings to Roden because the combination merely amounts to applying a known technique to yield predictable results. Ex.1003, ¶183.

It would have been obvious, beneficial, and predictable to combine Ito's teachings with Roden, where Ito teaches that, if a backup request cannot be received due to a network failure, the content is not backed up. A POSITA would have understood that, because recording device 112 and storage device 118 in Roden are connected via a network, when a network failure occurs, Roden's recording device 112 would also not be able to save content to the storage device 118. Ito thus merely provides additional details of a content backup process that are analogous to Roden, which would have been well known to a POSITA. Combining Ito's teachings would have been nothing more than combining prior art elements according to known methods (e.g., software programming) to yield predictable results, as well as the use of a known technique (not backing up data during a network failure as Ito teaches) applicable to a known device (Roden's recording device) to yield predicable results. A POSITA would have also had a reasonable expectation of success in the

combination, as it does not change the intended functionality of Roden, it simply adds detail on what would occur in Roden if a network failure occurs. Ex.1003, ¶184.

It would have also been obvious, beneficial, and predictable to combine Rathbone with Roden as doing so would have been nothing more than combining prior art elements according to known methods to yield predictable results. Roden specifically identifies a TiVo as an example of its recording device 112. Ex.1006, ¶16. Rathbone explains features of TiVo devices, and discloses a hierarchical folder organizational structure of such devices, which a POSITA would find obvious to combine with Roden's listing feature. Indeed, a POSITA would have expected Roden's devices to possess the "tree" organizational structure described by Rathbone because of Roden's explicit reference to TiVo. Further, tree structures were a well-known feature at the time of the '101 patent. There are only a finite number of ways to keep track of and display where media is stored in a networked media distribution system, and this combination would have been obvious because it represents known potential options with a reasonable expectation of success. A POSITA would have also had a reasonable expectation of success in the combination, as it does not change the intended functionality of Roden, it simply adds provides additional detail on a commercial implementation of Roden's example device. Ex.1003, ¶185.

F. Claim 1

1. [1.0]

Roden's "recording device 112" stores "previously recorded program[s]." Ex.1006, ¶31. Roden also discloses that "storage may apply to **any type of content**" including "**video**" and "**multi-media**." *Id.*, ¶12. Thus, Roden's recording device 112 discloses or renders obvious a "*server device for media*." Ex.1003, ¶¶186-187.

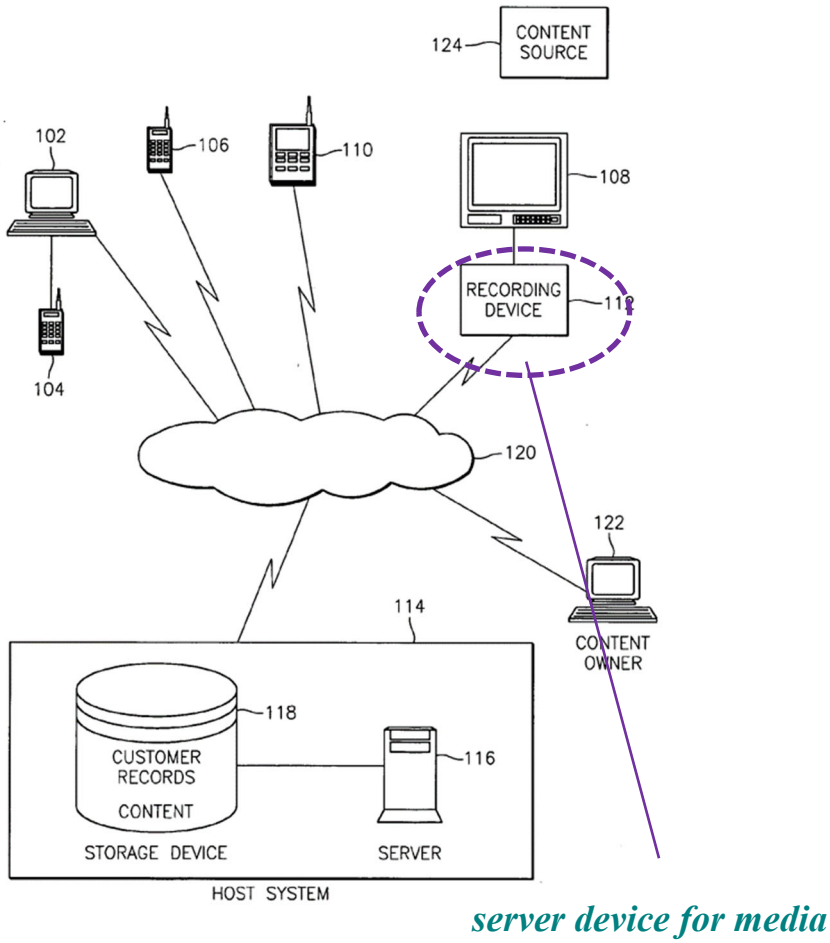


FIG. 1

Ex.1006, Fig. 1 (annotated)

2. [1.1]

Roden and Van Hoff render obvious this limitation.

First, Roden teaches that recording device 112 includes "*an internal storage device for storing digital contents*." Specifically, "[r]ecorder device 112 may comprise memory (e.g., an **internal hard drive** or DVD drive) whereby digital programming signals are received…and **stored in the memory**." Ex.1006, ¶16.

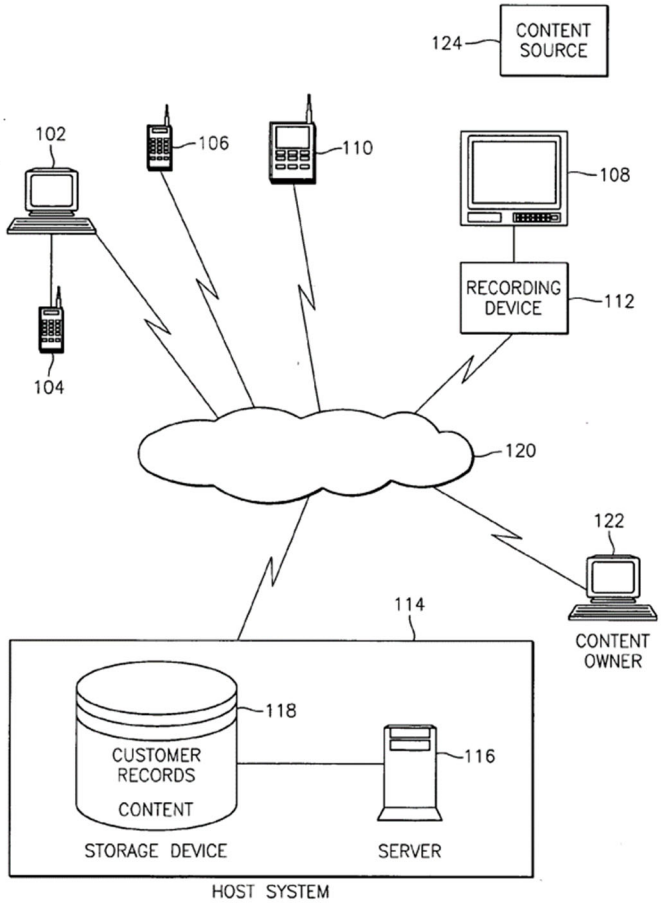


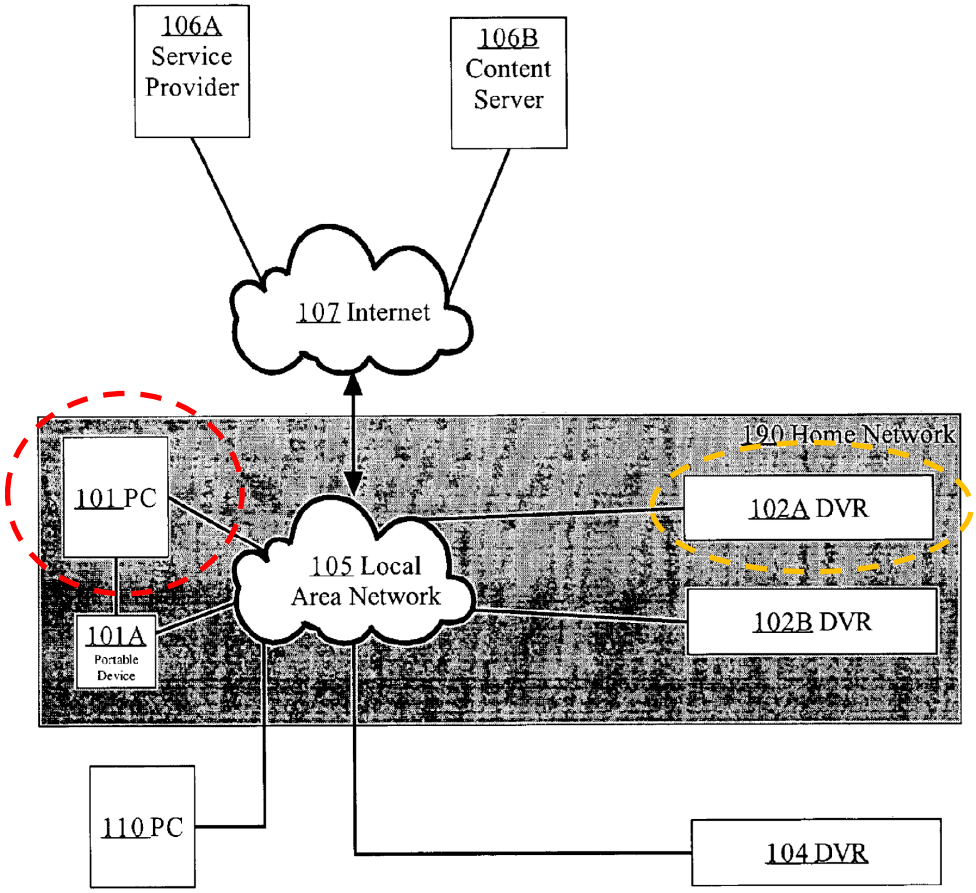
FIG. 1

Ex.1006, FIG. 1

Roden's recording device 112 is coupled to television 108, but Roden does not explicitly disclose that this is a network connection. However, it was known that recording devices, such as recording device 112, delivered streaming content over a network to other network-connected devices, and in particular, that TiVo devices (Roden's commercial example of recording device 112) streamed content over a network to other network-connected devices.

Consistent with this knowledge, Van Hoff (assigned to TiVo, Inc.) teaches "secure transfer and playback of multimedia content" which "enables the secure transfer of multimedia content from a digital video recorder (DVR)" (analogous to Roden's recording device 112) "to a personal computer (PC) and further to a handheld device." Ex.1007, Abstract; 1:15-17.

FIG. 1A



Ex.1007, Fig. 1A (annotated)

Van Hoff teaches the PC 101 sends a content request to the DVR 102A, and that "DVR 102A sends the **program stream** to PC 101." Ex.1007, 11:3-4, *see also* 4:15-31, 5:47-54 (LAN communication), Fig. 3A, 8:57-11:20. Thus, Van Hoff teaches

"*the server device for media*" (DVR 102A) *responds to a data transmission request from a network player*" (the content request from PC 101) "*by stream-delivering corresponding data in corresponding digital contents from the internal storage device to the network player during connection to a network*" (DVR 102A sends a program stream to PC 101 over LAN 105).

Thus, Roden and Van Hoff render obvious this limitation. Ex.1003, ¶¶188-193.

3. [1.2.1]

In Roden, "[t]he content storage and selection application may include business rules for monitoring and **removing selected content from a content device, managing the off-site network storage system**...The content storage and selection application includes logic that performs functions such **as determining what content will be stored locally on a user's content device and what content should be stored on the network** (i.e., storage device 118)." Ex.1006, ¶24. The "storage device 118" corresponds to "*a network storage device*" because it is connected to a network and stores data.

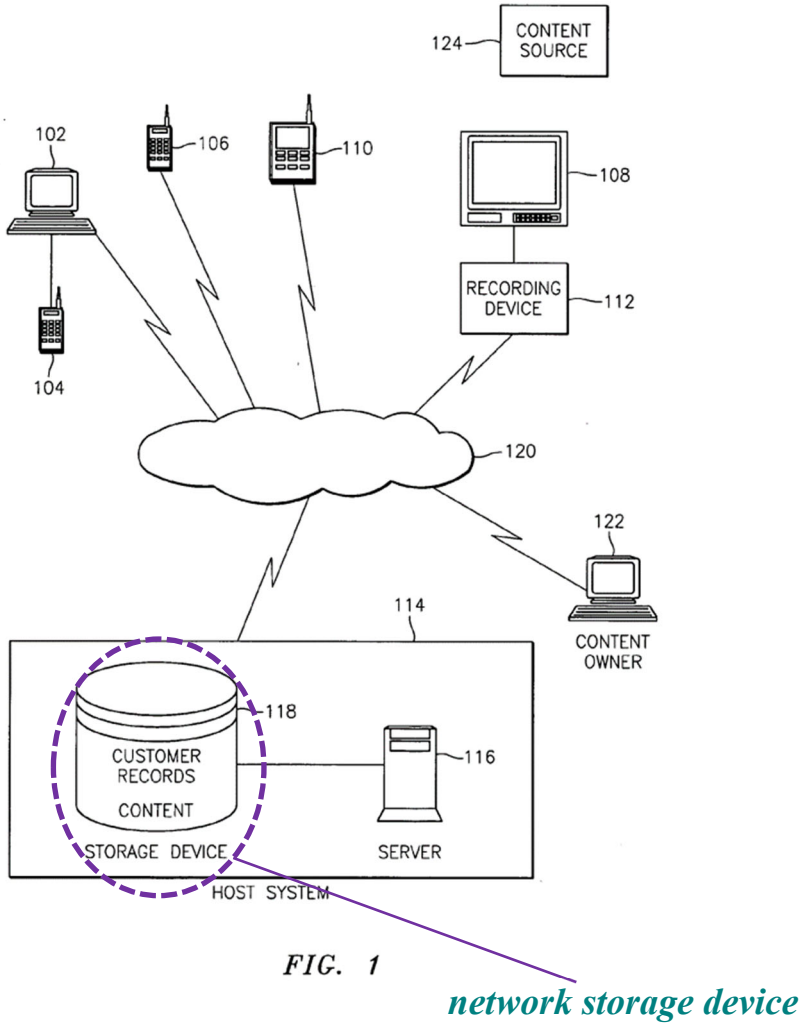


FIG. 1

Ex.1006, Fig. 1 (annotated)

Roden further explains that "a content device (e.g., recording device 112) may be purged…when it reaches a pre-determined threshold (e.g., 80%)" and "if the threshold…has been met at step 204, the content storage and selection application removes content from the content device" and "may be saved to the storage device 118." Ex.1006, ¶¶32-33. Thus, Roden's description of recording device 112 saving

content to storage device 118 renders obvious "*a transfer control unit adapted to transfer and store part of held digital contents in the internal storage device to a network storage device*." Ex.1003, ¶¶194-196.

4. [1.2.2]

In Roden, "host system 114 includes a **storage device 118 that is in communication with the server 116 over a network**" and "storage device 118 refers to an off-site network storage system that stores content." Ex.1006, ¶26. Thus, Roden's storage device 118 ("*the network storage device*") "*is connected to the network and is capable of storing data*." Ex.1003, ¶¶197-198.

5. [1.2.3]

Roden and Ito render obvious this limitation.

Because recording device 112 and storage device 118 in Roden are connected via a network, when a network failure occurs, Roden's recording device 112 would not be able to save content to storage device 118. And, while Roden discloses saving content from recording device 112 to storage device 118, it does not provide many details of this process. Ito provides additional details of a content backup process that are analogous to Roden and, as detailed above, a POSITA would have been motivated to combine these teachings with Roden.

Ito describes techniques for "generating a backup of digital content" similar to Roden's. Ex.1008, ¶1. In Ito's backup process, an HD recorder 100, which is

analogous to Roden's recording device 112, includes a main control unit 118 that performs various processes, including a backup process described with reference to Figures 18 and 19. Ex.1008, Figs. 18-19.

In describing Figure 19, Ito explains a backup request sent from the HD recorder to backup device 500 (analogous to Roden's storage device 118) connected over a network. Ito explains that "main control unit 118 transmits a backup request instructing a backup, the read device identifier 115 'ID_A', the content ID, the title, the recording date and time, the content key, and the encrypted content to the backup device 500." Ex.1008, ¶120. However, Ito explains that, in some instances, "main control unit 118 receives an error notification…indicating that the backup request cannot be accepted." Ex.1008, ¶121. Subsequently, the backup process ends, and the content is not sent from the HD recorder to the backup device. Ito teaches that the HD recorder 100 may fail to communicate with the backup device "due to a malfunction of the LAN 30" (i.e., a network failure occurs). Ex.1008, ¶60.

That is, the Roden-Ito combination teaches that "*said transfer control unit*" (recording device 112 of Roden as augmented by Ito's teachings) "*does not transfer, from the internal storage device to the network storage device, the digital contents that cannot be recovered if a network failure occurs during the transferring of the digital contents from the internal storage device to the network storage device*" (if the backup request taught by Ito cannot be received due to a network failure, the

content is not backed up on Roden's storage device 118). This is consistent with Patent Owner's interpretation of this language in district court filings: "Nest Aware allows Nest Cam's video history to be stored in the cloud automatically. Users can then access and watch the events recorded by Nest Cam on their Google devices, such as tablets, smartphones, or smartwatches. The recorded events are not transferred when there's a power cut or when the Wi-Fi connectivity goes down." *See* Ex.1014, 9. That is, Patent Owner argues this limitation is satisfied when a device cannot transfer data due to a network failure. For purposes of patentability, Patent Owner cannot argue that the claims do not cover this interpretation while simultaneously arguing its infringement theory in district court. *See, e.g.*, *Pall*, 259 F.3d at 1393; *Aylus*, 856 F.3d at 1359.

Accordingly, the combination renders obvious this limitation. Ex.1003, ¶¶199-205.

6. [1.3.1]

Roden's recording device 112 "may include a user interface that enables a user to build and browse one or more libraries of content." Ex.1006, ¶22. Roden explains that the "user interface may present a list of all content in the user's library on a display screen of the content device" and the "listing of content stored locally on the device and the content stored on the network may be integrated and displayed to the user." Ex.1006, ¶22; *see also* Ex.1007, Fig. 3A (Van Hoff teaching a request

for content listing from PC 101 received by DVR 102A). Thus, Roden's recording device providing a user interface in light of Van Hoff's teachings of PC 101 and DVR 102A renders obvious this limitation. Ex.1003, ¶¶206-209.

7. [1.3.2]

As detailed in [1.3.1], Roden's "user interface may present a list of all content in the user's library on a display screen of the content device." Ex.1006, ¶22. Roden explains that the listing may include "content stored locally on the device" ("*the digital contents left in the internal storage device*") "and the content stored on the network" ("*the digital contents transferred from the internal storage device to the network storage device and stored in the network storage device*") and "may be integrated and displayed to the user in such a way that the actual storage location of the content (e.g., content device 102-112, storage device 118) is transparent to the user." Ex.1006, ¶22; Ex.1003, ¶¶210-211.

8. [1.3.3]

Roden and Rathbone renders obvious this limitation.

Roden teaches that the listing of content includes the "*digital contents in the internal storage device*" but does not explicitly describe "*a tree structure*" of the digital contents. However, this was a well-known feature at the time of the '101 patent. As detailed in Roden, an example of its recording device 112 is a TiVo. Ex.1006, ¶16.

A POSITA would have recognized that TiVo devices available at the time of the '101 patent presented recordings on the device in "*a tree structure*." For example, Rathbone explains that "Series 2 TiVos…allow users to group shows into 'folders.'" The book further explains that a user may "[o]pen a folder to see all the recorded episodes of that particular show…" Ex.1009, 280-281 (Figure 20-5 caption).

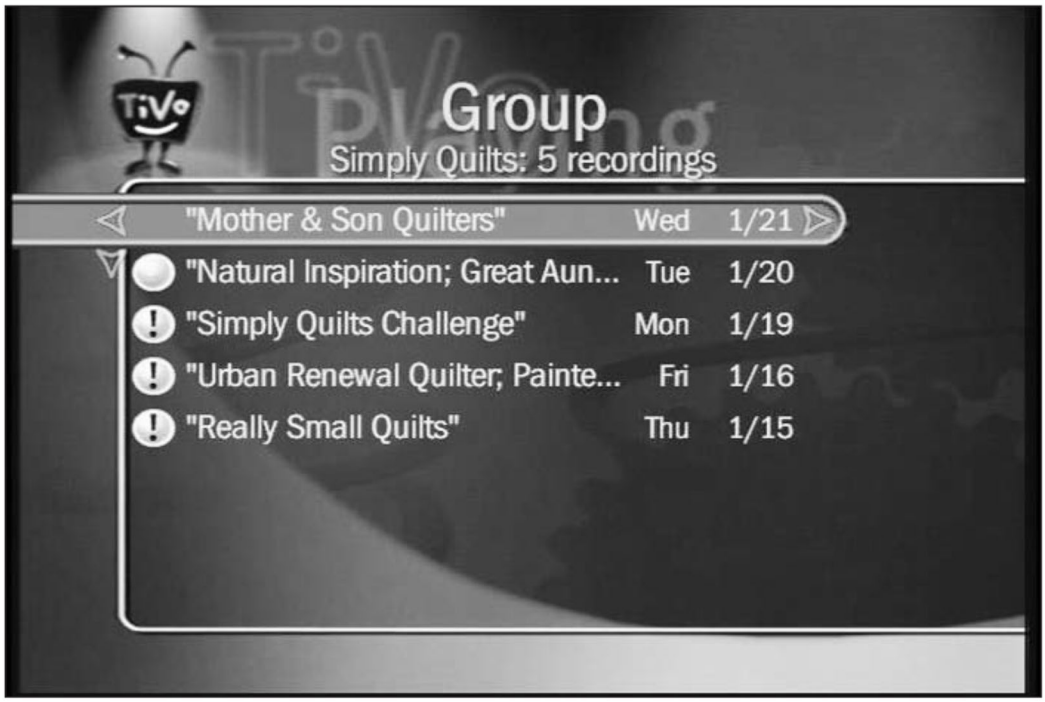


Figure 20-5: Open a folder to see all the recorded episodes of that particular show or Auto-recording WishList.

Thus, Rathbone teaches that it was known, in a recording device such as recording device 112, to "*maintain[] a tree structure of the digital contents in the internal storage device before transferring the digital contents to the network storage*

device."[6] *See also* Ex.1003, ¶¶214-215 (citing additional evidence that the "*tree structure*" would have been obvious given Roden and Rathbone).

Accordingly, the combination renders obvious this limitation. Ex.1003, ¶¶212-217.

9. [1.4]

Roden teaches that "the content storage and selection application associates a link to the removed content within the user library so that the customer may continue to access the content (e.g., via a download over the network 120) at step 208. The demarcation of storage facility sources for content associated with a customer library (e.g., on-site content device storage, off-site network storage) may be imperceptible to the customer." Ex.1006, ¶34; *see also* ¶22 ("list of all content in the user's library"). Roden also teaches that in response to "a request to access content stored in storage device 118," "the content storage and selection application grants access

[6] As detailed in limitation [1.3.2], Roden's listing may include "content stored locally on the device" as well as content "stored on the network." Ex.1006, ¶22. Thus, at all times, Roden's listing includes "*the digital contents in the internal storage device*," whether "*before transferring the digital contents to the network storage device*" or after, and thus Roden and Rathbone render obvious this limitation irrespective of any temporal requirement.

to the content…" Ex.1006, ¶¶35-36; *see also* ¶31 ("searching and access of the content").

Thus, Roden teaches to a POSITA that its recording device 112 performs "*searching for a location where the held digital contents are currently stored*" because users can request and access content stored both locally on the recording device 112 as well as on the storage device 118 and renders obvious "*a search unit adapted to respond to a data transmission request for the held digital contents from the network player by searching for a location where the held digital contents are currently stored*." Ex.1003, ¶¶218-220.

10. [1.5]

Roden and Van Hoff render obvious this limitation. Roden teaches "the content storage and selection application associates a link to the **removed content within the user library so that the customer may continue to access the content (e.g., via a download over the network 120) at step 208**." Ex.1006, ¶34. In combination with Van Hoff's teachings of stream-delivering content from the DVR to the PC, a POSITA would have recognized that the Roden recording device 112, as augmented by Van Hoff's DVR teachings, would pull data from the storage device 118 for streaming to the PC 101. Thus, the combined teachings of Roden and Van Hoff render obvious "*a digital contents data transmission processing unit*" (e.g., recording device 112) "*adapted to allow the corresponding data in held digital*

contents to be stream-delivered from the network storage device to the network player, if the result of search shows the network storage device." Ex.1003, ¶¶221-224.

11. [1.6]

Roden's recording device 112 "*is a media player*" because content can be played from recording device 112 on television 108: "Recording device 112 may receive instructions…regarding which programs will be presented on television 108." Ex.1006, ¶16. Thus, Roden discloses or renders obvious that the "*server device for media is a media player*." Ex.1003, ¶¶225-226.

G. Claim 2

Ito discloses that content offloaded to a backup device can be restored from the backup device: "'backup' refers to storing a copy of content in a backup device...A **recording and playback device** normally uses the content stored in itself, and when the **content stored in the recording and playback device** is lost, the recording and playback device obtains a copy from a backup device and **restore the lost content**." Ex.1008, ¶8. Ito further teaches "restoring means for receiving the content from the backup device and writing the received content to the storage means." Ex.1008, ¶23. Thus, Ito teaches causing "*the network storage device*" (the backup device) "*to transmit the corresponding data to the server device for media*"

(transmitting the backup copy to the recording and playback device, e.g., Roden recording device 112).

Roden and Van Hoff then teach that content is transmitted "*to the network player*" as detailed in limitation [1.1].

A POSITA would have incorporated the restoration teaching of Ito because a POSITA would have recognized that in certain circumstances, returning the content from the network storage (e.g., the backup device) to a DVR would have been preferable (e.g., in order to have content available when the network connection is intermittent or busy) rather than to rely on retrieving content from the backup device for playback. Accordingly, the prior art renders obvious this claim. Ex.1003, ¶¶227-231.

H. Claim 3

Roden teaches that "the content storage and selection application associates **a link** to the removed content within the user library so that the customer may continue to access the content." Ex.1006, ¶34. Roden's disclosure teaches, to a POSITA, that the DVR sends, to the PC of Van Hoff (e.g., the network player), "*information for identifying the network storage device*" (e.g., the link). Then, the network storage device directly sends the content to the PC (e.g., network player). Ex.1007, Fig.3A; Ex.1003, ¶¶232-234.

I. Claim 4

Ito discloses returning digital contents "*from the network storage device to internal storage device*," through teachings of restoring data from a backup device: "restoring means for receiving the content from the backup device and writing the received content to the storage means." Ex.1008, ¶23.

It would also have been obvious to a POSITA that a "*predetermined condition*" that would cause the return of digital contents from the network storage device to the internal storage device would be the user selecting a content item to restore. For example, Ito teaches that "the user selects the restore button 183" and then makes a "selection of the content to be restored." Ex.1008, ¶¶175-189.

A POSITA would have incorporated the restore teachings of Ito for the same reasons as set forth in the analysis of claim 2. Ex.1003, ¶¶235-239.

J. Claim 7

1. [7.0]

See [1.0].

2. [7.1]

See [1.1].

3. [7.2.1]

See [1.2.1].

4. [7.2.2]

See [1.2.2].

5. [7.2.3]

See [1.2.3].

6. [7.3.1]

See [1.3.1].

7. [7.3.2]

See [1.3.2].

8. [7.3.3]

See [1.3.3].

9. [7.4]

See [1.4].

10. [7.5]

See [1.5].

11. [7.6]

See [1.6].

IX. Ground 6: Claim 5 is obvious under §103 over Roden, Van Hoff, Ito, Rathbone, and Lamkin

A. Motivation to Combine

A POSITA would have been motivated to combine the teachings of Roden with Lamkin. It would have been obvious, beneficial, and predictable to apply Lamkin's teaching of a list showing where digital contents are stored, including whether digital contents are stored in internal or network storage, to Roden's provision of a list of content stored in the user's library. This combination would

achieve the benefits disclosed by Lamkin, of "managing content," over a "distribution network," as disclosed by Roden and Lamkin. Ex.1005, Abstract; Ex.1003, ¶251.

Lamkin is analogous art, as detailed above. *See, e.g.,* Ex.1001, 1:7-12; Ex.1003, ¶252.

While Roden also explains that the listing may include "content stored locally on the device and the content stored on the network," which "may be integrated and displayed to the user in such a way that the actual storage location of the content (e.g., content device 102-112, storage device 118) is transparent to the user," Roden does not go into much detail about *how* or whether it identifies if each digital content is currently stored in the internal storage device or the network storage device. Ex.1006, ¶22; Ex.1003, ¶253.

A POSITA would have recognized at the time of the '101 patent that lists were a routine way to keep track of available digital contents that could be provided to end users. For example, Lamkin explicitly teaches "a simplified example of a user interface 520" that "can include a listing of content 522." Ex.1005, ¶87. Lamkin also discloses that the listing 522 includes information in the list for identifying whether each digital content item is currently stored in a source/client device or is distributed to and available from another device. Ex.1005, Figure 5. Thus, Lamkin explicitly discloses a user interface that includes a listing of content that is available

on various network-connected devices and information on the storage location of such content. Lamkin also provides an explicit motivation for doing so, as it provides a "simplified example of a user interface" and characterizes the invention as "methods…for use in managing content" on a network, which would have motivated a POSITA to use its list teachings to manage the digital contents available to a user to provide an easy method of managing such content. Ex.1005, Abstract; Ex.1003, ¶254.

A POSITA would have recognized additional benefits of utilizing a list that specifies the location of content when managing digital content, as Lamkin teaches, within the context of Roden's teachings. For example, Lamkin states that "[t]here has been a drastic increase in the number of consumer electronic devices capable of communicating with one or more computers or other consumer electronic devices." Ex.1005, ¶4. As such, a consumer will need a way to "manage [that] media content over [said] network." Ex.1005, ¶2. Thus, Lamkin's teachings would have provided well-known benefits by the time of the '101 patent. Ex.1003, ¶255.

A POSITA would have also had a reasonable expectation of success in combining these teachings. Specifically, given the close overlap in subject matter between Roden and Lamkin, a POSITA would have expected success implementing Lamkin's list feature of managing digital contents in Roden, which likewise deals with distributing digital contents across a networked media system. Ex.1003, ¶256.

Further, a POSITA would have found it obvious to apply Lamkin's teachings to Roden's disclosure of managing media over a network because there was only a finite number of ways to keep track of and display where media is stored in a networked media distribution system. For example, while Roden provides a list where "the actual storage location…is transparent to the user" a POSITA would have recognized the alternative possibility, i.e., showing the user the actual storage location, to be an obvious option, especially given Lamkin, which explicitly teaches such an option. It would have been obvious to a POSITA to use a list to identify and inform the user where each piece of media was stored, in internal storage or network storage. Finally, a POSITA would have reasonably expected success in combining the teachings. Ex.1003, ¶257.

B. Claim 5

1. [5.1]

Roden teaches that recording device 112 "may include a user interface that enables a user to build and browse one or more libraries of content." Ex.1006, ¶22. Roden further explains that the "user interface may present a list of all content in the user's library on a display screen of the content device." Ex.1006, ¶22. Thus, Roden's user interface discloses or renders obvious a list that is transmitted to the network player. Ex.1003, ¶¶258-260.

2. [5.2]

Roden and Lamkin render obvious this limitation.

Roden's "user interface may present a list of all content in the user's library on a display screen of the content device." Ex.1006, ¶22. Roden explains that the listing may include "content stored locally on the device and the content stored on the network," but Roden does not specifically identify whether each content item is stored in internal storage or network storage. Ex.1006, ¶22.

Lamkin teaches that "listing 522 includes a listing of one or more content that can potentially be distributed over the local network 121 and/or remote network 140." Ex.1005, ¶87; *see also* Ground 1, [1.3.2]. As Figure 5 shows, the listing 522 includes "*information for identifying whether each digital content is currently stored in the internal storage device*" (e.g., content stored in a **source/client device**) "*or the network storage device*" (e.g., content **distributed to/available from another device**) "*in the display list of the network player*":

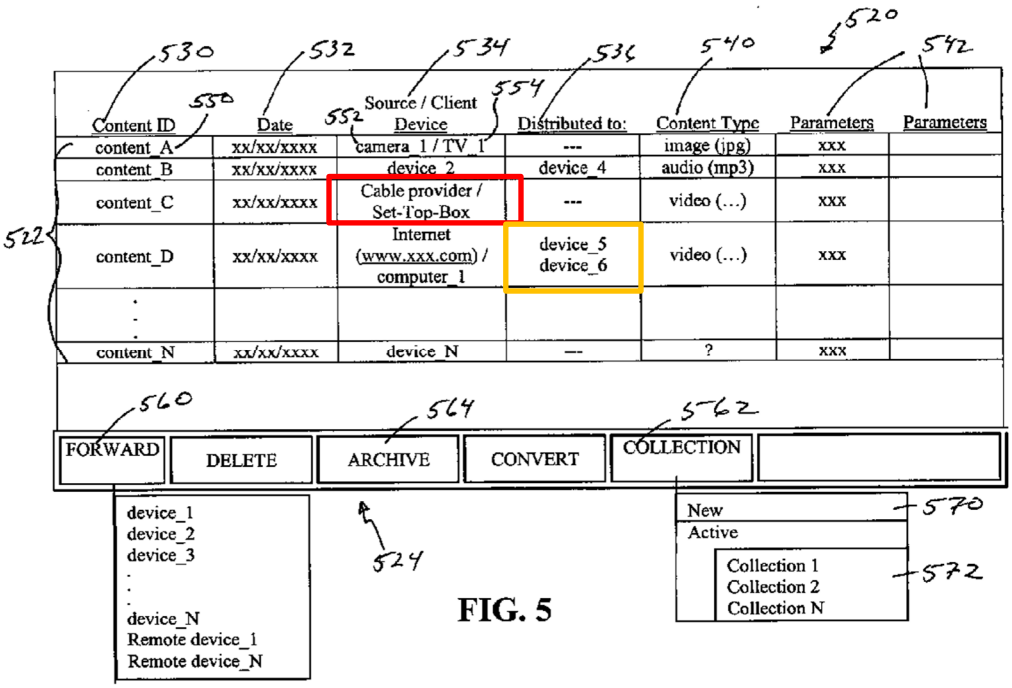


FIG. 5

Ex.1005, Fig. 5 (annotated)

Thus, Lamkin's Figure 5 user interface renders obvious "*whether each digital content is currently stored in the internal storage device or the network storage device in the display list of the network player*".

A POSITA would find it obvious to combine the information listed in Lamkin's Figure 5 with Roden's user interface list rendering this claim obvious. Ex.1003, ¶¶261-265.

X. Ground 7: Claims 6, 8-10, and 12 are obvious under §103 over Roden, Van Hoff, Ito, Rathbone, and Harris

A. Harris (Ex.1011)

Harris, which published November 10, 1998 and is §102(b) prior art, teaches "preserving data and continuing operations in the presence of network

disconnections" and "unilaterally controlling data and operations where preservation of data…is more important than some time delay." Ex.1011, Abstract.

In one aspect, Harris discloses "opportunity for user intervention may be provided, at a user's request." Ex.1011, Abstract. Harris discloses that "a user may frequently be presented with certain options" including "to **retry to establish a communication link.**" Ex.1011, 1:33-38. Harris also discloses "a user may also provide a signal 89 indicating a desire to select either an ignore signal 83 or **a retry signal** 85." Ex.1011, 10:21-22; Ex.1003, ¶¶266-269.

B. Motivation to Combine

A POSITA would have been motivated to combine the teachings of Harris. It would have been obvious, beneficial, and predictable to apply Harris's teachings regarding a manual override feature of an automatic system to the combination—for example, to provide a more customizable system, when addressing network "time outs." Ex.1003, ¶270.

Harris relates to managing content over a network. As such, Harris is analogous art. Ex.1003, ¶271.

A POSITA would have been specifically motivated to incorporate Harris's teachings because doing so would allow the user more control and specific tailoring of the system when a failed backup attempt occurred, meaning a user could retry a backup process irrespective of an earlier failure. Harris presents options to a user

including one "to **retry to establish a communication link** or to ignore a failure of communication," meaning that a user could override a prior failure and command the system to attempt the backup process again. Ex.1011, 1:33-38. Roden and Ito do not disclose such retry procedures, but a POSITA would have been well aware of retrying failed computer operations, as explicitly taught by Harris. Ex.1003, ¶272.

A POSITA would have also had a reasonable expectation of success in the combination. The teachings of Harris do not change the intended functionality of the combination, but rather add an additional feature of user tailoring (retrying an operation) of automatic functionality. Any modifications to the combination's methods and software to accommodate Harris's additional teachings would have been relatively straightforward to a POSITA, as doing so would have been well-within the level of skill in the art. Accordingly, a POSITA would have found it obvious to apply Harris's teachings to the combination's methods because the combination merely amounts to applying a known technique to a method ready for improvement. Ex.1003, ¶273.

C. Claim 6

1. Limitations [6.0]-[6.2.2], [6.3.1]-[6.6] are identical to Limitations [1.0]-[1.2.2], [1.3.1]-[1.6]

Limitations [6.0]-[6.2.2], [6.3.1]-[6.6] are obvious for the same reasons discussed above for limitations [1.0]-[1.2.2], [1.3.1]-[1.6]. *See* §VIII.F.

2. [6.2.3]

The combination's teachings render obvious this limitation.

Ito does not explicitly teach that data that cannot be recovered if a network failure occurs during the transfer from internal storage to network storage, ***can*** be transferred after obtaining permission from a user, but this would have been well-known to a POSITA in the failed-backup-attempt context of Ito. For example, a POSITA would have known that if a backup process fails, a user could retry the operation (e.g., obtaining permission from a user to transfer the data irrespective of the earlier failure).

Harris discloses "opportunity for user intervention may be provided, at a user's request." Ex.1011, Abstract. Harris also discloses that "a user may frequently be presented with certain options….Options may be…to **retry to establish a communication link** or to ignore a failure of communication." Ex.1011, 1:33-38. Harris also discloses "a user may also provide…**a retry signal** 85." Ex.1011, 10:21-22.

Accordingly, Harris renders obvious "*after obtaining permission from a user*" (Harris's providing of a user manually overriding and retrying a previous failed backup attempt), and resulting in "*the digital contents...[being] transferred.*" Ex.1003, ¶¶275-278.

D. Claims 8-10

Claims 8-10 are obvious for the same reasons discussed above for identical Claims 2-4. *See* §VIII.G-H.

E. Claim 12

1. Limitations [12.0]-[12.2.2], [12.3.1]-[12.6] are identical to Limitations [7.0]-[7.2.2], [7.3.1]-[7.6]

Limitations [12.0]-[12.2.2], [12.3.1]-[12.6] are obvious for the same reasons discussed above for limitations [7.0]-[7.2.2], [7.3.1]-[7.6]. *See* §VIII.J.

2. [12.2.3]

See [6.2.3].

XI. Ground 8: Claim 11 is obvious under 35 U.S.C. § 103 over Roden, Van Hoff, Ito, and Rathbone, Harris, and Lamkin

Claim 11 is obvious for the same reasons discussed above for Claim 5. *See* §IX.B.

XII. The Board Should Reach the Merits of This Petition

A. *Advanced Bionics* Favors Institution

The Board should reach the merits of this petition and should not exercise its discretion to deny based on 35 U.S.C. §325(d).

The Board's § 325(d) analysis considers: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner

has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (precedential); 35 U.S.C. §325(d).

Of the references applied in this petition, only Lamkin was previously presented to the Office in an IDS filed by the Applicant during prosecution. However, Lamkin was never applied to reject any claim and was not discussed by the Examiner during prosecution. There is no record evidence to show the Examiner appreciated the teachings of Lamkin, or the combinations of prior art cited herein and how the references render the challenged claims obvious. *See CrowdStrike, Inc. v. Webroot Inc.*, IPR2023-00126, Paper 9 at 14 (PTAB May 5, 2023) ("[The Board] cannot determine the extent to which [cited reference] was evaluated during the examination because it was never used in a rejection" and because "[cited reference] was not the basis of a rejection, there is no overlap of arguments."). Indeed, when a reference was never "substantively discussed by the Examiner[,]" "a petitioner's showing that the challenged claims are unpatentable over the asserted prior art may itself be evidence of material error by the Office during prosecution." *Quasar Science LLC v. Colt International Clothing, Inc. d/b/a Colt LED*, IPR2023-00611, Paper 10 at 14 (PTAB Oct. 10, 2023). Here, as shown above, had the Examiner applied Lamkin, in combination with the other art of record, the '101 patent's claims would not have issued. Accordingly, as Petitioner has shown the Office erred in a

manner material to the patentability of the challenged claims, the Board should not exercise its discretion to deny under §325(d). *See Scientific Design Co., Inc. v. Shell Oil Co.*, IPR2022-00158, Paper 7, 24-26 (PTAB Apr. 4, 2022) (declining to exercise discretion under §325(d) based on "credit[ing] Petitioner's argument that although the references 'were cited in an IDS, together with 111 references, none of them was used in any rejections, or otherwise addressed by the examiner'").

Petitioner reserves the right to address any discretionary issues raised by Patent Owner based on the facts and law as they stand at that time.

B. *Fintiv* Factors Favor Institution

Discretionary denial under 35 U.S.C. §314(a) is not appropriate. Patent Owner filed its amended complaint in the District Court for the Eastern District of Texas asserting the '101 Patent on August 2, 2024 and then filed an amended complaints on January 17, 2025.

The district court litigation is at an early stage. Under the current schedule, the claim construction hearing will not occur until September 16, 2025, and expert discovery will not close until November 18, 2025. Ex.1023, 4. The trial is not scheduled to begin until March 2, 2026. Ex.1023, 1. This Petition challenges all claims, while only claims 1-5 and 7-11 will be addressed by the litigation; thus, this Petition will address the patentability of claims (i.e., claims 6, 12) that the court will

not address, reducing any overlap. Finally, the Petition's merits are strong, as the prior art contains teachings that plainly render obvious all claims.

Petitioner reserves the right to file an opposition to Patent Owner's discretionary arguments submitted pursuant to the Acting Director's Interim Processes for PTAB Workload Management of March 26, 2025.

XIII. Mandatory Notices under 37 C.F.R. § 42.8

A. Real Parties-in-Interest

Google LLC is the petitioner and real party-in-interest.[7]

B. Related Matters

The '101 patent is at issue in *Advanced Coding Technologies LLC v. Google LLC*, No. 2:24-cv-00353-JRG (E.D. Tex.), *Advanced Coding Technologies LLC v. Apple Inc.*, No. 2:24-cv-00572-JRG (E.D. Tex.), and IPR2025-01103.

Petitioner is not aware of any other disclaimers, reexamination certificates, or IPR petitions addressing the '101 patent.

[7] Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc. XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.

C. Grounds for Standing

Petitioner certifies that the '101 patent is available for *inter partes* review and Petitioner is not barred from requesting this proceeding.

D. Lead and Backup Counsel and Service Information

Pursuant to 37 C.F.R. §§ 42.8(b)(3), 42.8(b)(4), and 42.10(a), Petitioner designates the following lead counsel:

- Raghav Bajaj (Reg. No. 66,630), raghav.bajaj@lw.com, Latham & Watkins LLP; 300 Colorado Ave. Suite 2400; Austin TX 78701; 737.910.7370.

Petitioner also designates the following backup counsel:

- Douglas E. Lumish (*pro hac vice* motion to be filed), doug.lumish@lw.com, Latham & Watkins LLP; 140 Scott Drive; Menlo Park, CA 94025; 650.463.2633.
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Pursuant to 37 C.F.R. § 42.10(b), a Power of Attorney from Petitioner is attached. Petitioner consents to electronic service.

E. Fee for *Inter Partes* Review

The Director is authorized to charge the fee specified by 37 C.F.R. § 42.15(a) to Deposit Account No. 506269.

XIV. Conclusion

For the reasons set forth above, Petitioner Google respectfully requests *inter partes* review of the challenged claims.

Respectfully submitted,

Dated: July 11, 2025

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CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

I hereby certify that this Petition complies with the word count limitation of 37 C.F.R. § 42.24(a)(1)(i) because the Petition contains a total of 13,998 words calculated by Microsoft Word's word-count feature. This total excludes the cover page, signature block, and the parts of the Petition exempted by 37 C.F.R. § 42.24(a)(1).

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CERTIFICATE OF SERVICE

The undersigned certifies that a complete copy of this Petition for *Inter Partes* Review of U.S. Patent No. 8,230,101 and all Exhibits and other documents filed together with this Petition were served on the official correspondence address for the patent shown in Patent Center:

Robinson Intellectual Property Law Office, P.C.
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via FEDERAL EXPRESS next business day delivery, on July 11, 2025.

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