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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CODE200, UAB, TESO LT, UAB, METACLUSTER LT, UAB, and OXYSALES, UAB,
Petitioner,

v.

BRIGHT DATA LTD.,
Patent Owner.

IPR2022-00353
Patent 11,044,344 B2

Before THOMAS L. GIANNETTI, SHEILA F. McSHANE, and RUSSELL E. CASS, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Granting Motions to Seal
35 U.S.C. § 318(a); 37 C.F.R. § 42.14

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons discussed herein, we determine that Petitioner has shown by a preponderance of the evidence that challenged claims 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, and 41–46 (the "challenged claims") of U.S. Patent No. 11,044,344 B2 (Ex. 1002, "the '344 patent") are unpatentable.

A. Procedural Background

Code200, UAB; Teso LT, UAB; Metacluster LT, UAB; and Oxysales, UAB (collectively, "Petitioner")[1] filed a Petition requesting *inter partes* review of claims 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, and 41–46 of the '344 patent, along with the supporting Declaration of Dr. Michael J. Freedman. Paper 1 ("Pet."); Ex. 1003. Bright Data Ltd. ("Patent Owner") filed a Preliminary Response to the Petition. Paper 6. On July 1, 2022, pursuant to 35 U.S.C. § 314(a), we instituted *inter partes* review based on the following grounds:

[1] Petitioner identifies coretech lt, UAB as another real party-in-interest. Pet. 4–5.

Claims Challenged	35 U.S.C. §[2]	Reference(s)
1, 2, 6, 7, 16, 18–23	102(b)	Crowds[3]
1, 2, 6, 7, 16, 18–25, 29, 30, 39, 41–46	103(a)	Crowds
8, 9, 31, 32	103(a)	Crowds, RFC 1122[4,]
10, 11, 13, 33, 34, 36	103(a)	Crowds, RFC 2616[5]

Pet. 10–12; Paper 8 ("Inst. Dec."), 6–7.

Patent Owner filed a Patent Owner Response ("PO Resp."), along with the Declaration of Tim Williams, Ph.D. Paper 13; Ex. 2025. Petitioner filed a Reply ("Pet. Reply") to the Patent Owner Response. Paper 20. Patent Owner filed a Sur-reply ("PO Sur-reply"). Paper 23.

An oral hearing was conducted on March 14, 2023. A transcript of the hearing is included in the record. Paper 34.

B. Related Matters

The parties identify several court proceedings that involve patents related to the '344 patent. Pet. 2–3; Paper 5, 2–3. In particular, the parties identify *Luminati Networks Ltd.*[6] *v. Teso LT, UAB, et al.*, No. 2:19-cv-395

[2] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Because the '344 patent claims priority to a provisional application that was filed before this date, with Petitioner not contesting that priority, the pre-AIA versions of §§ 102 and 103 apply. *See* Ex. 1002, code (60).

[3] Michael K. Reiter, *Crowds: Anonymity for Web Transactions*, ACM Transactions on Information and System Security, Vol. 1, No. 1, November 1998, at 66–92 (Ex. 1004).

[4] Requirements for Internet Hosts – Communication Layers, Network Working Group, RFC 1122, October, 1989 (Ex. 1040).

[5] Hypertext Transfer Protocol—HTTP/1.1, Network Working Group, RFC 2616, The Internet Society, 1999 (Ex. 1006).

[6] Luminati Networks Ltd. is now Bright Data Ltd.

(E.D. Tex.) ("the *Teso* district court litigation"). The parties do not, however, identify any district court cases that involve the '344 patent. *Id.*

The parties also identify several *inter partes* reviews for patents related to the '344 patent, but similarly, none of these cases challenged claims of the '344 patent. Pet. 3–5; Paper 5, 1–2. In addition, Patent Owner identifies *ex parte* reexaminations ordered for related patents, Control No. 90/014,875 and Control No. 90/014,876, which have been stayed. Paper 5, 2; *see* IPR2021-01492, Paper 14; IPR2021-01493, Paper 13.

C. The '344 Patent

The '344 patent is titled "System Providing Faster And More Efficient Data Communication" and issued on June 22, 2021, from an application filed on October 24, 2019. Ex. 1002, codes (22), (45), (54). The patent is subject to a terminal disclaimer. *Id.* at code (*). The application for the '344 patent claims priority to several applications, including U.S. Provisional Application No. 61/249,624, filed October 8, 2009. *Id.* at code (60).

The '344 patent is directed to addressing the "need for a new method of data transfer that is fast for the consumer, cheap for the content distributor and does not require infrastructure investment for ISPs." Ex. 1002, 1:54–56. The '344 patent states that other "attempts at making the Internet faster for the consumer and cheaper for the broadcaster," such as proxy servers and peer-to-peer file sharing, have various shortcomings. *Id.* at 1:58–3:3. The '344 patent provides a system and method "for faster and more efficient data communication within a communication network," such as in the network illustrated in Figure 3, reproduced below. *Id.* at 3:13–16, 4:3–5.

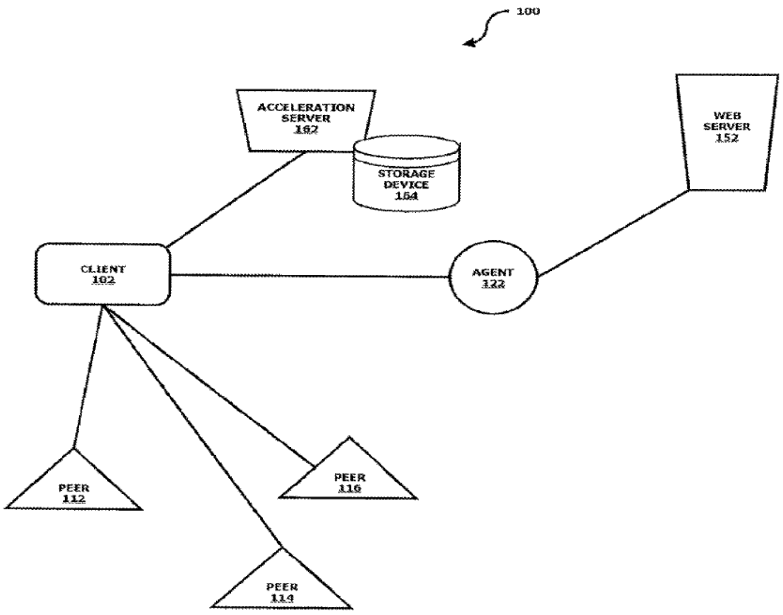


FIG. 3

Figure 3, above, is a schematic diagram depicting communication network 100 including a number of communication devices. Ex. 1002, 4:54–61. Client 102 is capable of communicating with peers 112, 114, and 116, as well as with one or more agents 122. *Id.* at 4:56–58. Web server 152 may be "a typical HTTP server, such as those being used to deliver content on any of the many such servers on the Internet." *Id.* at 4:63–67. Acceleration server 162 includes acceleration server storage device 164 with an acceleration server database, which "stores Internet Protocol (IP) addresses of communication devices within the communication network 100 having acceleration software stored therein." *Id.* at 5:11–16.

In operation, a client may request a resource on the network, for example, through the use of an Internet browser. Ex. 1002, 12:62–13:3. If server 152 is the target of the request, the client sends the IP address of server 152 to acceleration server 162. *Id.* at 13:8–13. Acceleration

server 162 then prepares a list of agents that can handle the request, which includes communication devices "that are currently online, and whose IP address is numerically close to the IP of the destination Web server 152." *Id.* at 13:19–29. The client then sends the original request to the agents in the list to find out which "is best suited to be the one agent that will assist with this request." *Id.* at 13:31–36. The connection established between the agent and client may be a Transmission Control Protocol [TCP] connection. *Id.* at 17:61–64.

Each agent responds to the client with information as to "whether the agent has seen a previous request for this resource that has been fulfilled," and "which can help the client to download the requested information from peers in the network." Ex. 1002, 13:51–58. The client selects an agent based on a number of factors, and the selected agent determines whether data stored in its memory or the memory of the peers "still mirrors the information that would have been received from the server itself for this request." *Id.* at 13:64–14:1, 14:35–38. If the selected agent does not have the necessary information to service a request, it may "load the information directly from the server in order to be able to provide an answer to the requesting client." *Id.* at 14:62–67.

The '344 patent has 46 claims. Claims 1 and 24 are the only independent claims. Claim 1 is illustrative of the claimed subject matter and is reproduced below, with bracketed designations added to the limitations for reference purposes.

> 1. [pre] A method for use with a web server that stores a first web-page identified by a first Uniform Resource Locator (URL), the method by a first client device comprising:

> [a] communicating with a second server;
>
> [b] receiving, from the second server, the first URL;
>
> [c] sending, to the web server over the Internet, the first URL;
>
> [d] receiving, the first web-page from the web server over the Internet in response to the sending of the first URL; and
>
> [e] sending the received first web-page to the second server, in response to the receiving of the first URL.

Ex. 1002, 19:16–25.

II. ANALYSIS OF PATENTABILITY OF CLAIMS 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, AND 41–46

A. The Parties' Arguments

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that at least one claim of the '344 patent is anticipated or would have been obvious. Inst. Dec. 16–25. Here, we must consider whether Petitioner has established by a preponderance of the evidence that claims 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, and 41–46 of the '344 patent are anticipated or would have been obvious. 35 U.S.C. § 316(e). We previously instructed Patent Owner that "Patent Owner is cautioned that any arguments not raised in the response may be deemed waived." Paper 9, 9; *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1379–82 (Fed. Cir. 2016) (holding patent owner waived an argument addressed in the preliminary response by not raising the same argument in the patent owner response). Additionally, the Board's Trial Practice Guide states that the Patent Owner Response "should identify all the

involved claims that are believed to be patentable and state the basis for that belief." Consolidated Trial Practice Guide (Nov. 2019)[7] ("TPG"), 66.

Patent Owner has chosen not to address certain arguments and evidence advanced by Petitioner to support its unpatentability contentions. In this regard, the record contains persuasive arguments and evidence presented by Petitioner regarding the manner in which the prior art discloses the corresponding limitations of claims 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, and 41–46 of the '344 patent and the rationale for combining the asserted references.

B. Level of Ordinary Skill in the Art

According to Petitioner, a person of ordinary skill in the art "would have had at least a bachelor's degree in Computer Science or related field (or equivalent experience), and at least two years' experience working with and programming networked computer systems" as of the date of the invention. Pet. 12–13 (citing Ex. 1003 ¶ 30).

Patent Owner proposes that person of ordinary skill in the art is someone who "had a Master's Degree or higher in the field of Electrical Engineering, Computer Engineering, or Computer Science or as of that time had a Bachelor's Degree in the same fields and two or more years of experience in Internet Communications" at the time of the invention. PO Resp. 2 (citing Ex. 2025 ¶ 28). Patent Owner asserts that its proposed definition has subtle differences with that of Petitioner, but "[t]he analysis herein is the same under either definition." *Id*. (citing Ex. 2025 ¶ 29).

[7] *Available at* https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=.

Petitioner also agrees that the slight differences in the levels of skill are not relevant to the evaluation of the merits. Pet. Reply 2.

In the Decision on Institution, we adopted the assessment of qualifications offered by Petitioner, which we also adopt here. Inst. Dec. 11. The assessment offered by Petitioner is consistent with the '344 patent and the prior art before us. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

C. Claim Construction

In this *inter partes* review, claims are construed using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2021). Under the principles set forth by the Federal Circuit, the "words of a claim 'are generally given their ordinary and customary meaning,'" as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek,*

Inc., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

1. "client device"

a. Petitioner's Assertions

Petitioner asserts that the district court's constructions in the *Teso* district court litigation should apply in this case. Pet. 14–17. In particular, Petitioner points to two claim construction orders in that case—an original order (Ex. 1011) and a supplemental order (Ex. 1014). Petitioner also relies on a claim construction order in *Bright Data Ltd. v. Code200, UAB*, Case No. 2:19-cv-00396 (E.D. Tex.) ("the Code200 Litigation"), which is directed to related patents. Pet. 2 (citing Ex. 1012). As Petitioner notes, the magistrate judge in the Code200 Litigation construed "client device" as "communication device that is operating in the role of a client." *Id.* at 14. Petitioner argues that the district court has repeatedly addressed and rejected Patent Owner's arguments on the claim construction for this term. *Id.* (citing Ex. 1011, 11–12; Ex. 1014, 7–11). Petitioner also refers to the claim construction order in *Bright Data Ltd. v. NetNut Ltd.*, No. 2:21-cv-225 (E.D. Tex.) ("the *NetNut* litigation"), in which the district court reaffirmed its analysis and rejected Patent Owner's construction of "client device" as referring to "consumer computer." Pet. Reply 9 n.2 (citing Ex. 2029), 11 n.3 (citing Ex. 2029). Petitioner refers to RFC 2616, which defines clients based on the roles being performed. *Id.* at 16 (citing Ex. 1006, 8).

In support, Petitioner points to the '344 patent Specification, which distinguishes the "client" and "agent" based on roles, and not separate hardware or operating system. Pet. 17 (citing Ex. 1003 ¶ 50). Petitioner

refers to the Specification's disclosure that a "'communication device' that 'contains three separate modules that run in parallel, namely, a client module 224, a peer module 226, and an agent module 228, each of which comes into play according to the specific role that the communication device 200 is partaking in the communication network 100 at a given time.'" *Id*. (emphasis omitted) (quoting Ex. 1002, 9:20–25).

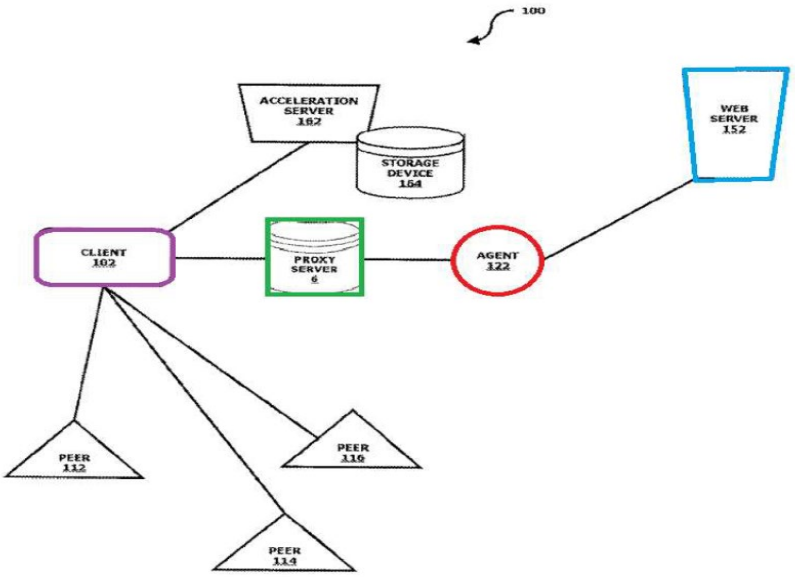
b. Patent Owner's Assertions

Patent Owner asserts that a person of ordinary skill in the art would understand the term "client device" to be a "consumer computer," or alternatively, to be a "consumer communication device." PO Resp. 11 (citing Ex. 2025 ¶¶ 64, 70). Patent Owner argues that these constructions are consistent with the claim language, the Specification, and the prosecution histories. *Id*. Patent Owner contends that a person of ordinary skill in the art would understand a client device is a communication device because the Specification states that "each communication device may serve as a client, peer, or agent" which "informs" a person of skill "that client 102, peers 112, 114, 116, and agent 122 are all 'client devices' in the context of the [S]pecification." *Id*. at 11–12 (citing Ex. 2025 ¶ 71; Ex. 1002, 4:44–50, 5:21–29).

Patent Owner alleges that the Specification discloses how a communication device can be configured to be a client, agent, or peer by its disclosure of "a requesting client device ↔ proxy server ↔ proxy client device ↔web server architecture." PO Resp. 12 (citing Ex. 1002, 4:44–50, 5:21–29, 9:12–50; Ex. 2025 ¶ 73) (coloring omitted). Patent Owner alleges that the Specification explains that when executing the fetching method, "the

requesting client device may be executing the client module 224 disclosed in FIG. 6, while the proxy client device may be executing the agent module 228 disclosed in FIG. 6." *Id.* Based upon this, Patent Owner contends that a person of ordinary skill in the art "would understand in the context of the [S]pecification, a client device is a consumer computer with specific software to operate in accordance with the claims." *Id.* at 12–13.

Referring to Figure 6 of the Specification, Patent Owner asserts that a person of ordinary skill in the art would understand that "one 'client device' may be configured to be the requesting client device and another 'client device' may be configured to be the proxy client device." *Id.* at 13 (citing Ex. 2025 ¶ 74). In support, Patent Owner also refers to a modified, annotated version Figure 3, reproduced below, alleging that agent 122 is disclosed as a client device "that is selected, for example, because agent 122 is closest to the web server 152." *Id.* at 9, 13 (citing Ex. 1002, 5:27, 5:30–34; Ex. 2025 ¶¶ 64, 75–76). In this modified version of Figure 3, Patent Owner inserts "Proxy Server 6" (outlined in green) between client 102 (outlined in purple) and agent 122 (outlined in red).



Patent Owner alleges that a person of ordinary skill would understand that the proxy server, as shown in modified Figure 3 above, "could be inserted between client 102 and agent 122," and that an architecture showing requesting client device (purple) ↔ second server (green) ↔ first client device (red) ↔ web server (blue) would correspond to the architecture client 102 ↔ second server 6 ↔ agent 122 ↔ web server 152, shown in Patent Owner's modified annotated Figure 3. PO Resp. 7–8.

Patent Owner further asserts that in light of the Specification, "a client device would be understood to be, more specifically, a consumer computer like a laptop, desktop, tablet, or smartphone." PO Resp. 13–14 (citing Ex. 2025 ¶ 77 (citing Ex. 1002, 2:44–46 ("In the network 50, files are stored on computers of consumers, referred to herein as client devices." (emphasis omitted)))).

Patent Owner acknowledges that the district court rejected Patent Owner's construction equating "client device" with "consumer computer."

PO Resp. 14. Patent Owner argues that the district court's rejection of its proposed construction of a "client device" as "consumer computer" is wrong for three reasons. *Id.* at 14–16. First, Patent Owner asserts that, although the district court found that there was no express lexicography in the Specification, the Specification states that "computers of consumers" are "referred to herein as client devices." *Id.* at 14 (citing Ex. 2025 ¶ 77; Ex. 1002, 2:44–46). Patent Owner further asserts that a person of ordinary skill in the art would have understood that a consumer device is distinguished from a commercial device, and that a consumer device is not a dedicated proxy server. *Id.* (citing Ex. 2025 ¶ 77). Second, Patent Owner disagrees with the district court's finding that in the Specification the term "consumer" refers to the consumer of content, as opposed to a broadcaster of content. *Id.* at 15 (citing Ex. 1011, 11). Rather, Patent Owner argues, the common understanding of "consumer" as "a person who buys goods or services for their own use" is not a deviation from the use of the term in the Specification, and personal use is often distinguished from commercial use. *Id.* (citing Ex. 2030; Ex. 2031, 5; Ex. 2032, 4; Ex. 2033; Ex. 2034, 4; Ex. 2025 ¶ 78; 15 U.S.C. § 6809(9); 12 C.F.R. § 332). Third, Patent Owner disagrees with the district court's finding that the term "consumer" does not appear to be used in connection with the claimed invention, contending that the Specification refers to "computers of consumers," and there were statements made during the prosecution of a grandparent application to the

'344 patent that refer to this issue. *Id*. at 15–16 (citing Ex. 2025 ¶ 70; Ex. 1002, 2:44–46; Ex. 1019, 84).

Patent Owner contends that in the '344 patent, "a client device is not a server." PO Resp. 16. Patent Owner disagrees with the district court's view that there was insufficient support for including a negative limitation in the construction that a client device is unable to act as a server in all cases. *Id*. (citing Ex. 1011, 12). According to Patent Owner, a person of ordinary skill in the art would have understood that a client device is not a server in the context of the patent, and the MPEP does not require that a negative limitation be recited verbatim in the Specification. *Id*. (citing *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993)). Patent Owner argues that the Specification describes the shortcomings of using a proxy server as an intermediary, and therefore provides a reason to exclude a client device encompassing a proxy server. *Id*. at 16–17 (citing Ex. 1002, 2:24–32; Ex. 1011, 12; Ex. 2044 ¶ 84; *Santarus, Inc. v. Par Pharm., Inc*., 694 F.3d 1344, 1351 (Fed. Cir. 2012)).

Patent Owner contends that, in view of the recited architecture of the '344 patent claims that distinguishes between client devices and servers, the use of three interchangeable devices in a pathway would not disclose that architecture. PO Resp. 17 (citing Ex. 2025 ¶ 79). Patent Owner also argues that the recited architecture in the '344 patent claims, that is, a second server ↔ first client device ↔ web server architecture, also distinguishes the use of a client device, rather than a proxy server, as an intermediary, and that this distinction is consistent with an *Alice*[8] order in the *Teso* district court

[8] *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

litigation. *Id*. at 17–18 (citing Ex. 2025 ¶ 80; Ex. 2021, 8–9); PO Sur-reply 2. Patent Owner further contends that the district court "repeatedly acknowledged that a client device is not merely a general-purpose computer." *Id*. at 17 (citing Ex. 2029, 14–15).

Patent Owner argues that a person of ordinary skill in the art would have understood "that a client device is typically portable and easily moved, like, for example, a laptop, desktop, tablet or smartphone." PO Resp. 18 (citing Ex. 2025 ¶ 81). Patent Owner contends that a person of ordinary skill in the art would be informed by statements made during prosecution that a client device is not a dedicated network device, which typically uses a single or relatively few connections, and is resource limited (e.g., bandwidth and storage), unlike a server. *Id*. Patent Owner also argues that a person of skill would have understood that a client device typically is understood "(a) to be regularly switched off and taken offline; (b) to be capable of processing only a limited number of requests at any given time . . . and/or (c) to have lesser fault tolerance, lesser reliability, and lesser scalability, prioritizing value to client device users over system costs." *Id*. at 18–19 (citing Ex. 2025 ¶¶ 81– 82). Patent Owner asserts that a person of ordinary skill's understanding of "client" would have been consistent with its plain and ordinary meaning, which is "an application that runs on a personal computer or workstation and relies on a server to perform some operations." *Id*. at 19 (citing Ex. 2025 ¶ 83; Ex. 2035; Ex. 2036, 5; Ex. 2037, 7). Patent Owner contends that a person of ordinary skill would have understood that there are

structural differences between client devices and servers. *Id*. (citing Ex. 2025 ¶ 85).

Patent Owner also contends that, upon reviewing Figures 1 and 3 of the Specification, a person of ordinary skill in the art would have understood that proxy server 6 must be structurally different from agent 122 and that "a server is not a client device and that a client device is not a server." PO Resp. 20 (citing Ex. 2025 ¶ 86). Patent Owner argues that "Petitioners' expert appears to agree that proxy server 6 of Figure 1 and agent 122 of Figure 3 would be operating in the same roles at a given point in time," so under the Board's preliminary constructions "Figure 3 collapses onto Figure 1" and fails to account for structural differences between a proxy server and a client device. *Id*. Patent Owner points to Dr. Freedman's testimony in the *Teso* district court litigation agreeing that in Figure 1, client devices 14 and 16 are operating in the role of a client and web server 32 is operating in the role of a server. *Id*. at 21–24 (citing Ex. 2025 ¶¶ 87–95; Ex. 2047, 282:1–285:6; 286:1–6). Patent Owner contends that for Figure 1 under the Board's preliminary role-based constructions, "proxy server 6 would be [] operating in the role of a client when receiving responses from web server 32 and [] operating in the role of a server when sending the received responses on to client devices 14,16," with Petitioner's expert's agreement. *Id*. at 24–25 (citing Ex. 2025 ¶ 96; Ex. 2026, 30:15–25; 31:14–21). Patent Owner asserts that for Figure 3 under the Board's preliminary role-based constructions, "client 102 is operating in the role of a client and web server 152 is operating in the role of a server" and "agent 122 would be [] operating in the role of a client when receiving responses from web server

152 and [] operating in the role of a server when sending the received responses on to client device 102," with Petitioner's expert agreeing. *Id.* at 25–26 (citing Ex. 2025 ¶¶ 97–99). Patent Owner argues that the experts agree that proxy server 6 of Figure 1 and agent 122 of Figure 3 operate in the same roles at a given point in time and there is nothing to distinguish the architectures of Figures 1 and 3. *Id.* at 27 (citing Ex. 2025 ¶ 103). Patent Owner asserts that Figures 1 and 3 inform a person of ordinary skill in the art "that a server is not a client device and that a client device is not a server," so "role-based constructions are not appropriate because they fail to account for these structural differences between proxy servers and client devices." *Id.* (citing Ex. 2025 ¶ 104).

Patent Owner additionally refers to the prosecution history of U.S. Patent No. 10,069,936 ("the '936 patent"), the great grandparent of the '344 patent. PO Resp. 28–31. Patent Owner argues that this prosecution history "clearly distinguishes client devices from servers." *Id.* at 29 (citing Ex. 2025 ¶ 106). Patent Owner asserts that during prosecution, the applicant amended the claims to "specify that the 'devices' being used as intermediaries are 'clients' in contrast to the teachings of Garcia," which was a reference used by the examiner to reject the then-pending claims. *Id.* (citing Ex. 1019, 125). Patent Owner points to the applicant's statement that "the 'device' was equated in the Garcia reference to the cache server 306, which is clearly a dedicated device and performs a server functionality," and further that "[t]he Garcia reference is silent, and actually teaches away from identifying and using another client device for supporting a content request by a specific client." *Id.* (citing Ex. 1019, 125 (emphasis omitted)). Additionally, Patent

Owner refers to the examiner's statement that "Garcia fails to teach a group of clients for data communication between the web server and a requesting client via one or more clients selected from the group and [] the selected client receiving the content from the web server and [] the requesting client receiving the content from the selected client," contending that "the examiner recognized a server cannot be equated to a client device regardless of the role being performed at a given moment in time." *Id*. at 30 (citing Ex. 1019, 95; Ex. 2025 ¶ 108). Patent Owner also refers to the applicant's statement that "[c]lient devices, such as client 105 in the Garcia reference, are end-units that request information from servers, use client-related software . . . and are typically consumer owned and operated." *Id*. at 30 (citing Ex. 1019, 84 (emphasis omitted)). Patent Owner further asserts that "the examiner acknowledged that 'the limitations of the independent claims, within its environment, is allowable subject matter over the prior art, in light of the specification.'" *Id*. at 31 (citing Ex. 1019, 17 (emphasis omitted)). Patent Owner contends that "this shows that the examiner appreciated the unique architecture disclosed in the common specification and the novel use of a proxy client device within that architecture." *Id*. (citing Ex. 2025 ¶ 111).

Patent Owner also refers to the prosecution history of U.S. Patent No. 10,257,319 ("the '319 patent"), which is the grandparent of the '344 patent, asserting that it shows that servers and client devices are not interchangeable general use computers. PO Resp. 32 (citing Ex. 2025 ¶ 113). In that prosecution, the applicant contended that "the claims involve specific networking of physical elements such as servers and clients,

connected via various networks forming a specific structure and relationships, which are physical apparatuses, and are NO[T] a 'generic computer' as stated in the Action." *Id*. (citing Ex. 1018, 163). Patent Owner further cites the applicant's statement that "the conventional arrangement involves fetching data by a client device from a server device, while the claims disclose a server receiving information from another server via a client device." *Id*. (citing Ex. 1018, 16–17). Patent Owner also refers to the prosecution histories of U.S. Patent No. 10,491,712 ("the '712 patent") and the '344 patent, arguing that the examiner acknowledged the "environment" of the claimed method, which "shows that the examiner appreciated the unique architecture disclosed . . . and the novel use of a proxy client device within that architecture." *Id*. at 33–34 (citing Ex. 1005, 11; Ex. 1041, 8–9; Ex. 2025 ¶¶ 116–117). Patent Owner also asserts that the examiner reviewed and initialed Crowds, RFC 1122, and RFC 2616 during the prosecution of the '344 patent. *Id*. at 34 (citing Ex. 2009, 6, 14, 18–19).

c. Analysis

For the reasons discussed below, we determine that the evidence of record supports the district court's construction of the term "client device" as a "communication device that is operating in the role of a client" that we adopted in out Institution Decision and we find applies here in view of the full record. Conversely, we find that the evidence does not support Patent Owner's view that a "client device" is a "consumer computer," or alternatively, a "consumer communication device," where the "client device" cannot be a server. *See* PO Resp. 10–34.

i. Claim Language

Under *Phillips*, we begin with the language of the claims themselves. *See Phillips*, 415 F.3d at 1314. In claim 1, the steps of the claims are performed by a "first client device." In step 1[c], the first web server "send[s], to the web server over the Internet, the first URL" and in step 1[d], the first client device, "receive[s], the first web-page from the web server over the Internet," which serves to receive content from the Internet. *See* Ex. 1002, 19:21–23. In steps 1[c] and [d], the first client device is acting as a client in requesting and receiving content. In step 1[e], the first client device "send[s] the received first web-page to the second server." *See id.* at 19:24–35. In step 1[e], the first client device is acting as a server to forward content. *See* Ex. 1050, 28:8–11.

The parties address the issue that the "first client device" acts in differing roles in claim 1. Petitioner asserts that the claim's required functionality is consistent with the district court's determinations on the role-based nature of the term. Pet. 14–16 (citing Ex. 1011, 11–12; Ex. 1014, 7–11); Pet. Reply 2–3. Patent Owner agrees that if the role-based construction were adopted, in its modified Figure 3, "agent 122 would be (i) operating in the role of a server when receiving requests from client device 102 and (ii) operating in the role of a client when sending requests to web server 1522," with Petitioner's expert agreeing to the same. PO Resp. 26 (citing Ex. 2025 ¶ 101).

Petitioner refers to Patent Owner's assertions in the *Teso* district court litigation, where Patent Owner identified client 102 with the "second server" and agent 122 to the "first client device" as shown in annotated Figure 3,

reproduced below, for claim 1 of '510 patent, which has substantially the same Specification as the '342 patent. Pet. Reply 14–15 (citing Ex. 1009, 20).

Independent claim 1 of the '510 Patent also recites a method that employs the same specific, concrete server-client device-web server architecture illustrated above with steps performed by the client device: A method for use with a **web server** that responds to Hypertext Transfer Protocol (HTTP) requests and stores a first content identified by a first content identifier, the method **by a first client device** comprising:

establishing a Transmission Control Protocol (TCP) connection with a **second server**;

sending, to the **web server** over an Internet, the first content identifier;

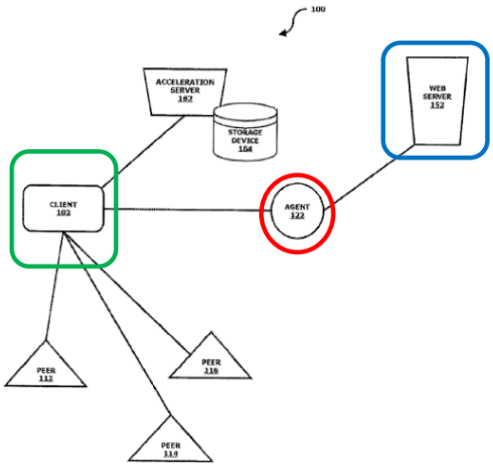


FIG. 3

receiving, the first content from the **web server** over the Internet in response to the sending of the first content identifier; and

sending the received first content, to the **second server** over the established TCP connection, in response to the receiving of the first content identifier.

As shown in annotated Figure 3 above, Patent Owner equated client 102 (green) to the "second server" and agent 122 (red) to the "first client device" in accordance with the roles required in the claim elements.[9]

[9] We recognize that Patent Owner modified its position in its Response to assert that both client 102 and agent 122 are both client devices. PO Resp. 7–8, 12–13 (citing Ex. 2025 ¶¶ 64, 73–76). We address the issue of two devices acting as client devices below in the discussion on modified Figure 3 in the discussion of Dr. Williams's testimony.

That is, Patent Owner asserts that the "first client device" (shown in red) is equivalent to agent 122, which sends the first content identifier to the web server, receives content requested from the web server, and sends that content to client 102 (the second server). Thus, under this presentation, the "first client device" (agent 122) is acting as a client when it sends the first content identifier to the web server and receives content in response, and is acting as a server when it sends content to client 102. This assertion by Patent Owner reflects a role-based interpretation of the claim terms; different terms are defined by their function.

The district court found that the interpretation of the term "client device" should be consistent with its role and claimed functionality, and we agree. More particularly, the district court indicated that the function of a component serves to define the term. Ex. 1014, 7–11. For instance, for related patents that share substantially identical specifications to that of the '344 patent, the district court found that under the steps of a claim, the "client device" operates as an intermediary to perform steps including "send[ing], to [a] web server over an Internet, the first content identifier" to request content and also to "send[] the received first content." Ex. 1011, 3–4. Consistent with the claim language, the district court recognized that "a component can be configured to operate in different roles—so long as it does not 'simultaneously serve as more than one of: the client device, the first server/second server, and the web server.'" Ex. 1014, 10 (emphasis omitted). That is, although the district court determined that a single component could not simultaneously serve more than one function at any particular time, components could operate in different roles, such as the

claimed "client device." *Id*. We agree with the district court's construction of "client device" as a "communication device that is operating in the role of a client" because this interpretation is consistent with the limitations of the claims. *See* Ex. 1011, 12.

We note that Patent Owner's argument that a client device is not a server (PO Resp. 16) is not supported by the claim language, which describes a "client device" that acts as a client to request content from the web server, as well as a server to forward content under the method claims. We discuss this issue further below in more detail.

ii. Specification

The district court's interpretation of the term "client device," adopted here, is also consistent with the '344 patent Specification. The '344 patent Specification, when describing the "multiple communication devices" depicted in Figure 3, states that the same components may assume different roles:

> *Due to the functionality provided by software stored within each communication device*, which may be the same in each communication device, *each communication device may serve as a client, peer, or agent*, depending upon requirements of the network.

Ex. 1002, 4:46–50 (emphases added). Accordingly, the Specification states that the components identified in Figure 3 may perform different functions based on their stored software. *Id*. More specifically, the Specification explains that "each of [the software modules] comes into play *according to the specific role that the communication device 200 is partaking* in the communication network 100 *at a given time*." Ex. 1002, 9:20–25 (emphasis added). The Specification thus supports the role-based function of the

network components, with components operating in different roles at different times, which is consistent with the claim language.

In opposition, Patent Owner argues that a person of ordinary skill in the art, when considering Figure 6 and associated text, would understand that "one 'client device' may be configured to be the *requesting client device* and another 'client device' may be configured to be the *proxy client device*." PO Resp. 13 (citing Ex. 2025 ¶ 74) (emphases added). In further support, Patent Owner refers to its modified annotated Figure 3, reproduced *supra* Section II.C.1.b, and asserts that a person of ordinary skill in the art would understand that client 102 (in purple) corresponds to the requesting client device client and agent 122 (in red) corresponds to the proxy client device. *Id*. (citing Ex. 2025 ¶¶ 75–76). Patent Owner contends that "[a]gent 122 is disclosed as a 'client device' (as opposed to a server) that is selected, for example, because agent 122 is closest to the web server 152." *Id*. (citing Ex. 2044 ¶ 76 (citing Ex. 1002, 5:27, 5:30–34)).

We do not find that the evidence of record supports Patent Owner's assertions on this issue. Dr. Williams's testimony, and Patent Owner's arguments, are based upon a modified version of Figure 3, in which Patent Owner has inserted "proxy server 6" between "client device" and "agent." This configuration is not shown in any figure in the '344 patent or disclosed in the Specification. *See* Ex. 1050, 45:4–8. Dr. Williams testifies that a person of ordinary skill in the art "would understand that proxy server 6 of Figure 1 *could be* inserted between client 102 and agent 122 of Figure 3." Ex. 2025 ¶ 64 (emphasis added). Dr. Williams combines the "proxy server 6" of the prior art shown in Figure 1 and the invention of Figure 3.

Ex. 1002, 2:8–18, 2:24–32, 4:41–45. But Dr. Williams provides no explanation or a rationale to combine the prior art with an embodiment of the invention.[10] Further, Dr. Williams testifies that different "client devices," i.e., a "requesting client device" and a "proxy client device," are disclosed, but we do not find that these characterizations are disclosed in the Specification. In view of the lack of record support, we afford little weight to Dr. Williams's testimony on this issue.

Thus, in view of the '344 patent Specification's disclosures, we do not agree that it discloses the architecture of a requesting client device ↔ proxy server ↔ proxy client device ↔ web server in the first place, as Patent Owner asserts. *See* PO Resp. 12 (citing Ex. 1002, 4:44–50, 5:21–29, 9:12–50). Moreover, we do not agree that Patent Owner's argument based upon "architecture" should govern the construction of "client device" in light of the claim language and the Specification's disclosures demonstrating that communications devices may serve in different roles due to the functionality provided by software stored within each communication device, which come into play depending on the specific role that the communication device takes at a given time. *See* Ex. 1002, 4:46–53, 9:20–26. The district court agreed, finding that "a component can be configured to operate in different roles—so long as it does not 'simultaneously serve as more than one of: the client

[10] Dr. Williams testifies that Petitioner's expert agreed that using a proxy server between a requesting client device and a web server would be well known to a person of ordinary skill in the art. Ex. 1025, 33, n.1 (citing Ex. 2026, 93:15–24). Even if true that a person of ordinary art knew that the modification could be done, the modified Figure 3 is not disclosed in the '344 patent and Patent Owner does not explain why the modified version of the Figure should direct claim construction.

device, the first server/second server, and the web server.'" Ex. 1014, 10 (emphasis omitted).

Patent Owner also argues that the district court's findings in the *Alice* order in the *Teso* district court litigation (Ex. 2021) are consistent with its understanding of the architecture required by the claims of the '344 patent and its "novel" use of a client device as an intermediary. PO Resp. 17 (citing Ex. 2025 ¶ 80; Ex. 2021, 8–9). We do not find that the district court's *Alice* order alters or modifies the claim construction the court adopted there, and that we adopted here. The *Alice* order addressed patent eligibility, not claim construction. *See* Ex. 2021. Moreover, the district court's *Alice* order acknowledged the court's prior claim construction, that is, the construction of the term "client device" as "communication device that is operating in the role of a client," and did not modify that construction. *Id*. at 5. Further, after the *Alice* order issued, in February, 2021, the district court consistently maintained its claim constructions (Ex. 2029, 16).

Patent Owner argues that in the '344 patent, "a client device is not a server." PO Resp. 16. We do not agree. As discussed above, we discern no limitation in the intrinsic record that a client device could not operate as a server. To the contrary, as also discussed above, the claim language provides that the first client device acts as a client in steps 1[c] and [d] in requesting and receiving content, and acts as a server in step 1[e] in sending content to the second server. *See* Ex. 1002, 19:21–25. Patent Owner has agreed that under the claim language, a device can have different functionality, as discussed above. This is also consistent with the district court's view that Patent Owner's argument "that a client device is

specifically not a server—is not supported by the specification." Ex. 1011, 10. The district court refers to the Specification's disclosure that a "communication device" may act as a client, peer, or agent. *Id*. at 12 (citing related '319 patent, 4:48–49). The district court also found, and we agree, that although the patent does not list "servers" as "communication devices," "that is not sufficient to construe 'client device' as unable to act as a server in all cases," in view of the case law that negative claim limitations are "supported when the specification describes a reason to exclude the relevant limitation." *Id*. (citing *Santarus*, 694 F.3d at 1351).

Here, Patent Owner further argues that a person of ordinary skill would understand that a client device is not a server—there are descriptions of communications devices having client, peer, and agent modules, but no server module and the MPEP "does not require that the negative limitation be recited verbatim in the specification." PO Resp. 16 (citing Ex. 2025 ¶ 74). We believe Patent Owner's reference is intended to refer to MPEP § 2173.05(i). This MPEP Section states that any negative limitation "must have basis in the original disclosure," and "[t]he mere absence of a positive recitation is not basis for an exclusion." MPEP § 2173.05(i). Patent Owner does not identify any disclosure in the Specification that states that a client device cannot be a server. Moreover, we note that under Patent Owner's analysis in the *Teso* district court litigation, the claimed "first client device," which may act as a server in claim 1, is identified as "Agent 122" of Figure 3. Ex. 1009, 15. As discussed, the Specification provides support that an

agent can act in different roles with software modules allowing different functions. Ex. 1002, 4:46–50.

Patent Owner also asserts that under a "role-based" construction, "Figure 3 collapses onto Figure 1." PO Resp. 20. According to Patent Owner, such constructions "do not account for structural differences between a proxy server (in Figure 1) and a proxy client device (in Figure 3)." *Id*. In comparing Figures 1 and 3, Patent Owner recasts the alleged invention as being directed to the avoidance of "a proxy client device encompassing a proxy server," and ties that alleged objective (which is contrary to the description of these devices in the Specification) to the construction of the term "client device." *Id*. at 16–17 (citing Ex. 1002, 2:24–32; Ex. 2044 ¶ 84). We do not agree with this argument as it is based solely on the alleged structure of proxy server as the point of the differentiation of the invention from the prior art. But the Specification makes it clear that these devices are capable of assuming different roles, and thus points to other alleged improvements, such as the agent performing different functions, and the use of an acceleration server, that serve to differentiate the disclosed invention from the prior art. Ex. 1002, code (57), Fig. 10. Here, the language that the applicant ultimately chose for claim 1 does not recite those improvements actually described in the Specification. Instead, Patent Owner more broadly claims the use of a "first client device" that functions as a proxy, that is, it acts as a client and as a server at different times, as discussed above. In sum, we find no support for a "proxy client device" in modified Figure 3, that Patent Owner presents as the claimed improvement over a "proxy server," for the reasons discussed above, that is, there is no

support for a "proxy client device" or for modified Figure 3 in the Specification or the claims.

Similarly, Patent Owner argues that proxy server 6 of Figure 1 must be structurally different from agent 122 of Figure 3. PO Resp. 19. Patent Owner asserts that Petitioner's expert agrees that these devices would be operating in the same roles at a given point in time. *Id*. at 20. Patent Owner asserts that a server is not a client device and the structural differences should be accounted for in claim construction in order preserve claim validity. *Id*. (citing *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1367 (Fed. Cir. 2002)). We do not agree with this assertion. The Federal Circuit has held that claims should be construed to preserve validity only when "the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous." *Phillips*, 415 F.3d at 1327. And a claim construction cannot be adopted "that is at odds with the clear language of the claim and the written description." *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999). We do not find that this is a circumstance where the claim term interpretation is ambiguous in view of the evidence of record based on the claim language and the written description, as discussed above. Thus, we do not adopt an alternative construction only to preserve the validity of claim 1.

Accordingly, we agree with the district court's finding that "the client device is defined by the role of the communication device as a client rather than by the components of the device and regardless of any additional role the device may serve, including as a server." Ex. 1012, 13. Petitioner also points to buttressing evidence in RPC 2616, which defines the terms "client"

and "server" based on roles, where "[a]ny given program may be capable of being both a client and a server; our use of these terms refers only to the role being performed by the program for a particular connection." Pet. 16 (citing Ex. 1006, 8 (emphases omitted)). Thus, we determine that the weight of the evidence supports the conclusion that a "client device" as recited in the claims of the '344 patent may act as a server as well as a client.

Patent Owner also contends that under Petitioner's assertions "any device that operates in the role of a client is a 'client device' and any device that operates in the role of a server is a 'server.'" PO Sur-reply 1 (emphases omitted). Patent Owner asserts that "[u]nder Petitioners' constructions, an intermediary device would be both a 'client device' and a 'server' albeit at different points in time." *Id.* Patent Owner argues that the proposed constructions improperly focus on a role being performed *at a given point in time*. PO Resp. 11. We disagree with Patent Owner's assertions that the under the proper construction the device has to act exclusively in only one role with one function at all times. As discussed, the claim language and Specification support that specific devices may operate to perform different functions and roles. In fact, to require that a device operate exclusively only in a single role and not be able to operate in different roles at different time is inconsistent with the language of claim 1, where the first client device has to act as a client and as a server at different times. Nevertheless, the device must be capable of performing the roles required by the claim limitations. The district court considered the issue of whether one component could *simultaneously* serve as more than one of: the client device, the first server/second server, and the web server. Ex. 1012, 14. The district found

that it could not do so because the components were separately recited, which indicated a distinction between the components. *Id.* at 14–15. The district court further characterized Patent Owner's argument as asserting that Petitioner was seeking "to treat client devices and servers interchangeably" as "general user computers," but the court explained that this was "an oversimplification of the issue" because Petitioner was not seeking to "reduc[e] the recited server ↔ client device ↔ web server architecture . . . and the recited client device ↔ server ↔ web server architecture . . . *as an indistinguishable computer ↔ computer ↔ computer architecture*." Ex. 1014, 10 (emphasis added). Rather, the district court determined, and we agree, that "a component can be configured to operate in different roles—so long as it does not 'simultaneously serve as more than one of: the client device, the first server/second server, and the web server.'" *Id.* (emphasis omitted).

Patent Owner additionally argues that a "client device" is a "consumer computer" because the Specification states that "computers of consumers" are "referred to herein as client devices." PO Resp. 14 (citing Ex. 2025 ¶ 77; Ex. 1002, 2:44–46). Our view is that the Patent Owner takes the Specification's disclosure out of context. The "computers of consumers" discussed are computers used in the prior art peer-to-peer filing sharing system known as BitTorrent. Ex. 1002, 2:40–52. The Specification identifies "client devices 60," but this designation is used only in the prior art peer-to-peer filing sharing system, which is distinguished from the invention. *See id.* at 2:40–3:9, 4:1–2, Fig. 2. The district court agreed, finding that "[n]otably, 'consumer' does not appear in connection with the

description of the claimed inventions." Ex. 1011, 11 (emphasis omitted). We also agree with the district court's finding that the Specification discloses that "'consumer' simply means a consumer of content, as opposed to a broadcaster of that content," which is contrary to Patent Owner's argument that the client device should be a consumer device for personal use. Ex. 1011, 11; *see also* Ex. 1002, 1:54–59; PO Resp. 14.

Patent Owner additionally asserts that a person of ordinary skill would have understood that a client device is portable and would be regularly switched off and taken offline, would be capable of processing only a limited number of requests at any given time, and would have lesser fault tolerance. PO Resp. 18–19. Patent Owner contends that a person of ordinary skill in the art would have understood that a consumer device is distinguished from a commercial device and that a consumer device is not a dedicated proxy server. *Id.* at 14 (citing Ex. 2025 ¶ 77). Dr. Williams testifies that his understanding is based on the Specification, statements made during prosecution, and by comparison with a server. Ex. 2025 ¶¶ 77, 81–82. We discuss the prosecution history below, but notably, Dr. Williams does not identify any portions of the Specification that support the alleged structure and nature of the client device, except for the discussion related to prior art BitTorrent peer-to-peer system, which we do not find applicable for the reasons discussed above. *Id.*

Accordingly, we find that the '344 patent Specification's disclosures support the interpretation of the term "client device" as a "communication device that is operating in the role of a client."

iii. Prosecution History

Patent Owner argues that the prosecution history of the '344 patent, its parent (the '712 patent), its grandparent (the '319 patent), and its great grandparent (U.S. Patent No. 10,069,936 ("the '936 patent")) support the conclusion that the claimed "client device" should be distinguished from a server. PO Resp. 28–34.

Patent Owner points to statements in the prosecution history of the great grandparent '936 patent concerning the Garcia prior art reference that was used as the basis of an examiner rejection. PO Resp. 29–31 (citing Ex. 1019, 17, 84, 93, 125, 136; Ex. 2025 ¶¶ 106, 108, 111–112). More specifically, Patent Owner asserts that the applicant argued that "the 'device' was equated in the Garcia reference to the cache server 306, which is clearly a dedicated device and performs a server functionality . . . and actually teaches away from identifying and using another client device for supporting a content request by a specific client." *Id.* at 29 (citing Ex. 1019, 125 (emphasis omitted)). Patent Owner refers to an examiner's response stating that Garcia "fails to teach a group of clients for data communication between the web server and a requesting client via . . . clients selected from the group and [] the selected client receiving the content from the web server and [] the requesting client receiving content from the selected client." *Id.* at 30 (citing Ex. 1019, 95). Patent Owner contends that this statement shows that "the examiner recognized a server cannot be equated to a client device." *Id.* (citing Ex. 2025 ¶ 108). Patent Owner also refers to statements made by the applicant distinguishing Garcia, including that in the reference client devices "are typically consumer owned and operated." *Id.* at 30 (citing Ex. 1019,

84–85) (emphasis omitted). Patent Owner asserts that in the Notice of Allowance, the examiner stated that "the limitations of the independent claims, **within its environment**, is allowable subject matter over the prior art." *Id*. at 31 (citing Ex. 1019, 17).

The claims that were under consideration in the '936 patent prosecution were different than the claims at issue here. A "client device" is not recited in the claims that were under examination; rather, the claims recited either a "device," "client communication device," and "client(s)." *See* Ex. 1019, 22–26; 115–119, 194–199, 246–256. Similarly, the issued claims in the '936 patent recite "requesting client" and a separate "client," and the issued claims have multiple steps that differ from those of the '344 patent. *See*, *e.g.*, Ex. 1024, 19:16–52. Given these differences, we discount the significance of statements made during the patentability assessment of the '936 patent prosecution to the assessment of claim construction for the '344 patent.[11] Further, considering the varying terms used, we do not find that the applicant's statements during prosecution on patentability regarding a recited "device" or "client" are sufficient to act as a disclaimer of the scope of the "client device" term used in the claims here. *See* Ex. 1072, 349, 624–625; *In re Am. Acad. Of Sci. Tech Ctr.*, 367 F.3d 1359, 1365 (Fed. Cir. 2004); *Epistar Corp. v. ITC*, 566 F.3d 1321, 1335 (Fed. Cir. 2009) (disavowal of claim scope by a patentee requires "expressions of manifest exclusion or restriction."). Also, the examiner's

[11] We note that although the examiner found that Garcia alone did not teach some steps of the claim, the examiner nonetheless found that Garcia alone taught a "client" for many of the limitations. Ex. 1019, 64, 94–95.

statements do not reflect an understanding of any disavowal of the scope of any claim terms. *See* Ex. 1019, 17.

Additionally, as discussed above, the '344 patent's claim language and Specification clearly support a role-based interpretation of the term "client device." In contrast, the '936 patent prosecution is for a great grandparent of the '344 patent and also involved evolving claim term amendments. S*ee Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1375 (Fed. Cir. 2010) ("[P]rosecution history comments cannot trump the plain language of the claims and the direct teaching of the specification."). For this reason, we find the '936 patent prosecution history to be less pertinent to the construction of the '344 patent claims than the claim language and Specification of the '344 patent itself. As the Federal Circuit has explained, the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes. *See Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380–82 (Fed. Cir. 2002) (the ambiguity of the prosecution history made it less relevant to claim construction); *Phillips*, 415 F.3d at 1317. This is particularly true here, where the prosecution history at issue involves a great grandparent application with different claims having different claim language from the patent and claims under review.

Patent Owner also presents arguments based on the prosecution history of the '319 patent, which is a grandparent to the '344 patent. PO Resp. 32–33. Patent Owner refers to applicant's argument that "the claims

involve specific networking of physical elements such as servers and clients, connected via various networks forming a specific structure and relationships, which are physical apparatuses, and are NO[T] a 'generic computer' as stated in the Action." *Id*. at 32 (citing Ex. 1018, 16). Patent Owner also cites the applicant's assertion that "the Examiner does not sufficiently establish that the 'ordered combination' of the recited elements also fails to 'transform the nature of the claim' into a patent-eligible application." *Id*. (citing Ex. 1018, 16). Patent Owner further cites the examiner's statement in the Notice of Allowance that "the limitations of the independent claims, within its environment, is allowable subject matter over the prior art, in light of the specification." *Id*. at 33 (citing Ex. 1018, 9).

Patent Owner's arguments based on the '319 patent prosecution concern patent eligibility, not claim construction. Based on our review of this prosecution history, we find that the applicant's statement addressed specific issues relating to patent eligibility, such as whether the claim recited the use of generic computers and functions for purpose of eligibility under 35 U.S.C. § 101, and that the applicant made no statement that indicated disclaimer of the scope of the claim term "client device." *See* Ex. 1018, 14–18.

Patent Owner additionally refers to the prosecution history of the parent '712 patent and '344 patent and the examiner's statement that the "environment" of the claimed methods supported patentability. PO Resp. 33–34. We do not discern that there is any disavowal of claim scope by the applicant in the prosecution of the '344 patent or the parent '712 patent, nor does the examiner indicate an understanding of any disclaimer.

iv. Conclusion

Based on evidence of record, we maintain our construction of the term "client device" as a "communication device that is operating in the role of a client."

2. "second server"

The district court construed the term "second server" as a "server that is not the client device," and the defendant in the litigation requested clarification that the term is "a device that is operating in the role of a server and that is not the first client device." Ex. 1011, 14; Ex. 1014, 8. The district court determined that "the clarifications Defendants seek are not inconsistent with the Court's previous findings about the nature of the . . . second server." Ex. 1014, 11.

Petitioner proposes the adoption of the district court's construction of the term. Pet. 16. Patent Owner appears to propose that a server is not a client device, and, more specifically, that the server is structurally different than the client device. PO Resp. 34–37.

Patent Owner's arguments, in the most part, repeat those presented for the "client device." *See* PO Resp. 34–38. That is, Patent Owner argues that: 1) the recited architecture of the claims is not satisfied by a generic computer ↔ computer ↔ computer architecture; 2) the claim language, specification, and prosecution histories distinguish client devices and servers; 3) a server is structurally different from a client device; and 4) a server is not a consumer computer and would be a commercial device with certain operational properties. *Id*.

We continue to agree with the district court's interpretation of the claim term, which we have adopted, because it is consistent with the evidence in the record. Of note, the construction requires that the "second server" be a "server," with the court agreeing that it is "a device that is operating in the role of a server." Ex. 1011, 14; Ex. 1014, 8. This construction is consistent with the role-based interpretation of the claim components, which we discuss *supra* Section II.C.1. That is, the "second server" operates in the "role of a server," but it does not have structural requirements, as Patent Owner argues, short of being able to function in the role of a server. We also agree with the district court's cabining of the "second server" construction to exclude the "first client server." Claim 1 recites that it is the "first client device" that "send[s] the received first web-page to the second server" in limitation 1[e], so the "second server" has to be a separate component.

We have addressed the majority of Patent Owner's arguments *supra* Section II.C.1 that concern alleged required architecture, structural requirements, and the assertion that a "client device" cannot be a server. Additionally, Patent Owner argues that in the *NetNut* litigation, the district court stated that it "hereby expressly rejects Defendant's proposal of referring generically to 'a device,'" and that the server "is not the client device," so client devices and servers are distinguished. PO Resp. 35 (citing Ex. 2029, 20, 23). We do not agree with this argument because, in context, the district court there only indicated that the use of the term "device" was too generic with regard to the term "server," which we take to mean that the server had to be capable of acting in the role of a server, and that a device

could not "act as a server and as a client simultaneously." Ex. 2029, 20–21. Patent Owner also argues that the district court indicated that a "server" is not a communication device. PO Resp. 36 (citing Ex. 1014, 10). However, the district court found, and we agree, that "a component can be *configured* to operate in different roles," so long as it does not serve in different roles simultaneously, and although the Specification does "not include servers as a type of 'communication device,' [ ] that is not sufficient to construe 'client device' as unable to act as a server in all cases." Ex. 1014, 10. Additionally, in view of the role-based construction for the components, we reject Patent Owner's other arguments on required structure and characteristics of a server. PO Resp. 36–39.

3. Other Terms

We determine that we need not expressly construe any other claim terms to resolve the parties' disputes. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g*, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Principles of Law

A claim is unpatentable under 35 U.S.C. § 102 if a prior art reference discloses each and every limitation of the claimed invention, either explicitly or inherently. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995); *see MEHL/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999) ("To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention;" any limitation not explicitly

taught must be inherently taught and would be so understood by a person experienced in the field.); *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991) (the dispositive question is "whether one skilled in the art would reasonably understand or infer" that a reference teaches or discloses all of the limitations of the claimed invention).

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of obviousness or nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

E. Anticipation of Claims 1, 2, 6, 7, 16, and 18–23 By Crowds

Petitioner contends that claims 1, 2, 6, 7, 16, and 18–23 are unpatentable under 35 U.S.C. § 102 because they are anticipated by Crowds. Pet. 17–43. Patent Owner argues that Crowds does not disclose all the limitations of the claims. PO Resp. 44–52.

We begin our discussion with summary of Crowds, and then address the evidence and arguments presented.

1. Crowds (Ex. 1004)

Crowds is an article that "introduce[s] a new approach for increasing the privacy of web transactions." Ex. 1004, 2.[12] In this approach, a user joins a "crowd" of other users, wherein the user's request to a web server is passed to a random member of the crowd, and possibly forwarded to one or more other members, prior to being submitted to the end server. *Id.* In this way, "[w]hen the request is eventually submitted, it is submitted by a random member, thus preventing the end server from identifying its true initiator." *Id.* In Crowds, a user is represented "by a process on her computer called a *jondo* (pronounced 'John Doe' and meant to convey the image of a faceless participant)." *Id.* at 8. "When the jondo is started, it contacts a server called the *blender* to request admittance to the crowd." *Id.* Exemplary paths for web requests from crowd users are shown in Figure 2, reproduced below:

[12] Unless otherwise stated, citations to exhibits use the page numbers identified by the parties.

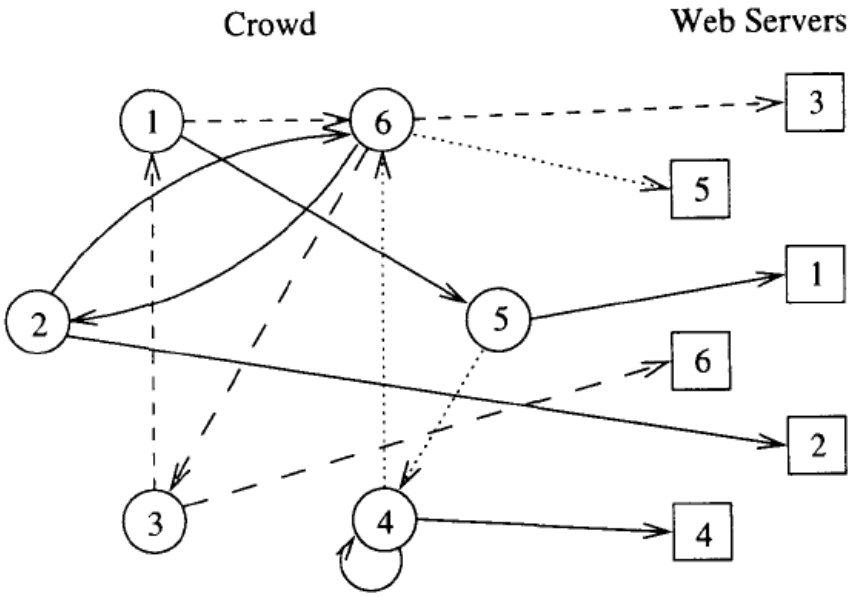


Fig. 2. Paths in a crowd (the initiator and web server of each path are labeled the same).

In Figure 2 of Crowds, above, when a jondo receives a user request from a browser, it "initiates the establishment of a random *path* of jondos that carries its users' transactions to and from their intended web servers." Ex. 1004, 8. For example, the paths in Figure 2 among the jondos labeled 1 to 6 are as follows: "1 → 5 → server; 2 → 6 → 2 → server; 3 → 1 → 6 → server; 4 → 4 → server; 5 → 4 → 6 → server; and 6 → 3 → server." *Id.* "[S]erver replies traverse the same path as the requests, only in reverse." *Id.* at 9.

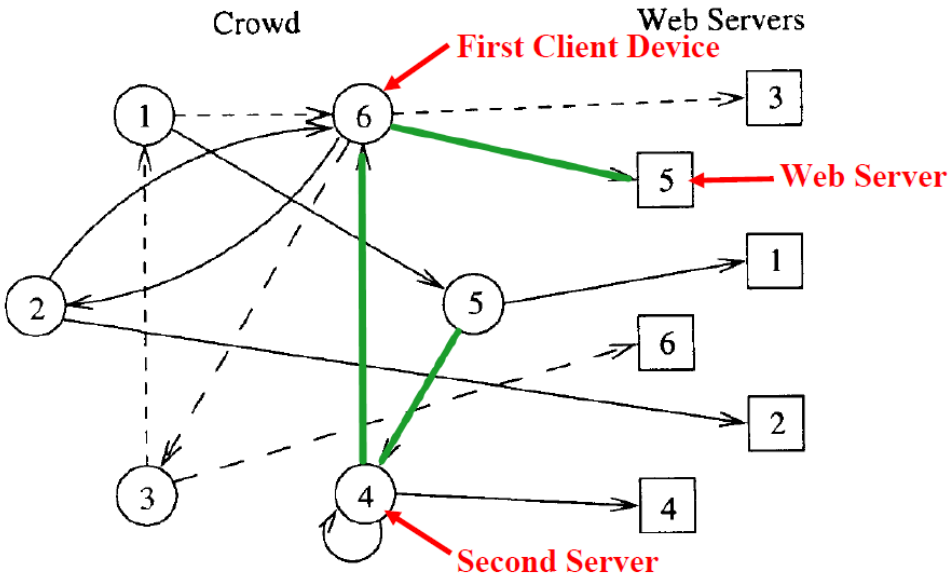
2. Discussion

a. Claim 1

The Petition asserts that Crowds discloses all the limitations of claim 1. Pet. 20–29. Below we consider the claim 1 limitations in turn.

i. Limitations of the Preamble

Petitioner asserts that Crowds discloses the claimed web server of the preamble limitations[13] that responds to receiving a URL and stores a web page. Pet. 20–21. Petitioner refers to annotated Figure 2 of Crowds, reproduced below.



As shown in Petitioner's annotated version of Figure 2 of Crowds, above, Petitioner refers to the path 5→4→6→server (highlighted in green), with boxed "5" identified as the web server. Pet. 20–21. As shown, Petitioner identifies jondo 6 as the first client device (jondo 6). *Id.* at 21. Petitioner identifies the device on which jondo 4 resides as the claimed second server (jondo 4). *Id.*

[13] The preamble provides antecedent basis for the terms "first client device" and "web server," among others. We determine that the preamble is limiting. *See* Ex. 1011, 9 (parties agree preambles of claims in related patents are limiting).

Patent Owner contends that Crowds does not disclose the architecture of the claims of the '344 patent. PO Resp. 48–50. We address these issues below in the discussion of limitation 1[b]. Patent Owner does not present any other arguments specific to this limitation. *See generally* PO Resp.; PO Sur-reply.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has demonstrated that Crowds discloses the limitations of the preamble of claim 1.

ii. Limitation 1[a]

Petitioner asserts that Crowds discloses limitation 1[a] because a person of ordinary skill in the art would understand that jondo 6 is operating in the role of a client, and that jondo 6 communicates with jondo 4, which operates in the role of a server. Pet. 22 (citing Ex. 1003 ¶ 72). More specifically, Petitioner asserts that "jondo 6 is a communication device because it is a device (user's computer) that, due at least in part to the jondo application residing on it, facilitates communication between other devices, including web server 5 and jondo 4 in the Mapped Path." *Id.* (citing Ex. 1003 ¶ 73; Ex. 1004, 8–9). Petitioner also contends that "[j]ondo 6 operates in the role of a client at least because, as the web request originating at jondo 5 is traveling to web server 5 in the Mapped Path, jondo 6 is serving as a client of web server 5." *Id.* (citing Ex. 1003 ¶ 73; Ex. 1004, 8–9).

We agree with Petitioner that jondo 6 is operating in the role of a client because it serves as a client of web server 5 when requests originating at jondo 5 are sent by jondo 6 to web server 5 in the identified path.

Ex. 1004, 8–9. We address other arguments related to the disclosure of a "first client device" below in the section on limitation 1[e].

Patent Owner does not present any arguments specific to this limitation.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has demonstrated by a preponderance that Crowds discloses the limitation 1[a].

iii. Limitation 1[b]

Petitioner asserts that limitation 1[b] is performed by Crowds because jondo 6 receives a URL from jondo 4. Pet. 23 (citing Ex. 1003 ¶ 76). Petitioner refers to Crowds disclosure that a user selects the jondo on her computer as her web proxy in her web browser for all services, including HTTP, and the request can result in "a retrieved web page." *Id*. (citing Ex. 1004, 8, n.1, 14, 17). Petitioner argues that "jondo 4 operates in the role of a server (it serves at least jondo 5 by receiving jondo 5's web request and sending it on to jondo 6 and later sending web server 5's response (received from jondo 6) back to jondo 5, thus providing a service to jondo 5), and it is not the same physical device as jondo 6 (the first client device)." *Id*. at 22–23 (citing Ex. 1003 ¶ 74; Ex. 1004, 8–9).

Patent Owner argues that "Crowds does not disclose a 'first client device' receiving the alleged first URL from a 'second server' as recited in claim 1." PO Resp. 45 (citing Ex. 2025 ¶ 157). Patent Owner contends that in the path "5→4→6→5 and in the context of jondo 4 sending a request for content to jondo 6, jondo 4 is operating in the role of a client and jondo 6 is operating in the role of a server." *Id.* Patent Owner argues that jondo 4

cannot be the "second server," "because at that point in time, when jondo 4 is sending a request to jondo 6, jondo 4 is operating in the role of a client, not a server." *Id*. Patent Owner asserts that Petitioner's expert agrees that at that point in time, jondo 4 is acting in the role of a client. *Id*. at 45–46 (citing Ex. 2047, 305:13–19).

Patent Owner's arguments are based on the premise that if a device is operating in a certain role performing a function *at a point in time*, it cannot be the claimed element. In other words, Patent Owner is asserting that a component has to operate exclusively in a single role in order to disclose a claim element. We are not persuaded by these contentions because we have not adopted Patent Owner's proposed claim constructions.

As discussed *supra*, Section II.C.2, we have adopted the district court's role-based construction, where a "server" is a "server that is not the client device," that is, the term means "a device that is operating in the role of a server and that is not the first client device." As Petitioner asserts, and we agree, Crowd's jondo 4 operates in the role of a server because it serves by sending the received jondo 5's web request on to jondo 6 and sending web server 5's response back to jondo 5. *See* Pet. 22–23; Ex. 1003 ¶ 74. We also agree with Petitioner that jondo 4 is not the same physical device as jondo 6 (the first client device). *Id*. Accordingly, jondo 4 meets the claim construction for the term "second server" adopted here. That jondo 4 may at times also act as a client is acceptable—as discussed *supra* Section II.C.1.c, a device may perform different roles with different functions at different times. Dr. Freedman's testimony (Ex. 2047, 305:13–29) reflects that

jondo 4 acts in the role of a server and can also act as a client, which is consistent with the role-based claim interpretation.

Patent Owner additionally argues that Crowds does not disclose the architecture of claim 1. PO Resp. 48–50. Patent Owner asserts that Crowds "does not disclose a 'first client device' between a 'second server' and a 'web server.'" *Id*. at 48. Patent Owner argues that the jondos of Crowds are user computers and there is no indication that these are dedicated user devices. *Id*. Patent Owner also asserts that there is no indication that Crowds's jondos are capable of a large number of connections or provide for scalability for increasing resources. *Id*. at 48–49. Patent Owner contends that the jondos of Crowds are interchangeable network devices and there are no differences between them, and it is not appropriate to call one jondo a "client device" and another a "server." *Id*. at 49. Patent Owner also asserts that does not disclose the second server ↔ first client device ↔ web server architecture of the '344 patent claims. *Id*. at 49–50. Patent Owner contends that Crowds does not disclose each limitation of claim 1 "as arranged in the claim" and one of ordinary skill in the art would "at once envisage" the claim 1 invention. *Id*. at 50. Patent Owner also asserts that Petitioner provides no analysis "regarding modifying jondo 4 to be a server under Patent Owner's proposed constructions." *Id*. at 52–53 (citing Ex. 2025 ¶ 180; Ex. 2026, 26:8–18, 20:20–21:6).

Most of Patent Owner's arguments are based on claim constructions that we have not adopted and further on premises related to claim construction such as that certain components have specific structural requirements or a component has to operate exclusively in a single role in

order to disclose a claim element. We are not persuaded by these contentions for the reasons discussed above.

We additionally do not agree with Patent Owner's assertions that Crowds does not disclose the elements "as arranged in the claim" and would not "envisage" that arrangement or that Crowds does not disclose the second server ↔ first client device ↔ web server architecture of the '344 patent claims. As shown in annotated Figure 2 of Crowds, and in Petitioner's reliance on the path 5→4→6→server as discussed for the preamble above, Crowds explicitly discloses the architecture of second server ↔ first client device ↔ web server. *See* Pet. 21; Ex. 1004, Fig. 2. This is the configuration as arranged in the claim. As also discussed, we find that Crowd's disclosures support Petitioner's contention that jondo 6 acts as the claimed "first client device," jondo 4 acts as the claimed "second server," and as discussed below, and server 5 acts as the claimed "web server." As such, Petitioner demonstrates that Crowds discloses the components "as arranged in the claim," and which could be understood by one of ordinary skill in the art as depicted in the configuration of Figure 2. We do not agree with Patent Owner that relying on component that meets the claim construction and also is in a configuration that is explicitly disclosed would require any "modification." *See* PO Resp. 52–53.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has demonstrated that Crowds discloses limitation 1[b].

iv. Limitation 1[c]

For limitation 1[c], Petitioner asserts that Crowds discloses that jondo 6 sends the first URL it received from jondo 4 to web server 5. Pet. 25 (citing Ex. 1003 ¶ 79). Petitioner argues that a person of ordinary skill in the art would understand that Crowds describes a request traveling from the initiating jondo device (jondo 5) to the intended web server (web server 5) through the intermediate jondo devices (jondos 4 and 6). *Id*. (citing Ex. 1003 ¶ 81; Ex. 1004, 8–9). Patent Owner does not present any additional arguments specific to this limitation. *See generally* PO Resp.; PO Sur-reply.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has demonstrated that Crowds discloses limitation 1[c].

v. Limitation 1[d]

For limitation 1[d], Petitioner asserts that Crowds discloses "jondo 6 receives a web page from web server 5 in response to sending the URL to web server 5." Pet. 27 (citing Ex. 1003 ¶ 84; Ex. 1004, 8–9). Petitioner argues that a person of ordinary skill in the art would have understood that Crowds discloses that web server 5 stored a web page identified by that URL, and because Crowds discloses replies from web servers following the same path (in reverse) as the request, jondo 6 receives web server 5's reply in response to jondo 6 sending that URL to web server 5, with the reply containing a web page. *Id*. (citing Ex. 1003 ¶ 85; Ex. 1004, 8, n.1, 9, 14, 17). Patent Owner does not present any additional arguments specific to this limitation. *See generally* PO Resp.; PO Sur-reply.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has demonstrated that Crowds discloses limitation 1[d].

vi. Limitation 1[e]

For limitation 1[e], Petitioner asserts that in Crowds, "jondo 6 sends the web page it receives from web server 5 to jondo 4, in response to jondo 4 receiving the URL identifying the web page from jondo 5." Pet. 28 (citing Ex. 1003 ¶ 87; Ex. 1004, 8–9). Petitioner argues that in Crowds, "when jondo 6 sends content (i.e., the web page it receives from web server 5) to jondo 4 upon receiving that content from web server 5, it does so 'in response to ***the receiving of the first URL***.'" *Id*. at 28–29 (citing Ex. 1003 ¶ 88).

Petitioner asserts that a person of ordinary skill in the art "would have understood that jondo 6 is a communication device because it is a device (user's computer) that, due at least in part to the jondo application residing on it, facilitates communication between other devices, including web server 5 and jondo 4 in the Mapped Path. Pet. 22 (citing Ex. 1003 ¶ 73; Ex. 1004, 8–9). Petitioner also contends that "[j]ondo 6 operates in the role of a client at least because, as the web request originating at jondo 5 is traveling to web server 5 in the Mapped Path, jondo 6 is serving as a client of web server 5." *Id*. (citing Ex. 1003 ¶ 73; Ex. 1004, 8–9).

Patent Owner asserts that Crowds does not disclose a "first client device" sending the received first web-page to a "second server" as recited in claim 1. PO Resp. 47 (citing Ex. 2025 ¶ 160). Patent Owner contends that Petitioner argues that jondo 6 sends the received first content to jondo 4

in the path 5→4→6→5. *Id.* (citing Pet. 28). Patent Owner argues that jondo 6 cannot correspond to the "first client device" "because at that point in time, when jondo 6 is sending a response to jondo 4, jondo 6 is operating in the role of a server, not a client." *Id.* (citing Ex. 2025 ¶ 160). Patent Owner also contends that "jondo 4 cannot correspond to the 'second server' as Petitioners allege because at that point in time, when jondo 4 is receiving a response from jondo 6, jondo 4 is operating in the role of a client, not a server." *Id.* (citing Ex. 2025 ¶ 160).

We agree with Petitioner that jondo 6 meets the claim construction of a "client device" adopted here, that is, a "communication device that is operating in the role of a client." More specifically, as Petitioner asserts, and we agree, jondo 6 is a communication device because its application facilitates communication between other devices and it operates in the role of a client when the web request travels to web server 5. Pet. 22. We do not agree with Patent Owner's arguments that jondo 6 is not disclosed by Crowds. As discussed for limitation 1[b], it is acceptable that jondo 6 may also act as a server at times. Under the claim construction adopted, a device may perform different roles with different functions at different times. For instance, as discussed, under the language of claim 1, a first client server acts as both a server and client. Jondo 4, which meets the construction of the term "second server," may also act in the role of a client at times for similar reasons.

We also agree with Petitioner (Pet. Reply 10) that even if Patent Owner's proposed construction that a "client device" is a "consumer computer" is adopted (PO Resp. 11), Crowd's jondo 6 meets that

construction. Crowds discloses that it utilizes users "into a large and geographically diverse," using their own computer, to act as the "jondos." Ex. 1004, 1, 8. Dr. Williams agrees that the user computers of Crowds are "consumer computers." Ex. 1050, 8:14–9:16.

vii. Conclusion

We note that Patent Owner has presented evidence of secondary considerations. *See* PO Resp. 57–75. Evidence of secondary considerations is not pertinent to an anticipation rejection under 35 U.S.C. § 102. *See In re Malagari*, 499 F.2d 1297, 1302 (CCPA 1974).

Accordingly, having considered the arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that Crowds anticipates claim 1 of the '344 patent.

b. Claims 6 and 7

Claim 6 recites

> 6. The method according to claim 1, for use with a third server that comprises a web server that is Hypertext Transfer Protocol (HTTP) server, the third server responds to HTTP requests and stores a second content identified by a second URL, the method by the first client device further comprising:
>
> receiving the second URL;
>
> sending, to the third server over the Internet in response to the receiving, the second URL; and
>
> receiving the second content from the third server over the Internet in response to the sending.

Ex. 1002, 19:51–61.

Claim 7 depends from claim 6.

Petitioner asserts that Crowds discloses the limitations of claim 6 by the additional path 3→1→6→server, as shown in annotated Figure 2 of Crowds, reproduced below. Pet. 33.

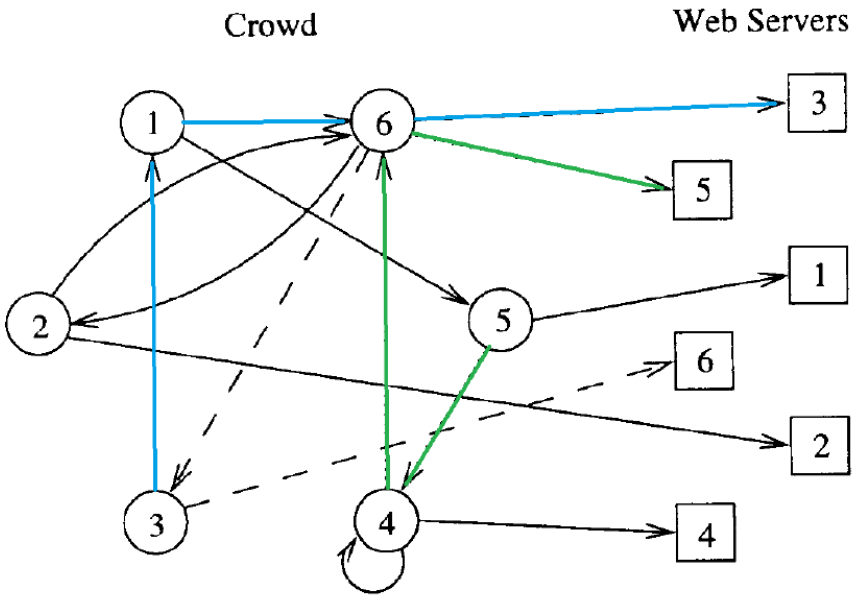


Fig. 2. Paths in a crowd (the initiator and web server of each path are labeled the same).

In annotated Figure 2, above, the path 3→1→6→server is shown in blue. Pet. 33–34 (citing Ex. 1004, 8–9; Ex. 1003 ¶ 96). Petitioner asserts that web server 3 (in square box) meets the claimed third server and, in the blue path, jondo 6 (first client device) receives a URL originating from the device on which jondo 3 resides, from the device on which jondo 1 resides, and sends that URL to web server 3 over the Internet in response to that receiving. *Id.* at 35 (citing Ex. 1004, 8–9, 24, Fig. 6; Ex. 1003 ¶ 101).

Patent Owner argues that in the blue path of 3→1→6→web server 3 Crowds does not disclose a first client device receiving the second URL "because *at that point in time*" when jondo is receiving the second URL from jondo 1, "jondo 6 is operating in the role of a server, not a client." PO

Resp. 51 (citing Ex. 2025 ¶ 173) (emphasis added). Patent Owner argues that claim 7 depends from claim 6, and also fails by the dependence. *Id*. at 51. We do not agree with these arguments for the same reasons discussed above for limitations 1[b] and [e]: under the claim construction adopted, a device may perform different roles with different functions at different times.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has shown by a preponderance of the evidence that Crowds anticipates claims 6 and 7.

c. Claim 20

Claim 20 depends from claim 1, further reciting: "wherein the first web-page comprises audio, or video content, and wherein the communicating comprises establishing a Transmission Control Protocol (TCP) connection with a second server." Ex. 1002, 20:59–62. Petitioner asserts that Crowds teaches that the communication between jondo 6 and jondo 4 comprises establishing a TCP connection between them, wherein "jondo 6 send[s] a message to jondo 4 containing jondo 6's IP address during, as part of, or in response to a start-up of jondo 6." Pet. 29 (citing Section VII.A.8), 29; Ex. 1003 ¶¶ 89, 108. In particular, "Crowds states that each jondo in the path 'receives the [first user] request' from the prior jondo and 'determines whether or not to forward the request to another jondo' or complete the path and 'submit[] the request to the end server for which the request was destined,'" which a person of ordinary skill in the art would recognize as being a communication with a TCP connection. *Id*. at 30 (citing Ex. 1004, 8 (failures "detected by the TCP/IP connection to the jondo

breaking or being refused."); Ex. 1003 ¶ 92). Patent Owner repeats the same arguments discussed for limitations 1[b] and [e], which is that in Crowds "when a jondo is admitted to a crowd, that jondo does not establish any TCP connections with other jondos until that first jondo receives a request for content from the user's browser" and "*at that point in time*, jondo 4 is operating in the role of a client and jondo 6 is operating in the role of a server." PO Resp. 52 (citing Ex. 2025 ¶¶ 178–179) (emphasis added). We do not find these arguments undermine Petitioner's showing of Crowd's disclosure of the limitations of claim 20 for the reasons discussed above under limitations 1[b] and [e].

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has shown by a preponderance of the evidence that Crowds anticipates claim 20.

d. Claims 2, 16, 18, 19, and 21–23

Petitioner presents evidence and arguments in support of Crowds's disclosure of the limitations of claims 2, 16, 18, 19, and 21–23. Pet. 29–43. Patent Owner does not present any arguments specific to these claims. *See generally* PO Resp.; PO Sur-reply.

We have reviewed the evidence and argument, and on this record, we determine that Petitioner has shown by a preponderance of the evidence that Crowds anticipates claims 2, 16, 18, 19, and 21–23.

F. Obviousness of Claims 1, 2, 6, 7, 16, 18–25, 29, 30, 39, and 41–46 over Crowds

1. Prior Art Teachings and Alleged Teaching Away

Petitioner contends that claims 1, 2, 6, 7, 16, 18–25, 29, 30, 39, and 41–46 would have been obvious over Crowds. Pet. 17–51. In addition to the arguments and evidence presented on anticipation, for limitation 1[c], Petitioner asserts, in the alternative, that a person of ordinary skill in the art would have found the identified path in Crowds "to have operated over the Internet." *Id.* at 27. And in addition to the arguments and evidence presented for anticipation, for claim 24, which claims an additional web server, Petitioner asserts that under Crowds the use of additional web servers are disclosed which may be used for web page storage. *Id.* at 43–48 (citing, *inter alia*, Ex. 1004, 8–9 ("[s]ubsequent requests initiated at the same jondo follow the same path (except perhaps going to a different end server).").

Patent Owner argues the Petitioner's obviousness analysis is deficient. PO Resp. 52–57. We disagree. For example, Patent Owner argues that Crowds teaches away from the claimed methods of the '344 patent because: 1) Crowds does not provide the initiator with anonymity as to the target web server; 2) Crowds teaches that an increase in deniability results in an increase in latency; and 3) Crowds does not teach the initiator to purposefully select a jondo to form a pathway. PO Resp. 55–57.

For the first issue, Patent Owner argues that Crowds does not provide anonymity for the originating requesting jondo. PO Resp. 55–56. More specifically, Patent Owner asserts that based on the flip of a biased coin, a jondo may send a request directly to the target web server. *Id.* (citing Ex. 2025 ¶ 187). We do not find this argument persuasive because Crowds

discloses that a goal of the use of the jondos is to provide anonymity by routing the messages through other jondos. *See* Ex. 1004, 2–5. And, while the jondo can select itself for routing, given that multiple jondos are selected in a path, other jondos will generally be selected for anonymity. *See id*. at 8. Moreover, anonymity is not a limitation of the claims. As to the third issue, a "purposeful" selection of a device is also not claimed. Evidence concerning whether the prior art teaches away from a given invention must relate to and be commensurate in scope with the ultimate claims at issue. *See, e.g., MeadWestVaco Corp. v. Rexam Beauty and Closures, Inc.*, 731 F.3d 1258, 1264–65 (Fed. Cir. 2013). As to the second issue, of Crowds's latency, Patent Owner does not explain, nor does Dr. Williams provide support for, why Crowds would teach away from the claimed invention, that is, "a person of ordinary skill, upon reading the reference . . . would be led in a direction divergent from the path that was taken" in the claim. *Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013). Moreover, Crowds discusses ways to mitigate latency problems in its system (Ex. 1004, 19) and in Crowds there is no criticizing, discrediting, misdirecting or otherwise discouraging of the approach taken in the claims. *See Meiresonne v. Google, Inc.*, 849 F.3d 1379, 1382 (Fed. Cir. 2017); *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Accordingly, we do not find that Crowds teaches away from the claimed invention of the '344 patent.

Patent Owner also argues that Crowds does not disclose the claimed architecture or teach modifying jondo 4. PO Resp. 52–53. We have addressed those arguments above and do not find them persuasive for the same reasons. Patent Owner also argues that the teachings as to claim 24 are

deficient for the same reasons as claim 1, which we do not find persuasive as discussed above. *Id*. at 53–54.

We find that Petitioner's evidence and argument show that one of ordinary skill in the art would be motivated to modify Crowds as asserted by Petitioner and as such, Crowds teaches the limitations of claims 1, 2, 6, 7, 16, 18–25, 29, 30, 39, and 41–46.

Patent Owner also asserts that the nonobviousness of the claims is supported by objective indicia of nonobviousness, including commercial success, long-felt need, copying, and industry praise, and we address those issues below.

2. Objective Indicia of Nonobviousness

Patent Owner asserts that nonobviousness is supported by objective indicia, including commercial success, long-felt need, copying, and industry praise. PO Resp. 57–75; PO Sur-reply 23–27. Petitioner disagrees, contending that Patent Owner's arguments rely on the use of residential proxies with residential IP addresses, which it contends do not have a nexus to the claims, and that Patent Owner's arguments regarding commercial success, long-felt need, copying, and industry praise suffer from additional evidentiary infirmities. Pet. Reply 22–26.

a. Legal Standards

Objective indicia of nonobviousness may include long-felt but unsolved need, failure of others, unexpected results, commercial success, copying, licensing, industry praise, and expert skepticism. *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1379 (Fed. Cir. 2012). "[O]bjective indicia 'may often be the most probative and cogent evidence of nonobviousness in

the record,'" and "help turn back the clock and place the claims in the context that led to their invention." *Id.* at 1378. Evidence of objective indicia of nonobviousness "must always when present be considered en route to a determination of obviousness." *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012); *see also Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc).

Objective indicia of nonobviousness are "only relevant to the obviousness inquiry 'if there is a nexus between the claimed invention and the [objective indicia of nonobviousness].'" *In re Affinity Labs of Tex., LLC*, 856 F.3d 883, 901 (Fed. Cir. 2017) (quoting *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006)). For objective indicia of nonobviousness to be accorded substantial weight, their proponent must establish a nexus between the evidence and the merits of the claimed invention. *ClassCo, Inc. v. Apple Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016).

As the Federal Circuit has explained, "a patentee is entitled to a rebuttable presumption of nexus between the asserted evidence of secondary considerations and a patent claim if the patentee shows that the asserted evidence is tied to a specific product and that the product '*is* the invention disclosed and claimed.'" *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (quoting *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988)). In other words, presuming nexus is appropriate "when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'embodies

the claimed features, and is coextensive with them.'" *Id.* (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). On the other hand, "'[w]hen the thing that is commercially successful is not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process,' the patentee is not entitled to a presumption of nexus." *Id.* Once "the patentee has presented a *prima facie* case of nexus, the burden of coming forward with evidence in rebuttal shifts to the challenger . . . to adduce evidence to show that the commercial success was due to extraneous factors other than the patented invention." *Demaco*, 851 F.2d at 1393.

Additionally, "[a] finding that a presumption of nexus is inappropriate does not end the inquiry into secondary considerations." *Fox Factory*, 944 F.3d at 1373. Even in the absence of a presumption, "the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the 'direct result of the unique characteristics of the claimed invention.'" *Id.* at 1373–74.

b. Commercial Success

Patent Owner argues that nonobviousness is supported by the fact that it "commercialized a novel 'residential proxy service' that uses residential consumer computers, such as a person's smartphone, tablet, laptop, or personal computer having a residential IP address, as a proxy client device according to the claimed methods." PO Resp. 57 (citing Ex. 2025 ¶ 133). According to Patent Owner, it "currently provides approximately 72 million residential IP addresses associated with real users, in approximately 195 countries, to be used as proxy client devices in its residential proxy service."

Id. at 57–58 (citing Ex. 2038). Patent Owner asserts that its "residential proxy service has grown to dominate the market." *Id.* at 71 (citing Ex. 2046, 4, 45; Ex. 2025 ¶ 192). According to Patent Owner, "just last year alone," its "residential proxy service generated revenues of $53.7 million." *Id.* at 70 (citing Ex. 2025 ¶ 141). Patent Owner further contends that EMK Capital's acquisition of a majority stake in Patent Owner "at an enterprise value of $200 million in 2017" is further evidence of commercial success. *Id.* (citing Ex. 2025 ¶ 140).

Patent Owner asserts that its "residential proxy service practices the methods claimed in the '344 [p]atent," and provides claim charts purporting to show how "this commercial embodiment practices at least claims 1–2, 6–9, 16, 18–25, 29–32, 39, and 41–46 of the '344 [p]atent." PO Resp. 59–68. Patent Owner argues that its "residential proxy service directly corresponds to the network architecture of the modified version of Figure 3 of the '344 [p]atent where the requesting client device corresponds to client 102, the Super Proxy corresponds to proxy server 6, and the proxy client device corresponds to agent 122." *Id.* at 68. According to Patent Owner, its "residential proxy service is 'reasonably commensurate in scope with the scope of the claims'" and "embodies the claimed features of the '344 [p]atent and is coextensive with them." *Id.* Additionally, Patent Owner argues that "[t]he features driving the commercial success of [its] residential proxy service is (a) the proxy client devices have residential IP addresses that lower the risk of blocking by the web server and (b) the scalability of this architecture given the large number of proxy client devices having residential IP addresses." *Id.* at 69. Finally, Patent Owner argues that "the

district court found that sufficient nexus was established." PO Sur-reply 23 n.12 (citing Ex. 2020, 4).

Petitioner responds that Patent Owner "has failed to carry its burden of showing that any of its purported secondary considerations has the requisite nexus to the claimed invention." Pet. Reply 22. Petitioner asserts that Patent Owner's secondary considerations arguments are irrelevant because they are based on the use of a "residential proxy service" and "residential consumer computers." *Id*. at 23. According to Petitioner, "the first client device does not require (nor do any of the Challenged Claims require) the use of a consumer computer, much less a 'residential' consumer computer." *Id*. Petitioner further contends that "[l]ikewise, none of the Challenged Claims requires that the first client device have a 'residential IP address.'" *Id*. Petitioner asserts that the challenged claims also do not require "scalability" and the "commercial success evidence lacks the required nexus for at least this reason alone." *Id*. Petitioner also argues that Patent Owner's expert testified that Patent Owner's alleged prior art-distinguishing feature, the use of a consumer computer as the claimed first client device, was already present in the prior art. *Id*. at 24 (citing Ex. 1050, 8:14–9:16).

We find that Patent Owner has failed to establish a nexus between the challenged claims and the products that Patent Owner relies on to show commercial success. First, we find that Patent Owner has not established a presumption of nexus because it has not shown that the products that it relies on for commercial success embody and are coextensive with the challenged claims. *See Fox Factory*, 944 F.3d at 1373. To the contrary, Patent Owner

relies on features of its products that are not claimed, including the use of a residential proxy service, residential consumer computers, and residential IP addresses, as the basis for the commercial success of its products. For example, Patent Owner identifies "[t]he features driving the commercial success" of its products as "the proxy client devices hav[ing] residential IP addresses" and the scalability of its architecture "given the large number of proxy client devices having residential IP addresses." PO Resp. 69; *see id.* at 57 (pointing to Patent Owner's "novel 'residential proxy service' that uses residential consumer computers, such as a person's smartphone, tablet, laptop, or personal computer having a residential IP address"), 71 (asserting that Patent Owner's "residential proxy service has grown to dominate the market" and pointing to a market report examining "residential proxy services").

The challenged claims, however, do not include any limitations requiring residential proxies, residential computers, or residential IP addresses. Moreover, as discussed above, we do not adopt Patent Owner's proposed construction limiting the term "client device" to mean a "consumer computer" or "consumer communication device." *See supra* Section II.C.1. At most, Patent Owner presents evidence that the challenged claims broadly cover the products relied on for commercial success, which is insufficient to show a nexus. *See Fox Factory*, 944 F.3d at 1377 (holding that a presumption of nexus cannot be established by simply showing that "the patent claims broadly cover the product that is the subject of the evidence of secondary considerations").

As noted above, even in the absence of a presumption of nexus, Patent Owner may "prove nexus by showing that the evidence of secondary considerations is the 'direct result of the unique characteristics of the claimed invention.'" *Fox Factory*, 944 F.3d at 1373–74. As discussed above, however, the "unique characteristics" that Patent Owner points to as "driving the commercial success" of its products—the use of a residential proxy service, residential consumer computers, and residential IP addresses—are not recited in the challenged claims. *See* PO Resp. 57–59, 68, 71. Therefore, Patent Owner has failed to prove that commercial success of its products is the "direct result" of the claimed invention's unique characteristics.

We also are not persuaded by Patent Owner's argument that "the district court found that sufficient nexus was established." PO Sur-reply 23 n.12 (citing Ex. 2020, 4). Patent Owner relies on the district court's ruling on defendants' motion to strike the opinions of Patent Owner's expert Dr. Rhyne, where the district court stated that it was denying the portion of "the motion requesting the Court to preclude Dr. Rhyne from testifying regarding secondary considerations of non-obviousness" because it "found that Dr. Rhyne established a sufficient nexus between the secondary considerations and the claimed invention." Ex. 2020, 4. The district court's order, however, does not explain the basis for its ruling, and Patent Owner does not point to anything in the record providing such an explanation. It is also not clear from evidence of record in this proceeding whether the district court actually made a finding on the merits of nexus, or simply determined

that Dr. Rhyne had provided sufficient disclosure in his expert report to offer testimony on nexus at trial.

c. Long-Felt Need

Patent Owner argues that its residential proxy service "solved a long felt, but unresolved need." PO Resp. 72. According to Patent Owner, "traditional data center server proxies could provide some anonymity for the user in accessing a target web site," but "that web site could still likely identify data center server IP addresses as proxy addresses" because there "were usually (a) associated with commercial IP addresses; and (b) limited to a block of IP addresses sharing the same IP address prefix and geographic location." *Id.* (citing Ex. 2025 ¶ 193). "In contrast," Patent Owner asserts, its "proxy client devices have residential IP addresses that vary widely from one another without being limited to one block of IP addresses and can have a wide variety of geographic locations." *Id.* Patent Owner further contends that its "residential IP network" solves the need to "dramatically increase the [number] of IP addresses that can be included in a proxy network." *Id.* (citing Ex. 2025 ¶ 193; Ex. 2048, 7; Ex. 2049, 182:22–197:21).

Petitioner responds that there is no nexus between the products that allegedly filled the long-felt need and the challenged claims. Pet. Reply 24–25. Petitioner also contends that Patent Owner provides no objective evidence of a problem's existence. *Id.* at 25.

For similar reasons as for commercial success, we agree with Petitioner that no nexus has been shown between Patent Owner's evidence of long-felt need and the challenged claims. The key features that Patent Owner points to as satisfying a "long-felt need" are its "residential proxy

service" including proxy client devices that "have residential IP addresses." PO Resp. 72. As explained above, however, the challenged claims do not recite or require a residential proxy service or residential IP addresses. Therefore, Patent Owner has failed to make the requisite showing that a long-felt need was met by its claimed invention.

d. Copying

Patent Owner argues that "[d]uring the jury trial in the Tex. Litigation [*Teso* district court litigation], evidence of Oxylabs copying Bright Data's residential proxy service, then under the name 'Hola,' was presented." PO Resp. 73 (citing Ex. 2025 ¶ 194). Specifically, Patent Owner argues that its representative (Ofer Vilenski) asked an employee of Oxylabs (Tomas Okmanas) to incorporate its software development kit (SDK) in Oxylabs' applications, but that instead Oxylabs "subsequently released their own SDK for Oxylabs' own residential proxy network." *Id.* (citing Ex. 2049, 202:12–204:8; Ex. 2047, 131:23–132:7, 152:8–153:6; Ex. 2025 ¶ 194). Patent Owner also asserts that Mr. Okmanas testified that he was looking for "a system that works like hola.org," that Oxylabs "wanted to develop its own residential proxy service," and that "he believed that he needed to do what Bright Data (previously known as Luminati and Hola) were doing to be successful." *Id.* at 73–74 (citing Ex. 2047, 95:20–97:1, 103:18–104:10, 149:13–150:8, 152:18–153:6; Ex. 2025 ¶ 195). "This" testimony, according to Patent Owner, "is strong evidence of copying." *Id.* at 74 (citing Ex. 2025 ¶ 195).

Petitioner responds that there is no nexus between the products that were allegedly copied and the challenged claims. Pet. Reply 25.

For similar reasons as for commercial success and long-felt need, we agree with Petitioner that no nexus has been shown between Patent Owner's evidence of copying and the challenged claims. Although Patent Owner does not point to specific aspects of Patent Owner's products that it alleges were copied, it refers generally to "Bright Data's residential proxy service" known as "Hola" and the software development kit relating to it. PO Resp. 73–74. As explained above, however, the challenged claims do not recite or require a residential proxy service. Therefore, Patent Owner has failed to make the requisite showing that the claimed invention was copied.

e. Industry Praise

Patent Owner argues that its "residential proxy service has received industry praise including from competitors, and that . . . praise is tied to the claims of the '344 [p]atent as described above." PO Resp. 75 (citing Ex. 2025 ¶ 197). Patent Owner further contends that "competitors like Oxylabs, Smartproxy, and Microleaves have praised the advantages of using a residential proxy service." *Id.* (citing Ex. 2025 ¶ 197).

Petitioner responds the industry praise evidence fails for the same reasons as those for commercial success. Pet. Reply 25.

For similar reasons as for the other objective indicia, no nexus has been shown between Patent Owner's evidence of industry praise and the challenged claims. Patent Owner ties the evidence of industry praise to its "residential proxy service," which is not recited in the challenged claims. PO Resp. 75. Therefore, Patent Owner has failed to make the requisite showing that the alleged industry praise has a nexus to the claimed invention.

3. Conclusion on Obviousness

For the reasons explained above, we conclude that Patent Owner's evidence purportedly showing commercial success, long-felt need, copying, and industry praise lacks merit because Patent Owner has not shown nexus with the claimed invention. Thus, weighting secondary considerations together with Petitioner's evidence of obviousness, Petitioner has established the obviousness of the challenged claims 1, 2, 6, 7, 16, 18–25, 29, 30, 39, and 41–46 of the '344 patent in view of Crowds.

Accordingly, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, 6, 7, 16, 18–25, 29, 30, 39, and 41–46 would have been obvious over Crowds.

G. Obviousness of Claims 8, 9, 31, and 32 over Crowds and RFC 1122 and Claims 10, 11, 13, 33, 34, and 36 over Crowds and RFC 2616

Petitioner asserts that claims 8 and 9 would have been obvious over Crowds and RFC 1122 and claims 10, 11, 13, 33, 34, and 36 would have been obvious over Crowds and RFC 2616. Pet. 51–64.

RFC 1122 is titled "Requirements for Internet Hosts – Communication Layers" and provides requirements for link layer, Internet layer, and transport protocols. Ex. 1040, 1. RFC 1122 was published in October 1989, and Dr. Freedman testifies that it was published by established standards organizations and was intended to be viewed by interested Internet engineering audience at large. *Id.*; Ex. 1003 ¶ 63. RFC 2616 is titled "Hypertext Transfer Protocol -- HTTP/1.1" and it "specifies an Internet standards track protocol for the Internet community."

Ex. 1006, 1. RFC 2616 was published in 1999 and Dr. Freedman testifies that it "was the definitive specification for HTTP version 1.1 protocol." *Id.*; Ex. 1003 ¶ 66.

Claim 8 depends from claim 1 and further recites "further comprising periodically communicating over the TCP connection between the second server and the first client device." Ex. 1002, 19:65–67. Claim 9 depends from claims 8 and further recites "wherein the periodically communicating comprises exchanging 'keep alive' messages." *Id.* at 20:1–3. Claims 31 and 32 have similar limitations. For claims 8 and 9, Petitioner asserts that a person of ordinary skill would have modified Crowds so that for a given path the jondo device would "periodically communicate by exchanging TCP keep-alive messages with each other over established TCP connections" in accordance with RPC 1122. Pet. 54 (citing Ex. 1003 ¶ 141; Ex. 1040, 102). Petitioner asserts that a person of ordinary skill in the art "would have been motivated to implement TCP keep-alives on Crowds' jondos to detect when a peer jondo has crashed and to prevent termination of the TCP connection due to inactivity." *Id.*

Claim 10 depends from claim 1, and further recites "determining, by the first client device, that the received first web-page, is valid." Ex. 1002, 20:4–6. Claim 11 depends from claim 10, and further recites "wherein the determining is based on the received HTTP header according to, or based on, IETF RFC 2616." *Id.* at 20:6–9. Claim 13 depends from claim 1, and recites:

> 13. The method according to claim 1, for use with a software application that includes computer instructions that, when executed by a computer processor, cause the processor to perform the sending of

> the Hypertext Transfer Protocol (HTTP) request, the receiving and storing of first content, the receiving of the first URL, and the sending of the part of, or the whole of, the stored first content, and the sending of a part of, or the whole of, the stored first web-page, the method is further preceded by:
>
> > downloading, by the first client device from the Internet, the software application, and
> >
> > installing, by the first client device, the downloaded software application.

Ex. 1002, 20:20–27.

Claims 33, 34, and 36 contain similar limitations to claims 10, 11, and 13, respectively.

Petitioner argues that as to claim 10, it would have been obvious for a person of ordinary skill in the art to modify Crowds to cache content as described in RFC 2616. Pet. 58. Petitioner asserts that caching was a well-known functionality to a person of ordinary skill in the art "that 'significantly improve[d] performance' by 'eliminat[ing] the need to send requests in many cases, and [] eliminat[ing] the need to send full responses in many other cases'" and the implementation would have benefited Crowds. *Id*. (citing Ex. 1003 ¶ 145; Ex. 1006, 47). Petitioner explains that with this implementation, "jondo 6 would have sent a 'conditional request' to web server 5 containing the 'cache validator" for the cached web page," and "if the web page was valid, jondo 6 would have received from web server 5 a response with a 'special status code,'" which teaches the limitations of claims 10 and 11. *Id*. at 60 (citing Ex. 1006, 54; Ex. 1003 ¶ 146).

For claim 13, Petitioner asserts that a person of ordinary skill in the art "would have understood that a jondo is a software application that includes

computer instructions." Pet. 62 (citing Ex. 1003 ¶ 150). Petitioner argues that it would have been obvious to a person of ordinary skill in the art that "in view of Crowds authors' desire to widely distribute the jondo application for that application to have been resident on jondo 6 after downloading same over the Internet and then installing same on the device." *Id*. at 61 (citing Ex. 1003 ¶ 149; Ex. 1004, 2, 3, 25). Petitioner also asserts that it would have been obvious to a person of skill "to modify Crowds in view of RFC 2616 to cache content," as discussed for claim 10, and "[i]n the modified Crowds, the jondo software computer instructions would have caused a processor in jondo 6 to cache." *Id*. at 62–63 (citing Ex. 1003 ¶ 151). Further, "[i]n Crowds modified by RFC 2616, the 'most up-to-date response held by the cache' of jondo 6 . . . would have been the stored web page jondo 6 received from web server 5," and a person of skill would have known that it would have been advantageous for jondo 6 and other jondo devices "to implement such send-stored-content functionality because it sped up web access times." *Id*. at 63 (citing Ex. 1003 ¶ 152).

Patent Owner only asserts that Petitioner provides no analysis that RFC 1122 or RFC 2616 that would cure the deficiencies of Crowds as to claim 1, and does not present any arguments specific to these claims. PO Resp. 55.

We have reviewed Petitioner's evidence and arguments and find that the references teach the limitations of the claims, with motivation to support the combination of the prior art references.

For the reasons explained *supra* Section II.F.2, we conclude that Patent Owner's evidence purportedly showing commercial success, long-felt

need, copying, and industry praise lacks merit because it does not show a nexus with the claimed invention. Thus, weighting secondary considerations together with Petitioner's evidence of obviousness, Petitioner has established the obviousness of the challenged claims.

Having considered the arguments and evidence, we determine that Petitioner has shown by a preponderance of the evidence that claims 8, 9, 31, and 32 would have been obvious over Crowds and RFC 1122 and claims 10, 11, 13, 33, 34, and 36 would have been obvious over Crowds and RFC 2616.

III. MOTIONS TO SEAL

Patent Owner filed a Motion to Seal and To Enter the Proposed Protective Order, which seeks to seal Exhibits 2039, 2040, 2041–2044, and 2025 and associated portions of the Patent Owner Response, and to enter an agreed-upon Joint Protective Order. Paper 15; Ex. 2062. Patent Owner asserts that Exhibit 2039 contains sensitive technical information, Exhibits 2040–2044 contain source code and related files, Ex. 2045 is an expert declaration that references some of the sensitive information in the exhibits, and portions of the Patent Owner Response incorporates some of the sensitive information. Paper 15, 2–7. Patent Owner argues that it would be harmed by the public disclosure of its highly sensitive information, which it has taken steps to guard against disclosure, which outweighs the public's interests. *Id*. This Motion is unopposed.

We have reviewed the exhibits at issue, including the redacted portions of the exhibits and Patent Owner Response, and the explanations of the confidential nature of the materials for which sealing is sought, as

discussed in the Motion. We grant the Motion to Seal and the associated request to enter the Protective Order. Paper 15; Ex. 2062.

Patent Owner filed another Motion to Seal, which seeks to seal Exhibit 2065. Paper 21, 2. Patent Owner asserts that Exhibit 2065 is an email making corrections to source code, which has not been publicly disclosed, and steps have been taken to guard against its disclosure, and Patent Owner would be harmed by disclosure of this information. *Id*. at 2–4. Petitioner does not oppose this Motion to Seal.

We have reviewed Exhibit 2065. We find that the information is sensitive and falls within the criteria for protection. Accordingly, we grant Patent Owner's Motion to Seal Exhibit 2069 (Paper 21).

IV. CONCLUSION[14]

For the foregoing reasons, we conclude that Petitioner has shown by a preponderance of the evidence that claims challenged claims 1, 2, 6–11, 13, 15, 16, and 18–23 of the '344 patent are unpatentable. In summary:

[14] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2). Patent Owner is further reminded that under 37 C.F.R. 42.73(d)(3)(i), a patent owner is precluded from taking action inconsistent with the adverse judgment, including obtaining in any patent a claim that is not patentably distinct from a cancelled claim.

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 6, 7, 16, 18–23	102	Crowds	1, 2, 6, 7, 16, 18–23	
1, 2, 6, 7, 16, 18–25, 29, 30, 39, 41–46	103	Crowds	1, 2, 6, 7, 16, 18–25, 29, 30, 39, 41–46	
8, 9, 31, 32	103	Crowds, RFC 1122	8, 9, 31, 32	
10, 11, 13, 33, 34, 36	103	Crowds, RFC 2616	10, 11, 13, 33, 34, 36	
Overall Outcome			1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, 41–46	

V. ORDER

Accordingly, it is

ORDERED that claims 1, 2, 6–11, 13, 16, 18–25, 29–34, 36, 39, and 41–46 of U.S. Patent No. 11,044,344 B2 have been shown to be unpatentable;

FURTHER ORDERED that the Motions to Seal (Papers 15, 21) are *granted*;

FURTHER ORDERED that the request to enter the protective order is *granted*;

FURTHER ORDERED that, no later than ten business days after the issuance of this Final Written Decision, the parties may file a joint motion to seal portions of this Final Written Decision, explaining why portions of it

should remain under seal, and including as an attachment a redacted version of the Final Written Decision that can be made publicly available;

FURTHER ORDERED that the present decision shall remain under seal until any joint motion to seal the Final Written Decision is resolved;

FURTHER ORDERED that the present decision shall be made public if, after the expiration of the time for the parties to file a joint motion to seal, no such motion has been filed; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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.

IPR2022-00353
Patent 11,044,344 B2

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