

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.,
Petitioner,

v.

NONEND INVENTIONS N.V.,
Patent Owner.

Case IPR2016-00174
Patent 8,090,862 B2

Before MICHAEL W. KIM, JENNIFER S. BISK, and
DANIEL N. FISHMAN, *Administrative Patent Judges*.

FISHMAN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. Background

Unified Patents Inc. (“Petitioner”), filed a Petition (Paper 2, “Pet.”) for *inter partes* review of claims 1–20 of U.S. Patent No. 8,090,862 B2 (“the ’862 patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 311–319. Nonend Inventions N.V. (“Patent Owner”) filed a Patent Owner Preliminary Response (Paper 7, “Prelim. Resp.”). On May 12, 2016, based on the record before us at the time, we instituted an *inter partes* review of all challenged claims (1–20) of the ’862 patent. Paper 10 (“Dec.”). Specifically, we instituted that review on the following challenges to the claims:

References	Basis	Claims challenged
Shastri ¹	§ 102(e)	1–6 and 8–18
Goldszmidt ²	§ 103(a)	1–20
Goldszmidt and Lumelsky ³	§ 103(a)	1–20

Dec. 26.

After we instituted this review, Patent Owner filed a Patent Owner Response (Paper 14, “PO Resp.”) and Petitioner filed a Reply (Paper 17, “Pet. Reply”).⁴ Petitioner relies on the first Declaration of Dr. Charles

¹ U.S. Patent Application Publication No. 2002/0065922 A1; May 30, 2002. Ex. 1002 (“Shastri”).

² U.S. Patent No. 6,195,680 B1; Feb. 27, 2001. Ex. 1004 (“Goldszmidt”).

³ U.S. Patent No. 6,377,996 B1; Apr. 23, 2002. Ex. 1005 (“Lumelsky”).

⁴ Petitioner appears to have filed the Reply twice as Papers 17 and 18. As those papers appear to be identical, we will refer to Paper 17 only.

Eldering (Ex. 1006) and the second Declaration of Dr. Eldering (Ex. 1018).⁵ Patent Owner relies on the Declaration of Dr. John C. Hale (Ex. 2016).

Patent Owner filed a Motion to Exclude Evidence (Paper 20) to which Petitioner filed an Opposition (Paper 23).

We heard oral argument on February 8, 2017 (“Oral Hearing”). The record contains a transcript of the hearing (Paper 25, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6. The evidentiary standard is preponderance of the evidence. *See* 35 U.S.C. § 316(e); *see also* 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons expressed below, we conclude that Petitioner has met its burden to show, by a preponderance of the evidence, that claims 1–20 are unpatentable.

B. The ’862 Patent

According to the ’862 patent, “[s]ystems and methods are disclosed for streaming content over a network that enables communication between a first consumer node, a second consumer node, and a production node.”

Ex. 1001, Abstract. The method involves processing, for play-back, part of an item of content received over a first connection, while another part of the item of content is being received over a second communication channel. *Id.* According to an embodiment, a first consumer node connects to a production node and commences receipt of a stream. *See id.* at 7:26–35. A

⁵ Petitioner appears to have filed the second Declaration of Dr. Eldering twice as Exhibits 1012 and 1018. Petitioner also filed a document labelled “Transcript of March 11, 2016 Conference” as Exhibit 1012. As Exhibits 1012 and 1018 appear to be identical, for the second Declaration of Dr. Eldering, we will refer only to Exhibit 1018.

second consumer node connects with both the production node and the first consumer node, tests whether the connection to the production node or to the first consumer node is the best, and selects the best node from which to receive the content. *See id.* at 7:44–48.

Figure 2C of the '862 patent depicts such a configuration and is reproduced below.

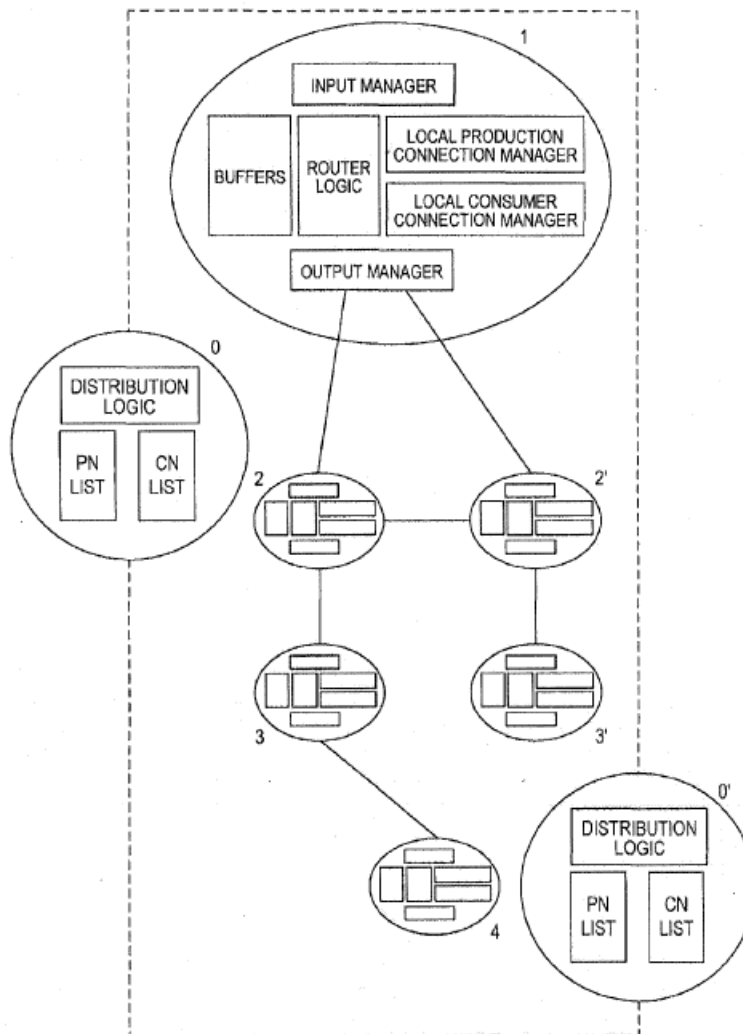


FIG. 2C

In Figure 2C (above), consumer nodes 2 and 2' are connected to production node 1, and are also connected to each other. Consumer node 2

initially receives a stream from production node 1. When consumer node 2 connects with production node 1, it is informed of the existence of consumer node 2', and that consumer node 2' can provide the requested content. While receiving the stream, consumer node 2 tests the connection with other nodes, such as consumer node 2', to determine if there is another node that can better supply the same stream (i.e., faster, better quality, etc.). If consumer node 2 detects a better node from which to receive the stream, it receives the stream through that other connection. *See, e.g.*, Ex. 1001, 8:62–9:22.

C. Related Matters

Patent Owner identifies several matters in litigation relating to the '862 patent, all in the Eastern District of Texas. Paper 6, 2–3.⁶ Petitioner identifies one related case (Pet. 1) that we presume, based on a similar case designation, is the same case Patent Owner identified as filed in the Eastern District of Texas involving Apple, Inc.

D. Illustrative Claim

Independent claim 1, reproduced below, is exemplary of the invention:

1. A method for receiving data packages of a streaming item of content at a receiving media player, using at least two communication channels, the method comprising:

receiving one or more data packages corresponding to at least a part of the item of content over a first communication channel operationally coupled to the receiving media player;

⁶ Paper 6 does not have page numbers. We treat the first page as page number 1 and number the pages consecutively from there.

initiating a request for at least a part of the item of content over a second communication channel operationally coupled to the receiving media player;

receiving, in response to initiating the request, one or more data packages corresponding to at least a part of the item of content, over the second communication channel; and

making incoming content received over the first communication channel ready for processing and play-back at the receiving media player, such that part of the item of content is streamed to a stream target at the receiving media player, while another part of the item of content is being received by the receiving media player over the second communication channel.

Independent claim 12 recites a similar method and independent claim 18 recites a device providing functionality similar to the method steps of claim 1.

II. ANALYSIS

A. *Real Parties in Interest*

Petitioner certified that Unified Patents Inc. is the real party in interest, and “further certifies that no other party exercised control or could exercise control over Unified’s participation in this proceeding, the filing of this petition, or the conduct of any ensuing trial.” Pet. 1. In support of this assertion, Petitioner filed “voluntary interrogatory responses,” signed by its counsel for Petitioner and verified by its CEO. Ex. 1007.

Patent Owner’s Preliminary Response contended that the Petition should be denied for failure to name the real party in interest. Prelim. Resp.

4–13. Patent Owner’s Response, however, does not address this contention. For this reason, we deem this argument waived. *See* Paper 11, 2–3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”); *see also* 37 C.F.R. § 42.23(a) (“Any material fact not specifically denied may be considered admitted.”).

B. Level of Ordinary Skill

Petitioner argues a person of ordinary skill in the art related to the ’862 patent “would have a Master’s Degree in electrical engineering, computer science, or a related subject or the equivalent, and would also have at least three years of experience working with distributed computer networks, or the equivalent.” Pet. 5 (citing Ex. 1006 ¶ 18). Patent Owner does not define the level of ordinary skill in the art. We find Petitioner’s definition of the level of ordinary skill in the art is commensurate with the level of ordinary skill in the art as reflected in the prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error where the prior art itself reflects an appropriate level and a need for testimony is not shown.”) (internal quotations omitted); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

C. Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016) (affirming that USPTO has statutory authority to construe claims according to 37 C.F.R. § 42.100(b)). Under the broadest reasonable construction standard, claim terms are

generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1862 (Fed. Cir. 2007). “[A] claim construction analysis must begin and remain centered on the claim language itself.” *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). “Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Furthermore, only those terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

“*Streamed*”

Independent claims 1, 12, and 18 each include a recitation relating to part of an item of content being “*streamed* to a stream target.” Petitioner argues “*streamed*” should be interpreted as “passed from a software or hardware component to another software or hardware component.” Pet. 9 (citing Ex. 1006 ¶ 29). Petitioner notes the ’862 patent does not clearly define “*streamed*” and points to column 5, lines 25–28, column 8, lines 32–36, and column 14, lines 1–35 as support for the proposed interpretation. *Id.* at 9–10.

Patent Owner argues Petitioner’s interpretation of “*streamed*” is unreasonably broad and encompasses “any type of data transmission from one point to another,” essentially re-writing the claims changing “*streamed*” to “*transmitted*.” Prelim. Resp. 25. Patent Owner argues Petitioner’s expert

contradicts such a broad interpretation, because Dr. Eldering interprets “steaming content” as follows:

Streaming content, such as streaming media, is content that may be played by a receiver while being transmitted The verb “stream” refers to the process of delivering content in this manner, and the noun “stream” refers to content that is has been [sic], is, or will be streamed. Delivering content via a stream allows a receiver to begin to play the content before the entire content file is transmitted.

Prelim. Resp. 26 (quoting Ex. 1006 ¶ 10).⁷ Patent Owner further contends “[a]s made clear from Dr. Eldering’s own testimony, the ordinary and customary meaning of ‘streamed’ requires that the content is capable of being played while it is still being transmitted.” *Id.* Furthermore, Patent Owner cites a technical dictionary definition of “streaming media” as “audio or video files that can begin playing as they are being downloaded to a computer.” *Id.* (citing Ex. 2012, 3). Patent Owner additionally cites the claim interpretation from a District Court Order in a related proceeding, that interprets “streamed” in the ’862 Patent as “transmitted continuously and may be played by the receiver while the transmission is occurring.” *Id.* (citing Ex. 1011, 5).

In our Decision on Institution, we determined Petitioner’s proposed interpretation is unreasonably broad, although we also did not adopt, wholesale, Patent Owner’s proposed interpretation. Dec. 11. Specifically, we determined the Specification of the ’862 patent supports a different interpretation by disclosing:

⁷ We note harmless error in that Patent Owner incorrectly cites paragraph 12 of Exhibit 1006 in quoting Dr. Eldering’s testimony. The quoted material is in paragraph 10 of that Exhibit.

[s]treaming video and streaming audio are known internet applications in which data packages with contents are transmitted from a server or station to clients or consumers. The special thing about these data packages is that the time sequence of the various packages is of importance: a radio broadcast, for instance, has a fixed time line. *Additionally the continuity of the data flow is of importance, as otherwise the broadcast will falter.* The general principles of such streaming internet application are known to the expert.

Ex. 1001, 7:8–16 (emphasis added). Thus, the act of streaming audio or video, consistent with the specification of the '862 patent, encompasses continuity of data flow (i.e., to avoid faltering of the broadcast). This important aspect (limitation) of the act of audio/video streaming (i.e., content that is “streamed”) is not captured in Petitioner’s proposed interpretation.

Regarding evidence concerning the ordinary and customary meaning of “streamed,” we found in our Decision on Institution a common technical dictionary defines the verb “stream” as “[t]o transfer data continuously, beginning to end, in a steady flow . . . [o]n the Internet, streaming enables user to begin accessing and using a file before it has been transmitted in its entirety.” Dec. 12 (quoting *Microsoft Computer Dictionary Fifth Edition*, 499 (2002) (Exhibit 3001)). The claims use the term “streamed” as a verb. For example, independent claim 1 recites, “such that part of the item of content is *streamed* to a stream target at the receiving media player, while another part of the item of content is being received.” Based on the above, we determined that the broadest reasonable interpretation of “streamed” is “transmitted continuously such that the content may be played by the receiver while the transmission is occurring.” *Id.*

In the Patent Owner Response, Patent Owner essentially repeats their assertions from the Preliminary Response (PO Resp. 8–10), but additionally cites to the testimony of their expert, Dr. Hale, who asserts that “it is my opinion that ‘streamed’ should be defined as ‘transmitted such that transmission and playback of content can occur simultaneously,’ excluding other forms of transmission.” Ex. 2016 ¶ 6. Other than the omission of the word “continuously,” an omission that we are unpersuaded is warranted given our analysis above, we discern little substantive difference between Dr. Hale’s proposed interpretation, and the interpretation set forth in the Decision on Institution. Petitioner now adopts our interpretation. Pet Reply 2 (“While Petitioner believes the ’862 patent supports a broader definition of ‘streamed’ (*see* Paper No. 2 at 9-10), Petitioner adopts the Board’s construction herein.”).

After considering all evidence and assertions anew, we discern no persuasive reason to alter our preliminary interpretation and conclude that the broadest reasonable interpretation of “streamed” is “transmitted continuously such that the content may be played by the receiver while the transmission is occurring.”

“Another”

Independent claim 1 includes recitations directed to streaming a part of an item of content while *another* part of the item of content is being received. Independent claims 12 and 18 each include a similar recitation. As an initial matter, we do not read the parties’ overall assertions as disputing that “another part” must be separate from the first “part.” For example, by way of analogy, the first “part” and the “another part” cannot both refer to the same copy of the song “Happy Birthday.” Instead, as set

forth below, our reading of the parties' overall assertions is that the actual dispute as being whether "another part" and the first "part" can be substantively the same, e.g., continuing with our analogy, the first "part" and the "another part" can be the song "Happy Birthday" and an identical duplicate copy of the song "Happy Birthday," respectively.

Petitioner argues "[t]he term 'another part of the item of content' should be interpreted to mean any part of the item of content, whether the same or different than any other part of the item of content." Pet. 10–11; Pet. Reply 3–4. Petitioner asserts:

For example, a second part of an item of content can be 'another' part if it is a partial copy of a first part of the item of content, if it is a segment of the item of content that includes or excludes segments contained within a first part of the item of content, or if it is a replica of a first part of the item of content.

Pet. Reply 4 (citing Ex. 1018 ¶ 5). Petitioner further asserts the '862 patent Specification supports this interpretation by disclosing that a node "specifies the portion of the item of content it wishes to receive" and "does not disclose or otherwise suggest that the requested part of the media stream could not be a copy of a part that the node had already received." *Id.* at 5 (citing Ex. 1001, 9:48–49, 13:27–32; Ex. 1018 ¶ 8).

Patent Owner argues "another" cannot mean the same part of the item of content, as would be encompassed within Petitioner's interpretation, but, instead, must mean a different part of the item of content. PO Resp. 10 (citing a dictionary definition of the adjective "another" (Ex. 2017)). Patent Owner further argues the '862 patent Specification supports its interpretation that *another* part must be a *different* part of the item of content. *Id.* at 10–11 (citing Ex. 1001, Figs. 2A–2Q, 8:62–9:22, 9:50–59, Figs. 6A–6J, 11:42–12:45). Patent Owner further relies on Dr. Hale's testimony that "another"

means a “different piece of content, not the same piece of content.” *Id.* at 11 (citing Ex. 2016 ¶¶ 7–9). Based on a definition of “another” set forth in an online dictionary (<http://merriam-webster.com>), Dr. Hale testifies “‘another part of the item of the content’ must refer to a different or distinct collection of data identified by a different or distinct location in the object or file.” Ex. 2016 ¶ 9.

We find no limiting definition or special meaning of “another” in the ’862 patent Specification. As noted by Petitioner, the phrase “another part of the item of content” (or simply “another part”) appears only in the Abstract and independent claims 1, 12, and 18 of the ’862 patent. Pet. Reply. 4.⁸ We find Patent Owner’s reliance on Figures 2A–2Q and related text at column 8, line 62 through column 9, line 22 and column 9, lines 50 through 59, of the ’862 patent, immaterial to interpreting “another.” These figures and related text describe communications among nodes to identify a best (fastest) connection therebetween, and refer only generally to sending content over such an identified higher speed connection—i.e., nothing in these cited portions identifies which “parts” of content are sent over which connections.

Figures 6A–6J, and related text at column 11, line 42 through column 12, line 45, of the ’862 patent are more helpful in interpreting “another,” although they do not support Patent Owner’s arguments. These portions of

⁸ Petitioner correctly notes the Abstract of the ’862 patent was added by amendment just prior to allowance of the patent. Pet. Reply 4. This amendment essentially mirrors the language of claim 1. Thus, the Specification of the ’862 patent provides little or no context for interpreting “another” in the claim recitation referring to “another part of the item of content.”

the '862 patent Specification describe how exemplary “data packages” (data packages 1 through 8) are distributed to nodes via the fastest connection among multiple possible connection paths. As described in the related text, a node may request a data package from a first node, but after realizing the connection to another node is faster, the node may establish the faster connection and request that same data package from the faster node. For example, referring to Figure 6D, the '862 patent Specification describes node 122 receiving a request for a data package from node 126. Ex. 1001, 11:51. Referring next to Figure 6E, the Specification discloses:

As the connection via node **122** of consumer node **126** appeared to be slow, consumer node **126** goes looking for a better connection and finally ends up at consumer node **129**. At the request of consumer node **126**, *consumer node 129 now also starts delivering data packages to 126*. . . . Consumer node **126** then disconnects the connection to consumer node **122**.

Id. at 12:1–8 (emphasis added). By use of the word “also,” we find the Specification discloses each of nodes 122 and 129 simultaneously and independently sending identical copies of requested data packages to requesting node 126. In the above example, we find that node 122 is transmitting the requested data package to node 126 while node 129 begins a faster transmission of an *identical* copy of the requested data package to node 126. Thus, Patent Owner’s reliance on this disclosure of the '862 patent appears misplaced. Contrary to Patent Owner’s assertion, this portion of the Specification supports Petitioner’s broader interpretation of “another” that encompasses the *same* data package—i.e., another copy (another transmission) of the *same* requested data package.

Patent Owner’s citation to a dictionary defining the adjective “another” as “different or distinct” (PO Resp. 10 (citing Ex. 2017); Ex. 2016

¶ 9) is unavailing because two copies of the same song are, nevertheless, “different” and “distinct” from each other. Furthermore, other definitions in Exhibit 2017 indicate “some other” or “being one more in addition to one or more of the same kind.” Ex. 2017, 3. Of those, the second definition makes the same point as the first, and the last definition’s use of the words “of the same kind” indicates that “another part” can be considered the same as the first “part.” In another dictionary cited by Petitioner (Pet. Reply, 4), similar definitions are provided, with its first definition being “one or more; an additional.” Ex. 1017, 4.⁹ This definition also supports Petitioner’s interpretation.

In view of the above, we conclude the broadest reasonable interpretation of “another” is “an additional, such as one or more,” which is an amalgamation of the most common portions of the above definitions. Additionally, we find that the above definitions are consistent with Figure 6E of the Specification, the only portion identified by the parties that we find sheds any appreciable light on the interpretation of “another.” In the context of the claim recitation “another part of the item of content,” we determine the claims encompass “an additional, such as one or more,” parts of the item of content, where the “another part” is separate from, but can be identical to a first “part.” This interpretation is consistent with Petitioner’s interpretation of “another” as “any part of the item of content, whether the same or

⁹ We observe the copyright date on the dictionary filed by Petitioner (Ex. 1017, 2 (1997)) pre-dates the copyright date on the dictionary filed by Patent Owner (Ex. 2017, 2 (2004)) and, more importantly, pre-dates the priority date of the ’862 patent (2001).

different than any other part of the item of content.” Accordingly, we conclude that Petitioner’s proposed interpretation is correct.

“Communication Channel”

The title and all claims of the ’862 patent refer to “communication channel,” but the Specification make no further reference to “channel” or “communication channel.” Petitioner proposes, ““communication channel” should be interpreted to mean a path for transmitting signals.” Pet. 8. Petitioner explains further that the term should not be limited to a physical communication medium, but, instead, should encompass a connection including, for example, a logical connection¹⁰ created through various multiplexing techniques over a single physical medium.¹¹ *Id.* at 9. Patent Owner does not provide an alternative interpretation.

The Authoritative Dictionary of IEEE Standard Terms defines “communication channel” as “[a] facility that permits signaling between terminals.” This definition appears to comport with Petitioner’s proposed interpretation. Although there is no definition of “communication channel” set forth in the Specification, we find that the Specification of the ’862 patent does define several seemingly related terms. For example, the

¹⁰ The Authoritative Dictionary of IEEE Standard Terms does not have a definition of “logical connection,” however, it defines “logical channel” as “[o]ne connection over a single physical communication link. There may be multiple logical channels over a single physical communication link.” The Authoritative Dictionary of IEEE Standard Terms 636 (7th ed. 2000) (Ex. 3002).

¹¹ Petitioner notes Patent Owner had agreed to a narrower interpretation in a related litigation in which a “channel” is tied to a physical, transmission communication medium, but urges our interpretation in this case should not be so limited. Pet. 8, n.4 (citing Ex. 1011, 14–16).

Specification define a “physical connection,” as a cable that carries data in electromagnetic form, as well as a wireless connection for transmitting data using wireless electromagnetic radiation (e.g., infrared, radio waves, etc.). Ex. 1001, 3:1–6. The Specification also refers to a “connection” being “made” and being “broken off.” *Id.* at 9:55–59. Furthermore, the Specification refers to a “connection” being requested (*id.* at 14:14, 14:48) and being closed (*id.* at 14:28). Claims 11 and 16 then refer to “communication channel” as being “over” a wireless network or “over” an electricity connection. We find that these portions of the Specification and claims are consistent with Petitioner’s proposed interpretation, and the aforementioned dictionary definition of a “communication channel,” as encompassing both a logical connection operating “over” a physical connection, as well as the underlying physical connections themselves.

For these reasons, we broadly, but reasonably, interpret “communication channel” to at least encompass “a logical or physical path for transmitting signals.”

Other Claim Terms

We determine that it is unnecessary to construe explicitly any other claim terms.

D. Claims 1–6 and 8–18 Anticipated by Shastri

1. Antedating Shastri (Ex. 1002)

Petitioner bears the burden of persuasion that the challenged claims are unpatentable, which includes the burden of establishing that any reference upon which it relies constitutes prior art under 35 U.S.C. § 102. 35 U.S.C. § 316(e); *see Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1576 (Fed. Cir. 1996) (holding that the challenger bears the burden of persuasion

“on all issues relating to the status of [the asserted reference] as prior art”). Petitioner has the burden of persuasion to prove unpatentability by a preponderance of the evidence. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1379 (Fed. Cir. 2015). Petitioner also has the initial burden of production to show that a reference is prior art to certain claims under a relevant section of 35 U.S.C. § 102. *Id.* Once Petitioner has met that initial burden, the burden of production shifts to Patent Owner to argue or produce evidence that the asserted reference is not prior art to certain claims, for example, because those claims are entitled to the benefit of priority of an earlier-filed application. *Id.* at 1380. Once Patent Owner has met that burden of production, the burden is on Petitioner to show that the claims at issue are not entitled to the benefit of priority of the earlier filed application. *Id.*

Here, Petitioner relies on Shastri as an anticipatory prior art reference under 35 U.S.C. § 102(e). On its face, Shastri shows a publication date of May 30, 2002 and a filing date of November 30, 2000. Ex. 1002, 1. The ’862 patent shows a filing date of June 9, 2010, but claims priority through a foreign patent application (in the Netherlands) back to Feb. 16, 2001. Ex. 1001, 1. Thus, based on the dates on the face of the two patents, we find that Petitioner has sufficiently met its initial burden of production showing that Shastri is prior art under 35 U.S.C. § 102(e). Therefore, Patent Owner then bears the burden of producing evidence antedating Shastri’s filing date (November 30, 2000). *Mahurkar*, 79 F.3d at 1576–77. We find that Patent Owner has met that burden by producing the Declarations of the inventors of the ’862 patent (Exs. 2018, 2019) and corroborating evidence (Exs. 2020–2027, 2029) that allegedly show conception prior to Shastri, and reasonable

diligence through filing of a patent application (constructive reduction to practice) to antedate the filing of Shastri. PO Resp. 11–13. Accordingly, the burden of persuasion concerning all aspects of this issue are on Petitioner.

Priority of invention can be awarded to a party who “can show that it was the first to conceive the invention and that it exercised reasonable diligence in later reducing that invention to practice.” *Price v. Symsek*, 988 F.2d 1187, 1190 (Fed. Cir. 1993). To establish conception, a party must provide evidence showing possession of every limitation recited in the claimed invention, including corroborating evidence showing the invention was disclosed to others in such clear terms as to enable those skilled in the art to make the invention. *Coleman v. Dines*, 754 F.2d 353, 359 (Fed. Cir. 1985); *see also Kridl v. McCormick*, 105 F.3d 1446, 1449–50 (Fed. Cir. 1997). The sufficiency of the party’s corroborating evidence is determined under a “rule of reason.” *Kridl*, 105 F.3d at 1450; *see also Price*, 988 F.2d at 1195. This requires “a reasoned examination, analysis and evaluation of all pertinent evidence so that a sound determination of the credibility of the inventor’s story may be reached.” *Coleman*, 754 F.2d at 360. However, the analysis “does not dispense with the requirement for some evidence of independent corroboration.” *Coleman*, 754 F.2d at 360; *see also Shu-Hui Chen v. Bouchard*, 347 F.3d 1299, 1310 (Fed. Cir. 2003) (“Evidence of the inventive facts must not rest alone on the testimony of the inventor himself”).

Patent Owner argues that the Declarations of the inventors of the ’862 patent (Exs. 2018, 2019) and corroborating evidence (Exs. 2020–2027, 2029) sufficiently show conception prior to Shastri, and reasonable diligence through filing of a patent application (constructive reduction to practice) to

antedate the filing of Shastri. PO Resp. 11–13. The inventors’ Declarations generally assert they conceived of the invention prior to the November 30, 2000 filing date of Shastri, and diligently worked on the invention up to the constructive reduction to practice at filing of the foreign patent application to which the ’862 patent claims priority (Feb. 16, 2001). Exs. 2018, 2019.

Patent Owner asserts that the filing of a patent application in the Netherlands “only two and ½ months after Shastri’s effective prior art date” confirms the inventors’ assertion that they conceived of the invention prior to November 30, 2000 and worked diligently to the filing on February 16, 2001 of the foreign patent application. PO Resp. 12 (citing Ex. 2018 ¶¶ 3, 5; Ex. 2019 ¶¶ 3, 5; Exs. 2020, 2021). Patent Owner further asserts that, although the inventors “no longer have extensive records from this time period,” several emails corroborate their testimony regarding conception and diligence. *Id.* at 12–13 (citing Ex. 2018 ¶ 4; Ex. 2019 ¶ 4; Exs. 2022–2027). Still further, Patent Owner asserts a facsimile (Ex. 2029) from an inventor dated December 29, 2000 further corroborates the testimony of the inventors regarding conception and diligence. *Id.* at 13 (citing Ex. 2018 ¶ 6; Ex. 2019 ¶ 6).

Petitioner contends the inventors’ Declarations should be given little weight, because the corroborating evidence is insufficient to support either conception or diligence. Pet. Reply 6–8. Specifically, Petitioner argues the inventors of the ’862 patent conceded that the Exhibits relied on for conception “do not illustrate the technical details ultimately claimed in the ’862 patent.” *Id.* at 7 (citing Ex. 1014, 24:24–37:9; Ex. 1015, 22:2–35:2).

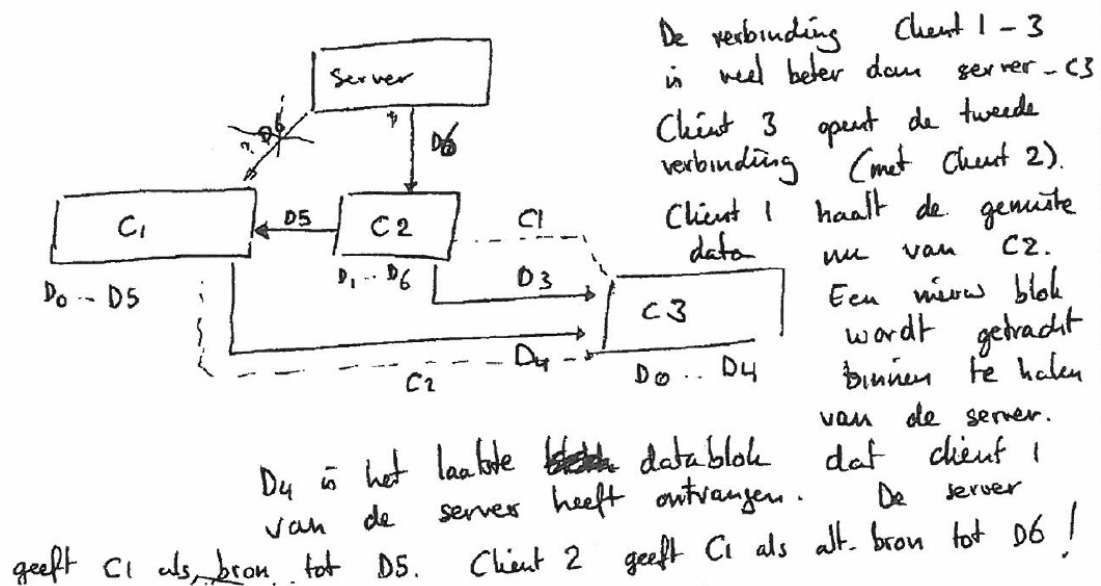
We agree with Petitioner that Patent Owner’s proffered evidence is insufficient to support a finding of conception prior to November 30, 2000.

Mr. Van Oldeborgh's Declaration does not identify any specific evidence showing details of the claimed invention, but, instead, merely states broadly and conclusorily that the inventors conceived of the invention prior to Shastri (Ex. 2018 ¶¶ 2, 3) and lists various Exhibits as supporting that assertion (*id.* ¶¶ 4, 6), but, again, with little to no analysis of these Exhibits as compared to the claimed invention. Mr. Gnirrep's Declaration (Ex. 2019) is substantively identical to that of Mr. Van Oldeborgh.

The one possible exception to the general lack of analysis concerning the claimed invention is the inventors' assertions that Exhibit 2029 shows some details of the claims in drawings depicting exemplary data transfers between nodes:

For example, the third figure on the second page of the fax shows a media player (C3) receiving part of an item of content (D3) on a first communication channel, and another part of an item of content (D4) on a second communication channel, and doing so at the same time so that the receipt of D4 overlaps with the processing of D3 received from the first communication channel.

Ex. 2018 ¶ 6; Ex. 2019 ¶ 6. The referenced third figure of the second page of Exhibit 2029 is reproduced below.



Ex. 2029, 2. The above-reproduced drawing shows four nodes, consisting of a server node and three client nodes (C1, C2, and C3), and data blocks D0–D6 communicated between the nodes. An English translation of the Dutch text in the above-reproduced figure reads as follows:

The Client 1–3 connection is much better than server – C3. Client 3 opens the second connection (with Client 2). Client 1 now retrieves the missed data from C2. An attempt is made to bring in a new block from the server. D4 is the last data block Client 1 has received from the server. The server assigns C1 as the source to D5. Client 2 assigns C1 as alternative source to D6.

Id. at 5.

Assuming, *arguendo*, the above-reproduced figure and associated text provide some detail regarding the claimed invention, the information provided is insufficient corroboration that the claimed invention of the '862 patent was conceived prior to November 30, 2000. The facsimile has a header indicating transmission on December 29, 2000 and the inventors acknowledge that it was created on that date. Ex. 1014, 40:4–10. We agree with Petitioner that a December 29, 2000 date for Exhibit 2029 does not

corroborate adequately the inventors' conception prior to November 29, 2000. Pet. Reply 7.

Indeed, only one Exhibit (Ex. 2022) among those relied on by Patent Owner as corroborating the inventors' testimony of conception actually pre-dates the filing of Shastri. Exhibit 2022 is an email between the inventors dated November 26, 2000—four days prior to Shastri's filing on November 30, 2000. Like the Declarations, however, we agree with Petitioner that Exhibit 2022 does not disclose any details of the invention as claimed in a manner sufficient to enable those skilled in the art to make the invention. Pet. Reply 7; *see Coleman*, 754 F.2d at 359. Mr. Gnrirrep conceded this weakness in his deposition:

Q. Does Exhibit 2022 involve everything recited in Claim 1?

...

A. Exhibit [20]22 mostly discusses the process for patent application, and it mentions an example for radio station, but it does not show any details of the claims in the patent application.

Q. ... Does Exhibit 2022 recite the details of Claim 1?

...

A. The e-mail mentioned by Exhibit [20]22 does not specify the details listed in the patent application.

Q. ... So Exhibit 2022 does not recite everything in Claim 1, correct?

...

A. It does not recite the details as mentioned in the patent application.

Ex. 1014, 24:24–25:19. Mr. Gnrirrep similarly concedes Exhibit 2022 does not recite the details of claims 12 and 18. *Id.* at 25:20–26:6. Regardless, Mr. Gnrirrep contends Exhibit 2022 supports his Declaration:

Q. Can you identify what parts of the e-mail [(Ex. 2022)] relate to the declaration?

A. Yes, I can. Mentions on the very first page of Exhibit [20]22 at the top it mentions that Marc has been spending Friday prior to November 26 at the patent office for preparing the patent application. This means that we already had the entire idea translated and details worked out and presented – already presented this to the patent application lawyer, to the Bureau of Industrial Property, and therefore, it’s relevant for the declaration.

...

Q. Do you think this e-mail describes everything that’s included in Claims 1, 12 and 18 of the ’862 patent?

...

A. It does not describe the details of the patent. It describes the patent application process, the part of it we were – it’s supporting that we already was filing for patent – for this patent and that we already had conceived the entire invention.

Id. at 28:2–29:10. Mr. Gnirrep also testifies that Exhibits 2023 and 2024 do not describe the claimed invention. *Id.* at 30:22–37–9. We have reviewed Exhibits 2025, 2026, and 2027 and find them similarly lacking of detail regarding the claimed invention.

Mr. Van Oldeborgh provided similar testimony regarding the allegedly corroborating exhibits. *See Ex. 1015 22:2–35:2.* For example, Mr. Van Oldeborgh testified:

Q. . . . Does this e-mail [(Ex. 2022)] include everything included in Claims 1, 12 and 18 of the ’862 patent?

...

A. I don’t think this has anything to do with the ’862 patent. It’s a new idea.

Ex. 1015, 23:8–13. Thus, Mr. Van Oldeborgh also concedes that Exhibit 2022 fails to provide details regarding the claimed invention of the ’862 patent.

Although Patent Owner’s proffered evidence fails to provide details of each element of the claims to corroborate the inventors’ testimony regarding

conception, independent circumstantial evidence may supply sufficient corroborating evidence of conception. *See Lacotte v. Thomas*, 758 F.2d 611, 613 (Fed. Cir. 1985); *see also Reese v. Hurst*, 661 F.2d 1222, 1225 (CCPA 1981) (“Independent corroboration may consist of testimony of a witness, other than the inventor, to the actual reduction to practice or it may consist of evidence of surrounding facts and circumstances *independent of information received from the inventor.*” (emphasis added)); *Hahn v. Wong*, 892 F.2d 1028, 1032 (Fed. Cir. 1989) (“The inventor, however, must provide *independent corroborating evidence in addition to his own statements and documents.*” (emphasis added)); *Knorr v. Pearson*, 671 F.2d 1368, 1373 (CCPA 1982) (“[S]ufficient *circumstantial evidence of an independent nature* can satisfy the corroboration rule.” (emphasis added)); *Brown v. Barbacid*, 276 F.3d 1327, 1335 (Fed. Cir. 2002) (“[A]n *inventor’s own unwitnessed documentation does not corroborate an inventor’s testimony about inventive facts.*” (emphasis added)).

Nevertheless, here, even after considering the evidence the inventors rely on (Exs. 2022–2027, 2029) as circumstantial evidence, we agree with Petitioner that the evidence still falls short of corroborating the inventors’ testimony regarding conception. The evidence is *not independent* of the inventors’ testimony, but, instead, consists of general communications between the two co-inventors. Specifically, Exhibits 2022 through 2027 are email messages exchanged between the two co-inventors admittedly discussing (1) ideas that are not part of the claimed invention of the ’862 patent and (2) scheduling of meetings. Exhibit 2029 is an exception, in that it does appear to disclose some details of the ’862 patent claims, however, we agree with Petitioner that it also is merely another communication

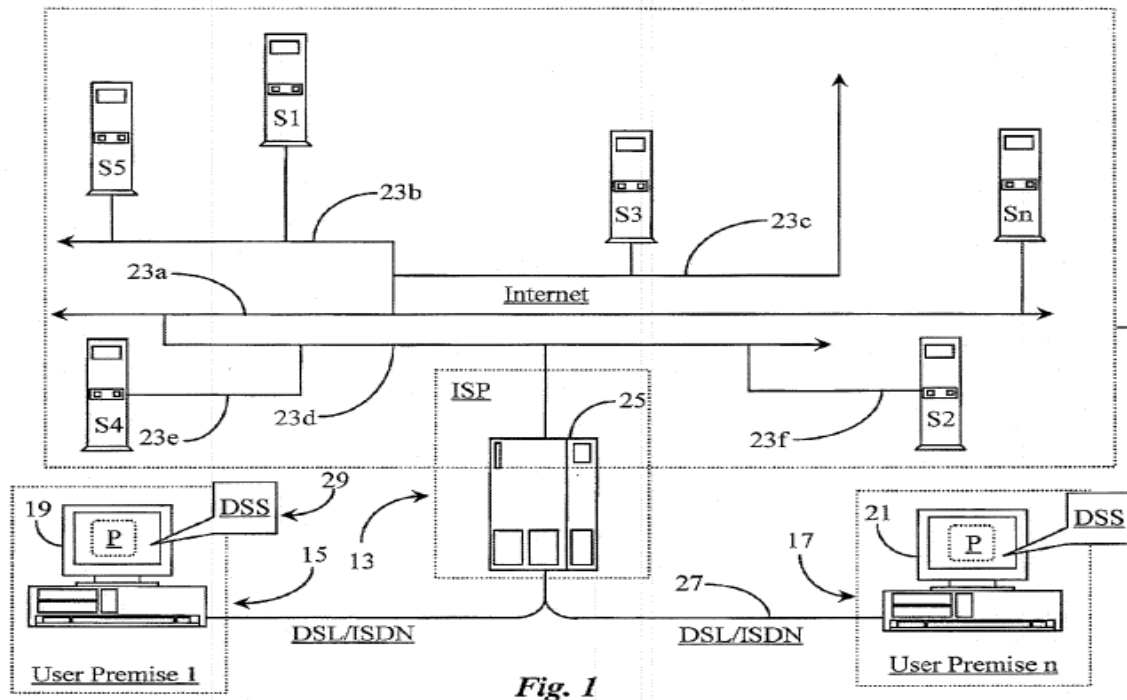
between the inventors. No independent corroborating, circumstantial evidence is proffered, for example, from the Netherlands Bureau of Industrial Property or from the patent attorney the inventors worked with to prepare and file the '862 patent.

For the above reasons, we are persuaded that Patent Owner has not shown sufficiently that the invention claimed in the '862 patent was conceived prior to the Shastri patent filing. Lacking evidence of conception we need not address diligence. Generally, however, the same evidence (Exs. 2022–2027, 2029) similarly fails to provide sufficient proof of diligence from the alleged conception through filing of the foreign application in February 2001, for the same reasons as set forth above. Thus, we determine that Petitioner has met its burden of showing, by a preponderance of the evidence, that Shastri is properly considered prior art under 35 U.S.C. § 102(e) (pre-AIA).

2. *Summary of Shastri*

Shastri discloses a system “for effecting a dynamic switch from an existing client-server connection established between a client node and a server node on a data-packet-network (DPN) to an alternate server-node connected to the network and accessible to the client node.” Ex. 1002, Abstract.

Figure 1, reproduced below shows an exemplary network environment in which Shastri's invention operates.



Shastri's Figure 1 (above) shows user computer 15 coupled to the Internet through Internet Service Provider 13 ("ISP"). Ex. 1002 ¶ 27 ("user premise 17" is a media player including user computer 15). A plurality of multimedia servers (S1–Sn) are coupled to the Internet through various tree-structured backbone connections (23a–23f). *Id.* ¶¶ 24–25. User computer 15 includes dynamic server selection ("DSS") module 29, where DSS 29 is software configured to measure quality of service ("QoS") during media play-back from a selected server, in each of the various connections between computer 15 and servers S1–Sn. *Id.* ¶ 33. "If there is a better-performing server available, under certain circumstances DSS 29 enables a dynamic switching to the better-performing server. A multimedia selection from a

new server may begin streaming at the point left off at the original server without interruption.” *Id.*

Shastri’s Figure 4, reproduced below, broadly describes a method of Shastri’s invention.

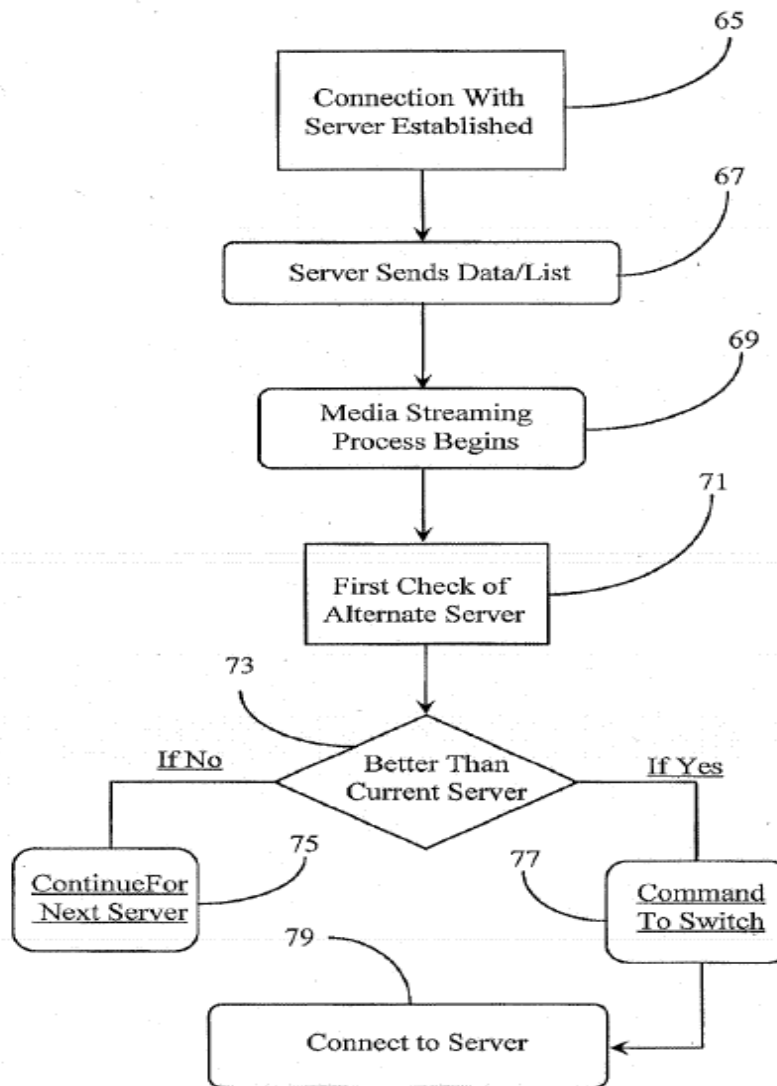


Fig. 4

The method of Shastri’s Figure 4 discloses steps 65–69 establishing a connection between the user computer and a first server, and commencing the streaming of content from the first server to the user computer. Ex. 1002

¶¶ 61–62. While streaming content from the first server, method steps 71–75 check for alternate servers that can better serve the content (i.e., better QoS). *Id.* ¶¶ 62–63. If a better server is found, steps 77 and 79 connect the user computer to the alternate server, and the alternate server continues serving the media stream. *Id.* ¶¶ 63–64.

3. *Anticipation by Shastri (Claims 1–6 and 8–18)*

Regarding independent claim 1, Petitioner maps the preamble and first three steps of claim 1 to teachings of Shastri. Pet. 13–18. Patent Owner does not challenge these mappings. We note, in particular, Petitioner’s mapping of the second step (initiating a second connection with a second computer) and mapping the third step (receiving part of the content over the second connection) to teachings in Shastri’s paragraph 48. Pet. 17–18. Specifically, Shastri’s paragraph 48 discloses “[p]eriodically, separate connections are opened with alternate servers for the purpose of obtaining a sampling of QoS data by very briefly accepting the same media content from the second test server.” As will be explained in further detail below, we agree with Petitioner, and find that Shastri discloses initiating a second connection (“separate connections are opened with alternate servers) and receiving some part of the desired content over the second connection (“sampling QoS data by very briefly accepting the same media content from the second test server”).

The final step of claim 1 recites,

making incoming content received over the first communication channel ready for processing and play-back at the receiving media player, such that part of the item of content is streamed to a stream target at the receiving media player, while another part of the item of content is

being received by the receiving media player over the second communication channel.

In particular, the last portion of this step recites, in essence, overlapping processing of content received over the first channel with receipt of another part of the same content received over the second channel. Patent Owner refers to this limitation as the “simultaneity requirement.” *See, e.g.*, PO Resp. 1, 6.

Petitioner argues Shastri discloses receiving content from multiple servers. Pet. 20 (citing Ex. 1002 ¶ 36). Shastri paragraph 36 discloses “[i]n addition to receiving video and QoS data from a current server, module 31 has a capability of connecting to and receiving data from another servers [sic] at the same time with the aid of browser software.” Petitioner further argues Shastri discloses concurrent play-back of a first part of the content while receiving another part of the content over the second connection. *Id.* (citing Ex. 1002 ¶ 48). Shastri paragraph 48 discloses “[p]eriodically, separate connections are opened with alternate servers for the purpose of obtaining a sampling of QoS data by very briefly accepting the same media content from the second test server.” Thus, Petitioner contends, “by opening a separate connection to an alternate server and receiving a sample of the content item from the alternate server while streaming the content item from the initial server,” Shastri discloses overlapping the processing and play-back of a first part of the content received over the first connection with receipt of another part of the same content (a QoS sample) over the second connection (sampled from another server). *Id.* As will be explained in further detail below, we find that Petitioner has established by a preponderance of the evidence that these limitations are disclosed by Shastri.

Patent Owner argues Shastri does not disclose receiving, over a second channel, “another part” of an item of content while processing content received over a first channel but, instead, discloses sampling the same data. PO Resp. 18 (citing Ex. 2016 ¶¶ 17–19). Petitioner disagrees, asserting Shastri discloses sampling the same media *file*, not necessarily the same *data* as previously received. Pet. Reply 13. Petitioner further asserts, even if Shastri’s sampling were the same data as some previously received data, “this sampled data would still be ‘another part’” at least because it is a separate copy of the same content received from another server over the second channel. *Id.*

We agree with Petitioner’s argument as consistent with our interpretation of “another.” Shastri’s paragraph 48 recites, in part, “sampling of QoS data by very briefly accepting the same media content from the second test server.” Thus, we agree with Petitioner that Shastri does not teach sampling the “same data” but, instead, teaches sampling the “same media content.”¹² Patent Owner’s argument relies on its narrower, proposed, interpretation of “another” that we rejected as discussed *supra*. Shastri’s sample of content received from another server over the second channel, even if it is the same content previously received over the first channel, is encompassed by our interpretation of “another” as “any part of the item of content, whether the same or different than any other part of the item of content.”

Patent Owner further argues Shastri does not teach receiving “another” part because “[m]erely sampling data to obtain a QoS

¹² We note that even if Shastri did disclose sampling the “same data,” that would still meet our construction of “another” set forth above.

measurement of the channel does not necessarily involve receiving the data.” PO Resp. 18 (citing Ex. 2016 ¶¶ 20–21). Patent Owner contends Shastri does not require receiving the actual content in its sampling of QoS, but could “simply count the rate at which frame headers that are addressed to the receiving device without receiving any of the actual content contained in the frames.” *Id.* Petitioner disagrees, arguing Shastri makes clear that the media content, *per se*, is sampled to determine QoS. Pet. Reply 14–16.

We agree with Petitioner that Shastri makes clear that QoS determinations include, *inter alia*, a media player sampling media content from a server. *See, e.g.*, Ex. 1002 ¶ 32 (“Quality of Service (QoS) statistics, which may be determined in part by playback statistics”), ¶ 40 (“Certain QoS statistics relating to current server performance are determined during playback by individual components contained in player P and passed to module 39 as part of normal function.”), ¶ 62 (“Step 71 includes establishing a connection with the alternate server and the initiation of streaming of the same file being provided by the original server of step 65.”). Thus, we find that Shastri’s sampling receives a part of media content from a server, and evaluates QoS from the act of sampling that part, as opposed to the other measurements asserted by Patent Owner. We find also that the part of the media content being sampled would have been understood by the ordinarily skilled artisan to be “another part,” as recited in claim 1, for the reasons set forth above.

For the above reasons, we are persuaded Petitioner has established, by a preponderance of the evidence, that claim 1 is anticipated by Shastri.

Independent claims 12 and 18 recite limitations similar to independent claim 1. Petitioner similarly maps disclosures of Shastri to recitations of

independent claim 12 (Pet. 26–29), independent claim 18 (Pet. 30–34), and dependent claims 2–6, 8–11, and 13–17 (Pet. 21–25, 29–30). Petitioner provides a detailed mapping of every limitation of each of claims 2–6 and 8–18 that we find persuasive. Pet. 21–34. Patent Owner does not set forth any assertions concerning separate patentability of any of claims 2–6 and 8–18, for this ground of unpatentability, not already set forth above. We have reviewed Petitioner’s arguments and evidence regarding these additional challenged claims, and determine Petitioner has met its burden of showing, by a preponderance of the evidence, that claims 2–6 and 8–18 are anticipated by Shastri.

*E. Claims 1–20 Obvious over Goldszmidt or
Goldszmidt and Lumelsky*

1. Summary of Goldszmidt (Ex. 1004)

Goldszmidt discloses “[a] client-based system for the fault tolerant delivery of real-time or continuous data streams, such as real-time multimedia streams, e.g., live audio and video clips.” Ex. 1004, Abstract.

Goldszmidt Figure 1a, reproduced below, discloses an architecture for fault-tolerant, multimedia, stream delivery.

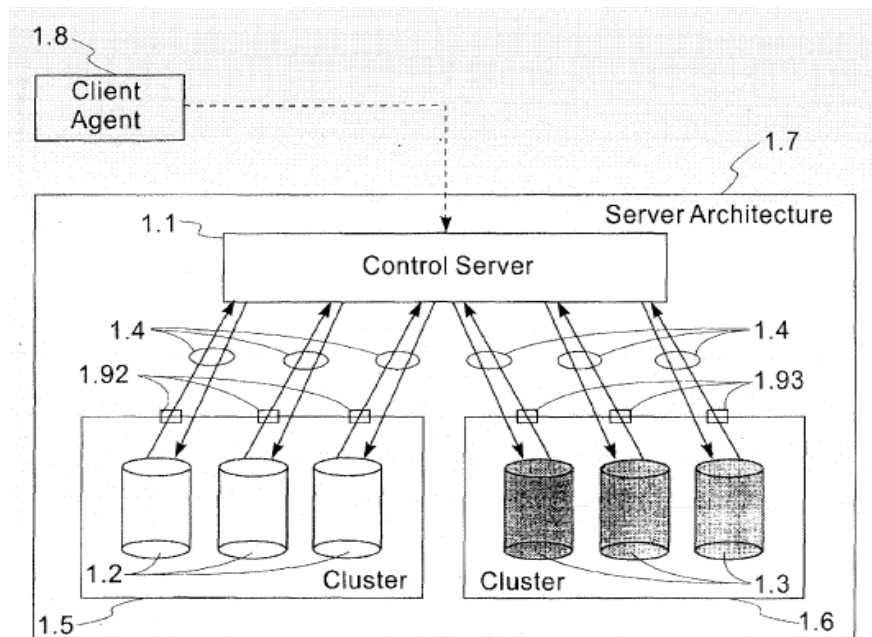


Fig. 1a

Figure 1a (above) shows client 1.8 coupled through control server 1.1 to clusters 1.5 and 1.6 of servers 1.2 and 1.3 for multimedia delivery. Ex. 1004, 4:27–33. Goldszmidt discloses “[t]he control server 1.1 redirects incoming client agent 1.8 requests to the streaming servers (1.2, 1.3), preferably while monitoring the workload of the streaming server.” *Id.* at 5:32–34. An initial (first) connection is established with a primary server to stream requested content. *See id.* at 8:34–63, Figs. 2A–2C. After the initial connection begins streaming data (*see id.* Fig. 4), the client may detect a fault in the stream delivery and request the control server to switch the connection to an alternate server.

Fig. 5 of Goldszmidt, reproduced below, describes the process of requesting a switch to an alternate server.

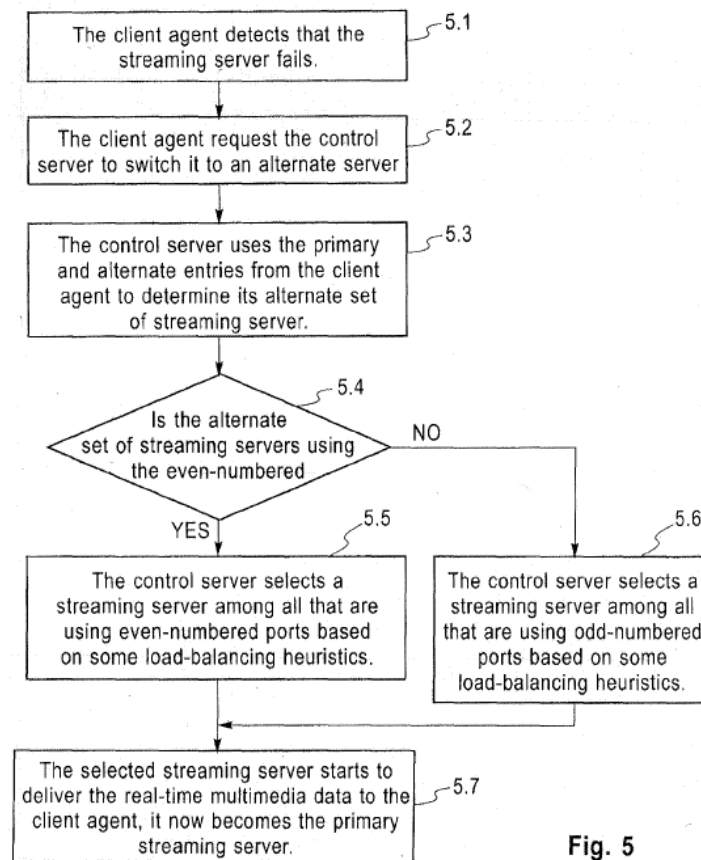


Fig. 5

In Goldszmidt Fig. 5 (above), while receiving a stream from a primary server, the receiving client at step 5.1 detects a failure in delivery of the stream. Ex. 1004, 10:6–7. At step 5.2, the client requests the control server to automatically locate an alternate server for the same content and initiate a switch to that alternate server. *Id.* at 10:28–31. At a selected one of steps 5.5 or 5.6, the control server selects an appropriate alternate server. *Id.* at 10:41–43. At step 5.7, the selected alternate server begins serving the stream to the client. *Id.* at 10:43–48.

2. Summary of Lumelsky (Ex. 1005)

Lumelsky generally discloses switching “a source of a streaming session between a primary server and its client, from the primary server to another server at arbitrary points during the progress of the streaming

session.” Ex. 1005, Abstract. More specifically, Lumelsky discloses “a seamless switch enabling migration of a streaming client across servers . . . at arbitrary points in a manner that appears seamless to the client with respect to the continuity and temporal progress of its streaming session.” Ex. 1005, 3:19–23. Furthermore, Lumelsky discloses “[i]n a seamless switch, stream processing on the client-side of the application appears to remain unaffected . . . the client does not necessarily need to know which server, primary or auxiliary, is currently provisioning its content.” *Id.* at 6:15–19.

3. *Obviousness over Goldszmidt Claims 1–20*

a. *Initiating a Request*

Regarding independent claim 1, Petitioner maps the preamble recitation “using at least two communication channels” to Goldszmidt as “using a communication link with a primary server (e.g., link 2.11 of Fig. 2C) and a communication link with an alternate server (e.g., link 3.12 of Fig. 3C) (‘using at least two communication channels’).” Pet. 38. The first step of receiving over a first communication channel is identified as Goldszmidt’s use of link 2.11 (of Figure 2C) for receiving data packages from a primary server. *Id.* at 38 (citing Ex. 1004, Fig. 2C, 8:44–63, 11:35). The step of “initiating a request” is identified as the client in Goldszmidt sending a message to the control server requesting a switch to an alternate server, and the alternate server continuing the streaming of the content over a different (second) communication channel (link 3.12 of Goldszmidt’s Fig. 3C). *Id.* (citing Ex. 1004, Fig. 3C, 9:10–22). The step of receiving data packages over the second communication channel is then identified as the alternate server streaming content over the second communication channel

(link 3.12 of Goldszmidt’s Fig. 3C). *Id.* at 40 (citing Ex. 1004, Figs. 3B, 3C, 9:15–22). As will be explained in further detail below, we find that Petitioner has established by a preponderance of the evidence the initiating step is disclosed by Goldszmidt.

The initiating step recites, “initiating a request for at least a part of the item of content over a second communication channel operationally coupled to the receiving media player.” Patent Owner argues this step requires that the request must be transmitted over the second communication channel—the same channel over which another part of the content will be received. PO Resp. 19. Patent Owner further argues Goldszmidt fails to teach a request that is transmitted over the second communication, but, instead, transmits its request over a communication channel coupling the client to the control server—not the channel over which the requested data will be received. *Id.*

Petitioner disagrees, arguing Patent Owner mis-reads the claim limitation as requiring the request be sent over the second communication channel. Pet. Reply 17. Petitioner further argues the ordinarily skilled artisan would understand the step of “initiating a request” as merely taking actions that, eventually, result in a request, rather than actual steps requiring a request be sent or sent over a particular communication channel. *Id.* at 18. Petitioner contends the entirety of the phrase “for at least a part of the item of content over a second communication channel” modifies “request,” indicating the type of request that is being initiated, rather than requiring the request be sent over the second channel. *Id.*

We agree with Petitioner that the initiating step does not require a request be sent over the second communication channel.¹³ “Initiating” does not appear in the Specification of the ’862 patent in reference to a request. The Abstract of the ’862 patent does refer to “initiating, from the first consumer node, a first connection to the second consumer node” and “initiating, from the first consumer node, a second connection over the network to a production node.” Ex. 1001, 1. That disclosure, however, does not provide us with any pertinent guidance. Otherwise, we find no discussion of initiating a request, or any specific requirements regarding which communication channel must be used to transmit such an initiated request.

Indeed, Patent Owner concedes as much by not identifying any disclosure in the ’862 patent that requires the request be transmitted over any particular communication channel. Instead, Patent Owner relies on paragraphs 26 and 27 of Dr. Hale’s Declaration in support of its interpretation of the initiating step (PO Resp. 19 (citing Ex. 2016)), but Dr. Hale also does not point to any support in the ’862 patent Specification in support of his interpretation of the initiating step.¹⁴

¹³ Indeed, by its own terms, it is unclear that the initiating step itself even requires that the request be sent at all—it appears to only require “initiation” of the sending, as opposed to completion of the sending, of the request.

¹⁴ Dr. Hale testifies: “In addition, the ’862 patent teaches that receiving systems (Consumer Nodes) can also act as content servers (Production Nodes), yielding a dynamic and resilient organic network topology (see [’862 col 2, 9-20] and [’862 col 6, 27-30].” Ex. 2016 ¶ 26. We fail to see the significance of this citation to the ’862 patent in relation to interpreting the initiating step.

At the Oral Hearing, counsel for Patent Owner contends the sequence of Figures 2A–2Q in the ’862 patent disclose the request being transmitted over the second link—the same link on which the requested data is returned. *See* Tr. 64:22–65–8. Counsel for Patent Owner remarked, “I think what the dispute boils down to is a matter of claim language, not a matter of trying to import something into the claim is what is that over the first communications channel modifying.” *Id.* at 67:6–9. Counsel for Patent Owner identified column 9, lines 13 through 22 as implying its interpretation of the initiating step as requiring the request be sent over the second communication channel. The cited portion states:

In FIG. 2E consumer node 3 is testing, for instance because its connections are not optimal, the connection to various nodes in the network of which it now (directly or indirectly) knows of its existence. This testing may for instance take place because the connection to consumer node 2 gets worse and worse. On this case consumer node 3 tests the connection to production node 1 and consumer node 2'. It appears that consumer node 2' still has capacity to spare. Consumer node 2' now also starts to send content to consumer node 3. (FIG. 2F).

Ex. 1001, 9:13–22. We fail to discern support, express or otherwise as would be understood by a skilled artisan, in the cited portion for an interpretation of “initiating a request” that requires a request must be sent on the second communication channel—the same channel on which requested data is returned.

b. Simultaneity Requirement

As discussed *supra*, the last portion of the last step (making . . .) recites, in essence, overlapping the processing and play-back of a first part of the content received over the first connection, with receipt of another part

of the same content received over the second connection. Petitioner argues this recitation is taught because, “Goldszmidt discloses that the switch between servers is transparent to the client, and that the client continues to receive the multimedia content in an uninterrupted fashion during the switch.” Pet. 42 (citing Ex. 1004, 2:30–35, 3:12–21). Petitioner further argues an ordinarily skilled artisan “would recognize that the play-back is uninterrupted during the switch because packets of the multimedia stream have already been buffered by the client and continue to be rendered while the switch takes place.” *Id.* (citing Ex. 1006 ¶¶ 165, 168; Ex. 1004, 12:20–27, 12:58–13:5, 13:64–14:19). As will be explained in further detail below, we find that Petitioner has established by a preponderance of the evidence the “simultaneity requirement” is disclosed by Goldszmidt.

Admittedly, Goldszmidt does not expressly teach the use of buffering for the purpose of overlapping processing content received over a first channel, while receiving content over a second channel (the “simultaneity requirement”). Goldszmidt discloses the use of buffering helps assure uninterrupted play-back based on the speed of the communication link to serve the content. *See* Ex. 1004, 12:24 (“in order to maintain continuous playback”); *see also id.* at 14:24–26 (“the clip is buffered sufficient for the clip to play to completion smoothly once rendering is started”). In our Decision on Institution, we determined:

We are persuaded that congestion or insufficient bandwidth, for example, in a first connection with a primary server, would have suggested to the ordinarily skilled artisan a need to switch to an alternate server. We are further persuaded that Goldszmidt would have suggested data received from a first connection that is pre-loaded (e.g., already buffered when congestion is sensed)

would have continued to be processed for play-back as streamed data from an alternate server was received.

Dec. 22.

Patent Owner argues, “the mere fact that buffering may be useful generally in processing data says nothing about its suitability for use in the context of switching between media streams.” PO Resp. 20. Patent Owner further argues, even if buffering is used, it is not necessarily the case that there will be overlap in processing content received over the first channel while receiving content over the second channel, as required by the claims (the “simultaneity requirement”). *Id.* (citing Ex. 2016 ¶¶ 28–30). Dr. Hale argues Goldszmidt’s buffering is “solely designed to compensate for the rate limitations of the first (and only) connection” and that buffering in Goldszmidt is not “presented to account for delays in switching to a second connection.” Ex. 2016 ¶ 29. Dr. Hale contends a “serial” solution would be simpler, in which buffered content received from a first server connection, as in Goldszmidt, would be fully processed (buffer emptied) before content from an alternate server is received, thus, providing continuity of play-back without the overlapped processing required by the claimed invention. *Id.* ¶ 14.

Petitioner disagrees, arguing it is an express teaching of Goldszmidt to switch between servers such that play-back is uninterrupted, and to keep the buffer filled to assure uninterrupted (continuous) play-back of the content. Pet. Reply, 19–20 (citing Ex. 1018 ¶ 29). Therefore, Petitioner contends the ordinarily skilled artisan “would have recognized that, by keeping media content in the buffer and playing the media content out of the buffer when

switching to another server, uninterrupted playback could be achieved.” *Id.*
at 20. Dr. Ederling testifies,

To the extent Goldszmidt does not explicitly disclose playing content out of the buffer while receiving content on a second channel, modifying Goldszmidt [sic] to operate in this fashion would have been trivial to a person of ordinary skill in the art. All that would be required, for example, would be to begin to fill the stream buffer of Goldszmidt with content from the second channel before the buffer empties. In fact, keeping media content in a buffer and playing it back when switching to another source (e.g., server) to maintain uninterrupted playback is standard engineering practice. It is my opinion that to interpret Goldszmidt in any other way, such as suggesting a scheme to empty the buffer before getting content from another source, goes against well-known engineering practices and common sense.

Ex. 1018 ¶ 30.

We agree with Petitioner. Goldszmidt expressly teaches it is desirable to maintain uninterrupted play-back by using a buffer based on the communication bandwidth of the stream server (*see, e.g.*, Ex. 1004, 12:24, 14:24–26) and expressly teaches it is desirable to maintain uninterrupted play-back when switching between servers for content delivery (*see, e.g., id.* at 10:3–7). Although we recognize from Dr. Hale’s testimony that there are other approaches to use of a buffer in Goldszmidt to achieve uninterrupted play-back that do not provide for the claimed “simultaneity requirement,” we give weight to Dr. Ederling’s testimony that Dr. Hale’s proposed simpler approach “goes against well-known engineering practices and common sense.” Ex. 1018 ¶ 30. To the extent Goldszmidt does not expressly teach using its buffer to achieve uninterrupted play-back during a switch between stream servers, such use of the buffer would have been known by and

suggested to the ordinarily skilled artisan to achieve uninterrupted playback.

c. Combination with Lumelsky

Petitioner also contends (in the alternative), to the extent it may be argued Goldszmidt fails to teach the “simultaneity requirement” (overlapping processing of a part of the content received over the first connection while receiving a part of content over the second connection), Lumelsky discloses this limitation in combination with Goldszmidt. Pet. 42–43. Specifically, Petitioner argues Lumelsky discloses that while a stream is being received at the client from the primary server (a first connection), a determination is made to switch to a target server (coupled to the client via a second connection). *Id.* at 43 (citing Ex. 1005, 10:12–15). Petitioner contends Lumelsky’s target server commences sending the stream to the client while the first connection continues sending content and, thus, the client starts receiving the same stream from two servers. *Id.* at 43–44 (citing Ex. 1005, 11:14–16). Petitioner further contends, the client searches for markers in the two streams to locate a common marker where the two streams overlap and, when such a marker is located in the streams, terminates streaming from the primary server and designates the target (alternate) server as the new primary server. *Id.* at 44 (citing Ex. 1005, 7:36–56, 11:17–22).

Petitioner argues it would have been obvious to the ordinarily skilled artisan to modify Goldszmidt to switch between streaming servers as taught by Lumelsky. *Id.* Petitioner contends the rationale for such a modification would have been “to ensure that the switch occurs seamlessly and without losing the continuity of the session.” *Id.* (citing Ex. 1006 ¶ 173; Ex. 1005,

3:8–13, 4:35–39). Petitioner further contends the proposed combination involves only “a combination of old elements in which each element performed as expected to yield the predictable results of ensuring that the switch occurs seamlessly.” *Id.* at 44–45 (citing Ex. 1006 ¶ 173). Dr. Eldering’s analysis at paragraph 173 largely mirrors Petitioners analysis, and only adds that the combination would have been obvious because “[s]eamless switching, as a POSA would understand, is required to maintain the ability to utilize and view content (e.g. a movie).” As will be explained in further detail below, we find that Petitioner has established by a preponderance of the evidence that a skilled artisan would have combined the references.

Patent Owner argues Lumelsky relies on use of redundant components in the client system (e.g., redundant buffers and network ports), and argues Petitioner fails to provide evidence that the ordinarily skilled artisan would have modified Goldszmidt by adding redundant components required by Lumelsky. PO Resp. 21–23. Patent Owner further argues, “combining *Lumelsky* with *Goldszmidt* requires modification of the media content data itself for the insertion of the segmentation markers that *Lumelsky* relies upon to perform the server switch.” *Id.* at 23 (citing Ex. 1005, 7:28–56, 8:4–59, Fig. 6).

The test for obviousness does not require bodily incorporation of the references but, instead, looks to what would be suggested to the ordinarily skilled artisan by the combined references. *See Keller*, 642 F.2d at 425. Furthermore, even if such bodily incorporation of redundant components and/or segmentation markers in the data stream were required to combine Goldszmidt with the features of Lumelsky, we do not discern that the

resulting arrangement would be “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). As discussed *supra*, Dr. Eldering’s analysis asserts, and we agree, the ordinarily skilled artisan would have been motivated to combine the references, because continuity of a streamed movie is required and, thus, a seamless switch to another server is required. Ex. 1006 ¶ 173. Petitioner has shown a sufficient rationale to combine Goldszmidt and Lumelsky in the manner indicated, and has shown that the combination meets the limitations of claim 1.

d. Conclusion Regarding Obviousness

We find, by a preponderance of the evidence, that Petitioner has established that independent claim 1 is unpatentable over Goldszmidt alone, or, in the alternative, over the combination of Goldszmidt and Lumelsky.

Independent claims 12 and 18 recite limitations similar to independent claim 1. Petitioner maps the combined disclosures of Goldszmidt and Lumelsky to recitations of independent claim 12 (Pet. 51–54), independent claim 18 (Pet. 55–58), and dependent claims 2–11, 13–17, 19, and 20 (Pet. 45–50, 54–55, 58–60). Petitioner provides a detailed mapping of every limitation of each of claims 2–20 that we find persuasive. Pet. 45–60. Patent Owner does not challenge any of these additional mappings of claimed features with the combined disclosures of Goldszmidt and Lumelsky. We have reviewed Petitioner’s arguments regarding these additional challenged claims and we determine Petitioner has met its burden of showing, by a preponderance of the evidence, that claims 2–20 are

unpatentable over Goldszmidt alone, or, in the alternative, over the combined teachings of Goldszmidt and Lumelsky.

F. Motion to Exclude

Patent Owner filed a Motion to Exclude (Paper 20). Patent Owner's Motion requests exclusion of paragraphs 26 and 27 of Dr. Ederling's Second Declaration (Ex. 1018) as new evidence introduced for the first time in Petitioner's Reply. We do not rely on these arguments in our Decision and, accordingly, Patent Owner's Motion to Exclude is *dismissed* as moot.

G. Conclusion

We are persuaded that Petitioner has met its burden of showing, by a preponderance of the evidence, that claims 1–20 of the '862 patent are unpatentable.

III. ORDERS

After due consideration of the record before us, and for the foregoing reasons, it is:

ORDERED that claims 1–20 of the '862 patent are held unpatentable;
FURTHER ORDERED that Patent Owner's Motion to Exclude is *dismissed*; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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