

2023-2144, 2023-2145, 2023-2146, 2023-2147,
2023-2414, 2023-2415, 2023-2442 & 2023-2443

**United States Court of Appeals
for the Federal Circuit**

BRIGHT DATA LTD.,

Appellant,

— v. —

CODE200, UAB, TESO LT, UAB, METACLUSTER LT, UAB, OXYSALES,
UAB, THE DATA COMPANY TECHNOLOGIES INC., MAJOR DATA UAB,
CORETECH LT, UAB,

Appellees.

*On Appeals from the United States Patent and Trademark Office,
Patent Trial and Appeal Board in Nos. IPR2022-00103, IPR2022-
00135, IPR2022-00138, IPR2022-00353, IPR2022-00915, IPR2022-
00916, IPR2021-01492, IPR2022- 00861, IPR2021-01493 and
IPR2022-00862*

BRIEF FOR APPELLANT

KORULA T. CHERIAN
ROBERT M. HARKINS, JR.
CHERIAN LLP
2001 Addison Street, Suite 275
Berkeley, California 94704
(510) 944-0190
sunnyc@cherianllp.com
bobh@cherianllp.com

THOMAS M. DUNHAM
RONALD R. WIELKOPOLSKI
CHERIAN LLP
1901 L Street NW, Suite 700
Washington, DC 20036
(202) 838-1560
tomd@cherianllp.com
ronw@cherianllp.com

Counsel for Appellant

February 6, 2024

CLAIM AT ISSUE – U.S. PATENT NO. 11,044,342

1. [preamble] A method for use with a web server that responds to Hypertext Transfer Protocol (HTTP) requests and stores a first content that is identified by a first Uniform Resource Locator (URL), the method by a first client device comprising:

[1a] executing, by the first client device, a web browser application or an email application;

[1b] establishing a Transmission Control Protocol (TCP) connection with a second server;

[1c] receiving, the first content from the web server over an Internet; and

[1d] sending the received first content, to the second server over the established TCP connection, in response to the receiving of the first URL.

CLAIM AT ISSUE – U.S. PATENT NO. 10,257,319

1. [preamble] A method for use with a first client device, for use with a first server that comprises a web server that is a Hypertext Transfer Protocol (HTTP) server that responds to HTTP requests, the first server stores a first content identified by a first content identifier, and for use with a second server, the method by the first client device comprising:

[1a] receiving, from the second server, the first content identifier;

[1b] sending, to the first server over the Internet, a Hypertext Transfer Protocol (HTTP) request that comprises the first content identifier;

[1c] receiving, the first content from the first server over the Internet in response to the sending of the first content identifier; and

[1d] sending, the first content by the first client device to the second server, in response to the receiving of the first content identifier.

CLAIM AT ISSUE – U.S. PATENT NO. 10,484,510

1. [preamble] 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:

[1a] establishing a Transmission Control Protocol (TCP) connection with a second server;

[1b] sending, to the web server over an Internet, the first content identifier;

[1c] receiving, the first content from the web server over the Internet in response to the sending of the first content identifier; and

[1d] sending the received first content, to the second server over the established TCP connection, in response to the receiving of the first content identifier.

CLAIMS AT ISSUE – U.S. PATENT NO. 11,044,344

1. [preamble] 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:

[1a] communicating with a second server;

[1b] receiving, from the second server, the first URL;

[1c] sending, to the web server over the Internet, the first URL;

[1d] receiving, the first web-page from the web server over the Internet in response to the sending of the first URL; and

[1e] sending the received first web-page to the second server, in response to the receiving of the first URL.

...

24. [preamble] A method for use with a web server that stores a first web-page identified by a first Uniform Resource Locator (URL), and for use with an

additional web-server that stores a second web-page identified by a second URL, the method by a first device comprising:

[24a] receiving, from the second server, the first URL;

[24b] sending, to the web server over the Internet, the first URL;

[24c] receiving, the first web-page from the web server over the Internet in response to the sending of the first URL;

[24d] sending the received first web-page to the second server, in response to the receiving of the first URL;

[24e] receiving, from the second server, the second URL;

[24f] sending, to the additional web-server over the Internet in response to the receiving of the second URL, the second URL; and

[24g] receiving the second web-page from the additional web-server over the Internet in response to the sending.

FORM 9. Certificate of Interest

Form 9 (p. 1)
March 2023**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT****CERTIFICATE OF INTEREST****Case Number** 23-2144, -2145, -2146, -2147, -2414, -2415, -2442, -2443**Short Case Caption** Bright Data Ltd. v. Code200, UAB**Filing Party/Entity** Bright Data Ltd.**Instructions:**

1. Complete each section of the form and select none or N/A if appropriate.
2. Please enter only one item per box; attach additional pages as needed, and check the box to indicate such pages are attached.
3. In answering Sections 2 and 3, be specific as to which represented entities the answers apply; lack of specificity may result in non-compliance.
4. Please do not duplicate entries within Section 5.
5. Counsel must file an amended Certificate of Interest within seven days after any information on this form changes. Fed. Cir. R. 47.4(c).

I certify the following information and any attached sheets are accurate and complete to the best of my knowledge.

Date: 02/05/2024Signature: /s/ Robert M. Harkins, Jr.Name: Robert M. Harkins, Jr.

FORM 9. Certificate of Interest

Form 9 (p. 2)
March 2023

1. Represented Entities. Fed. Cir. R. 47.4(a)(1).	2. Real Party in Interest. Fed. Cir. R. 47.4(a)(2).	3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. ☒ None/Not Applicable	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. ☐ None/Not Applicable
Bright Data Ltd.		IPPN Group Ltd.

☐ Additional pages attached

FORM 9. Certificate of Interest

Form 9 (p. 3)
March 2023

4. Legal Representatives. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

☐ None/Not Applicable☐ Additional pages attached

Cherian LLP, 1901 L Street NW, Suite 700, Washington, DC 20036		
Elizabeth A. O'Brien		

5. Related Cases. Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

☒ Yes (file separate notice; see below) ☐ No ☐ N/A (amicus/movant)

If yes, concurrently file a separate Notice of Related Case Information that complies with Fed. Cir. R. 47.5(b). **Please do not duplicate information.** This separate Notice must only be filed with the first Certificate of Interest or, subsequently, if information changes during the pendency of the appeal. Fed. Cir. R. 47.5(b).

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

☒ None/Not Applicable☐ Additional pages attached

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	viii
STATEMENT OF RELATED CASES UNDER FED. CIR. R. 47.5	x
I. JURISDICTIONAL STATEMENT	1
II. STATEMENT OF ISSUES	2
III. INTRODUCTION	4
IV. STATEMENT OF THE CASE	10
A. INTRODUCTION TO THE CASE	10
B. BACKGROUND OF THE INVENTIONS	10
C. SUMMARY OF THE INVENTIONS	12
D. COMMERCIAL EMBODIMENT OF THE INVENTIONS	15
E. LITIGATION HISTORY	16
1. Bright Data prevailed in the Oxylabs Litigation where the district court repeatedly recognized the claims use different types of network components arranged in a specific way.....	17
2. The district court expressly rejected purely role-based constructions in the NetNut Litigation.....	19
3. The PTAB entered final written decisions based on art and arguments that were already rejected by the district court in the Oxylabs Litigation and the NetNut Litigation.....	20
V. SUMMARY OF THE ARGUMENT	21
VI. ARGUMENT	23
A. STANDARD OF REVIEW	23
B. BRIGHT DATA’S CONSTRUCTIONS THAT “CLIENT DEVICE” IS A “COMPUTER OF A CONSUMER” AND “SECOND SERVER” IS A “SERVER THAT IS NOT A CLIENT DEVICE” ARE CORRECT.....	23

1.	The patentee acted as a lexicographer by specifically defining “client devices” as “computers of consumers” and distinguishing them from commercial network “servers”	24
2.	Prosecution history precludes constructions that are role-based by confirming the importance of the hardware differences between “client devices” and “servers”	26
a.	The Patentee defined and limited the meaning of “client devices” and “servers” in the original prosecution	26
b.	The Patentee’s Statements in Response to IPR Petitions Constitute Relevant Prosecution History	30
3.	The claim terms must be read in light of the specification, which supports Bright Data’s constructions	32
a.	The specification and claims set out a specific architecture that requires “client devices” be used as proxies between a network server and a web server	32
b.	The Background and Summary of the Invention make clear that the proxy problem is the use of expensive commercial hardware “servers” that is solved by creating a new network of “client devices” that are computers of consumers	37
c.	The specification clearly distinguishes “servers” from “client devices”	39
d.	A POSA would have understood from the specification that “client devices” are distinct hardware from “servers”	41
4.	The claim language itself makes sense only if “client device” and “server” are distinguished from each other as different types of hardware used in a novel architecture	43

C.	THE PTAB’S CONSTRUCTIONS OF “CLIENT DEVICE” AND “SECOND SERVER” THAT ADOPT ROLE-BASED HTTP SOFTWARE DEFINITIONS ARE INCORRECT AND INCONSISTENT WITH THE SPECIFICATION, PROSECUTION HISTORY, AND USAGE IN THE CLAIMS	44
1.	The PTAB failed to apply basic claim construction principles in view of lexicography, the prosecution history, and the claim terms in the context of the patent specification	45
2.	The PTAB’s constructions of “client device” and “server” contradict the express claim language	46
3.	The PTAB’s constructions improperly render the discussed differences between the prior art and the invention moot by failing to recognize any difference between proxy servers and agents.....	49
4.	Nowhere do the Challenged Patents incorporate role-based HTTP software definitions	51
D.	THE PTAB ERRED IN ITS ANALYSIS OF THE PRIOR ART BOTH BY FAILING TO APPLY CORRECT CLAIM CONSTRUCTIONS AND BY MISAPPLYING ITS OWN CLAIM CONSTRUCTIONS	53
1.	Crowds does not invalidate the independent claims of the ‘342, ‘319, ‘510, and ‘344 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions	54
2.	Border does not invalidate the independent claims of the ‘319 and ‘510 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions	57
3.	Morphmix does not invalidate the independent claims of the ‘319 and ‘510 patents under Bright Data’s constructions or under the PTAB’s incorrect constructions	60

4.	Plamondon does not invalidate the independent claims of the ‘319 and ‘510 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions	62
E.	THE PTAB ERRED IN ITS NEXUS ANALYSIS	66
VII.	CONCLUSION.....	68

TABLE OF AUTHORITIES

	Page(s)
Cases:	
<i>ABS Glob., Inc. v. Cytonome/St, LLC</i> , 84 F.4th 1034 (Fed. Cir. 2023).....	53
<i>Amdocs Isr. Ltd. v. Openet Telecom, Inc.</i> , 841 F.3d 1288 (Fed. Cir. 2016).....	35
<i>Aylus Networks, Inc. v. Apple Inc.</i> , 856 F.3d 1353 (Fed. Cir. 2017).....	26, 30
<i>Bd. of Regents v. BENQ Am. Corp.</i> , 533 F.3d 1362 (Fed. Cir. 2008).....	46
<i>BlephEx, LLC v. Myco Indus.</i> , 24 F.4th 1391 (Fed. Cir. 2022).....	36
<i>Cuozzo Speed Technologies, LLC v. Lee</i> , 136 S. Ct. 2131, 195 L. Ed. 2d 423 (2016).....	30
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	23
<i>Inverness Med. Switz. GmbH v. Warner Lambert Co.</i> , 309 F.3d 1373 (Fed. Cir. 2002).....	46
<i>IXI IP, LLC v. Samsung Elecs. Co.</i> , 903 F.3d 1257 (Fed. Cir. 2018).....	23
<i>Kennametal, Inc. v. Ingersoll Cutting Tool Co.</i> , 780 F.3d 1376 (Fed. Cir. 2015).....	23
<i>Krippelz v. Ford Motor Co.</i> , 667 F.3d 1261 (Fed. Cir. 2012).....	30
<i>Kyocera Senco Indus. Tools, Inc. v. ITC</i> , 22 F.4th 1369 (Fed. Cir. 2022).....	24
<i>Microsoft Corp. v. Biscotti, Inc.</i> , 878 F.3d 1052 (Fed. Cir. 2017).....	65
<i>Microsoft Corp. v. Proxyconn, Inc.</i> , 789 F.3d 1292 (Fed. Cir. 2015), <i>overruled on other grounds by</i> <i>Aqua Prods., Inc. v. Matal</i> , 872 F.3d 1290 (Fed. Cir. 2017).....	44, 45

<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	26, 32, 46
<i>TecSec, Inc. v. Adobe Inc.</i> , 978 F.3d 1278 (Fed. Cir. 2020)	36
<i>Telcordia Technologies, Inc. v. Cisco Systems, Inc.</i> , 612 F.3d 1365 (Fed. Cir. 2010)	46
<i>Teva Pharms. USA, Inc. v. Sandoz, Inc.</i> , 574 U.S. 318 (U.S. 2015)	23
<i>Thales Visionix, Inc. v. United States</i> , 850 F.3d 1343 (Fed. Cir. 2017)	35
<i>Trading Techs. Int’l, Inc. v. CQG, Inc.</i> , 675 F. App’x 1001 (Fed. Cir. 2017)	36
<i>Vitronics Corp. v. Conceptronic</i> , 90 F.3d 1576 (Fed. Cir. 1996)	24

Statutes and Other Authorities:

28 U.S.C. § 1295(a)(4)(A)	1
35 U.S.C. § 141	1
35 U.S.C. § 141(c)	1
Fed. Cir. R. 15	1
Fed. Cir. R. 52	1
Border, <i>et al.</i> , U.S. Patent No. 6,795,848 B1 (Sep. 21, 2004)	3
Marc Rennhard, <i>MorphMix – A Peer-to-Peer-based System for Anonymous Internet Access</i> (2004)	3
Michael K. Reiter, <i>Crowds: Anonymity for Web Transactions</i> , <i>ACM Transactions on Information and System Security</i> , Vol. 1, No. 1, November 1998	3
Plamondon, U.S. Patent Application Publication US 2008/0228938 A1, published September 18, 2008	3

STATEMENT OF RELATED CASES UNDER FED. CIR. R. 47.5

Appellant Bright Data Ltd. states as follows:

U.S. Patent Nos. 10,257,319 and 10,484,510 are involved in the following pending district court cases:

- *Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Teso LT, UAB, et al.*, No. 2:19-cv-395 (E.D. Tex.); and
- *Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Tefincom S.A.*, No. 2:19-cv-414 (E.D. Tex.).

U.S. Patent Nos. 10,257,319 and 10,484,510 are involved in the following pending administrative matters:

- Reexamination Control No. 90/014,875; and
- Reexamination Control No. 90/014,876.

Other patents related to U.S. Patent Nos. 11,044,342, 10,257,319, 10,484,510, and 11,044,344 in the same family are involved in the following pending district court cases and administrative matters:

- *Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Code200, UAB, et al.*, No. 2:19-cv-396 (E.D. Tex.);
- *Bright Data Ltd. v. Oxylabs, UAB*, No. 2:23-cv-171 (E.D. Tex.);

- *Oxylabs, UAB v. Bright Data Ltd.*, IPR2023-01425;
- *Oxylabs, UAB v. Bright Data Ltd.*, IPR2024-00126;
- Reexamination Control No. 90/014,652;
- Reexamination Control No. 90/014,816;
- Reexamination Control No. 90/014,624;
- Reexamination Control No. 90/014,827; and
- Reissue Application No. 18/523,800.

Other patents by the same inventors of U.S. Patent Nos. 11,044,342, 10,257,319, 10,484, 510, and 11,044,344 and directed at similar technologies are involved in the following pending administrative matters:

- *Metacluster LT, UAB, v. Bright Data Ltd.*, PGR2022-00052;
- *Metacluster LT, UAB, v. Bright Data Ltd.*, PGR2022-00061; and
- Reexamination Control No. 90/014,880.

I. JURISDICTIONAL STATEMENT

This is a consolidated set of appeals, Nos. 2023-2144, 2023-2145, 2023-2146, 2023-2147, 2023-2414, 2023-2415, 2023-2442, and 2023-2443. Dkts. 10, 11, 16, 17. Each appeal pursuant to 35 U.S.C. § 141(c) is from a Final Written Decision (“FWD”) of the Patent Trial and Appeal Board (“PTAB”) of the United States Patent and Trademark Office (“USPTO”). Each Notice of Appeal (“NOA”) was timely filed under 35 U.S.C. § 141 and Fed. Cir. R. 15 and 52 by the real party-in-interest, Bright Data Ltd. This Court’s jurisdiction rests on 35 U.S.C. § 141 and 28 U.S.C. § 1295(a)(4)(A).

Case No.	IPR No.	Patent No.	Date of FWD	Date of NOA
2023-2144	IPR2022-00103	11,044,342	May 30, 2023	July 7, 2023
2023-2145	IPR2022-00135	10,257,319	May 25, 2023	July 7, 2023
2023-2146	IPR2022-00138	10,484,510	May 9, 2023	July 7, 2023
2023-2147	IPR2022-00353	11,044,344	June 27, 2023	July 7, 2023
2023-2414	IPR2022-00915	10,257,319	Sept. 13, 2023	Sept. 18, 2023
2023-2415	IPR2022-00916	10,484,510	Sept. 13, 2023	Sept. 18, 2023
2023-2442	IPR2021-01492 ¹	10,257,319	Sept. 22, 2023	Sept. 27, 2023
2023-2443	IPR2021-01493 ²	10,484,510	Sept. 22, 2023	Sept. 27, 2023

¹ IPR2022-00861 was joined to IPR2021-01492 and then terminated. Appx39297.

² IPR2022-00862 was joined to IPR2021-01493 and then terminated. Appx46356.

II. STATEMENT OF ISSUES

1. Does the claim term “client device” mean “computers of consumers” (consumer computers) as proposed by Bright Data, based on lexicography, intrinsic evidence, and supporting expert testimony? And was the PTAB incorrect in construing “client device” when it refused to apply the lexicography definition in from the patent, contradicted the express claim language, the specification’s disclosure differentiating client devices and servers, and the prosecution history?
2. Does the claim term “second server” mean a “server that is not a client device” as proposed by Bright Data, based on the intrinsic evidence, and supporting expert testimony? And was the PTAB incorrect in construing “second server” when it contradicted the express claim language, the specification’s disclosure differentiating client devices and servers, and the prosecution history?

3. Did the PTAB err in determining that the independent claims of the ‘342, ‘319, ‘510, ‘and ‘344 Patents are unpatentable in view of Crowds³, Border⁴, MorphMix⁵ and/or Plamondon⁶?
4. Do the PTAB’s incorrect constructions for “client device” and “second server” warrant remand on the issue of nexus between independent claim 1 of each of the ‘342, ‘319, ‘510, and ‘344 Patents and Bright Data’s residential proxy service regarding secondary considerations of non-obviousness?

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 (“Crowds”). Appx2391-2417.

⁴ Border, *et al.*, U.S. Patent No. 6,795,848 B1 (Sep. 21, 2004) (“Border”). Appx41496-41510.

⁵ Marc Rennhard, *MorphMix – A Peer-to-Peer-based System for Anonymous Internet Access* (2004) (“MorphMix”). Appx40570-40876.

⁶ Plamondon, U.S. Patent Application Publication US 2008/0228938 A1, published September 18, 2008 (“Plamondon”). Appx9493-9617.

III. INTRODUCTION

The claims of the Challenged Patents (the ‘342, ‘319, ‘510, and ‘344 Patents) recite methods of fetching content from public web servers using an entirely new product category known as “residential proxy service.” In invalidating the claims, the PTAB incorrectly construed two claim terms used throughout the claims at issue: “client device” and “second server.” This Court’s *de novo* review should conclude that the correct constructions for those two terms (whereby “client devices” are “computers of consumers” (*i.e.*, “consumer computers”) and “second server” is the commercial hardware device known as a server that is not a client device) preclude findings of invalidity. The decisions should be remanded with instructions to find each of the challenged patent claims not invalid over the cited prior art.

As used in the Challenged Patents, in computer networking and communications over the Internet, “proxies” are intermediate components that act on behalf of a user to obtain information the user otherwise might not be able to or want to access directly. Whereas in the prior art, expensive commercial server equipment was used for proxies, inventors Derry Shriman and Ofer Vilenski created a new proxy network relying on many millions of consumer computers (smart phones, tablets, laptop computers, etc.) repurposed as proxies instead of, or in addition to, the much more limited and expensive prior art proxy servers. Thus,

the Challenged Patents speak to hardware problems and provide a hardware and software-based solution to register and maintain a flexible network of consumer client devices used as proxies for communications that would otherwise flow between two servers.

The inventors expressly defined client devices as hardware that are “computers of consumers” (“computers of consumers, referred to herein as client devices,” Appx1159(2:44-46)) in contrast to servers that are commercial hardware components. The differentiation between client devices and servers was reinforced throughout the patent specification and during prosecution including by explaining the attributes of client devices versus servers.⁷

The PTAB ignored the hardware-based language of the Challenged Patents as used in the specification and prosecution history. Instead, the PTAB incorrectly relied on purely role-based software protocol definitions of “client” (*not* the claim term “client device”) and “server” as set forth in what is known as the “client-server model” in the HyperText Transfer Protocol (HTTP) described in RFC 2616. In that protocol, any software that makes requests or receives responses acts as a

⁷ In litigation between Bright Data and Oxylabs, the U.S. District Court for the Eastern District of Texas recognized the importance of the hardware by finding that “client devices” and “servers” are not generic computers. The district court construed a “client device” as a “communication device,” that as described in the Challenged Patents is a type of consumer computing device, in contrast to a “server”. Appx2946, Appx2948.

“client” and any software that receives requests and sends responses acts as a “server.” But the Challenged Patents do not use the terms that way. So the PTAB’s application of role-based software definitions to the claim terms in the Challenged Patents contradicts the teachings of the Challenged Patents in violation of core claim construction principles.

The problem and solution set out in the Challenged Patents show why the PTAB is incorrect. The specification expressly discloses the problems with proxy servers in the Background of the Invention section. The specification expressly solves the problems by creating an entirely new type of network using proxy client devices. The Challenged Patents discuss servers (commercial hardware) that are prohibitively expensive and impractical to deploy around the world. Appx1159(2:24-39). The solution of the Challenged Patents relies on computers of consumers to allow for “large distribution systems without the large hardware costs involved with a proxy [server] solution.” Appx1159(2:40-41).

Not only do the PTAB’s claim constructions contradict the Background and Summary of the Invention, they conflict with the differences between the prior art and the invention illustrated in Figures 1 and 3. Appx1144, Appx1146. Figure 1 sets out the prior art hardware proxy server solution that the Challenged Patents explain is too expensive and logistically too difficult to deploy and use worldwide.

Then, in Figure 3 the Challenged Patents illustrate an inventive embodiment, which is to replace or supplement servers with client devices known as “agents”:

Fig. 1 – Prior Art
(excerpted & annotated)

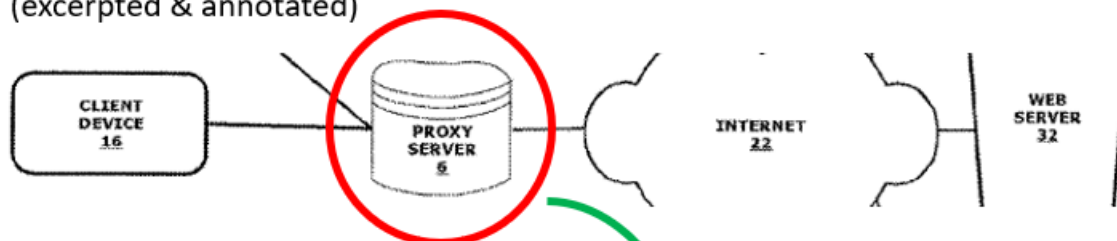
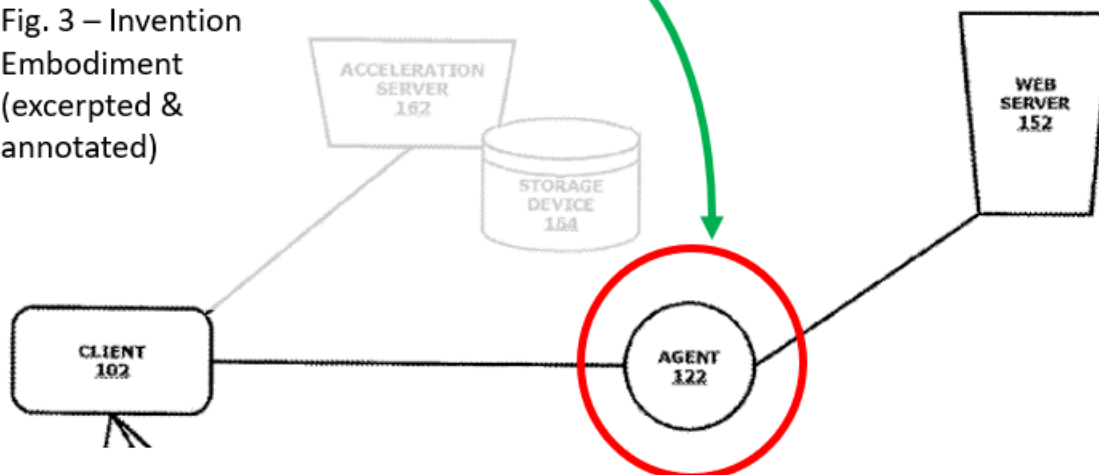


Fig. 3 – Invention
Embodiment
(excerpted & annotated)



In this way, the specification identifies that the prior art problem stemming from expensive and limited server hardware can be solved by relying on cheaper, abundant consumer-owned client devices that are used to create a new type of client device proxy network.⁸

By incorrectly relying on software role-based definitions in HTTP, the PTAB incorrectly found that the prior art Proxy Server in Fig. 1 is no different than the

⁸ According to the specification, the proxy client devices may register with an acceleration server.

exemplary inventive Agent in Fig. 3. The PTAB's claim constructions informed its further incorrect finding that every intermediary component acting as a proxy - whether client device or server - is necessarily both a "client" (because it makes requests and receives responses) and a "server" (because it receives requests and sends responses). In this way, the PTAB ignored and eliminated any meaningful difference between the prior art servers and the inventive consumer computer client device network. As a result, the PTAB's constructions undermine the very purpose of the Challenged Patents.

The PTAB's claim constructions not only improperly rewrite the claims and contradict the purpose of the Challenged Patents, they also cannot be harmonized with the claims themselves. For example, the PTAB defined "client device" as "operating in the role of a client" (per HTTP), but the Challenged Claims require the client device to receive requests and send responses, which under HTTP is the role of the server and not the role of the client. Similarly, the PTAB defined "server" as "operating in the role of a server" (again per HTTP) but the claims require the server to make requests, which under HTTP is the role of a client and not the role of a server.⁹ Thus, the PTAB's constructions as applied to the usage of the terms in the claims are nonsensical.

⁹ For example, the claimed "client device" is not "operating in the role of a client" during the method steps recited in limitation 1[d] of the '342 Patent; limitations

The PTAB's claim construction errors also lie at the heart of all its invalidity findings. By ignoring the distinction between client *device* (*i.e.*, hardware) and server hardware, the PTAB effectively rewrote the claims to delete the hardware requirements of “server” and “client device” to instead allow for the claimed steps to occur between any “computer” and any other “computer,” rendering the Challenged Patent claims meaningless.

Once the PTAB's claim construction errors are corrected, it becomes clear that none of the cited prior art discloses the novel architecture recited in the Challenged Patent claims, and all the claims are valid as they were originally determined to be when each of the four patents issued. Additionally, even applying the constructions the PTAB adopted, the PTAB proceeded to misapply those constructions, and proper application of even the PTAB's constructions shows that there is no invalidating prior art.

The PTAB also applied the incorrect constructions to its nexus analysis regarding evidence of secondary considerations, which warrants a remand as well.

1[a] and 1[d] of the ‘319 Patent; limitation 1[d] of the ‘510 Patent; and limitations 1[b] and 1[e] of the ‘344 Patent.

IV. STATEMENT OF THE CASE

A. INTRODUCTION TO THE CASE

These consolidated appeals are from *inter partes* review (“IPR”) proceedings involving the ‘342, ‘319, ‘510, and ‘344 Patents. The patents at issue are all from the same patent family currently having fifty-five (55) issued patents, each claiming methods for using different types of network components arranged in a specific way for fetching web content. Patents in this family have been asserted successfully in district court litigation against infringing proxy services, including the ‘319 and ‘510 Patents, which assertion resulted in a multi-million-dollar jury verdict against Oxylabs¹⁰ finding the ‘319 and ‘510 Patents willfully infringed *and not invalid*. Appx6334-6337.

B. BACKGROUND OF THE INVENTIONS

The related ‘342, ‘319, ‘510, and ‘344 Patents share a common specification and claim priority to U.S. Provisional Application No. 61/249,624, filed October 8, 2009. Appx1137-1138, Appx1170-1171, Appx1199-1200, Appx1229-1230.

Fig. 1 of the specification shows the prior art use of an intermediary proxy server to fetch content from a web server, in a well-known client device ↔ proxy

¹⁰ In 2022, Oxysales, UAB and metacluster It, UAB merged into Teso LT, UAB, which is now known as Oxylabs, UAB (“Oxylabs”). Oxylabs and Code200, UAB are wholly owned subsidiaries of coretech It, UAB. Appx2080, Dkt. 3 at 2. Following the jury verdict but before entering final judgment, the district court *sua sponte* stayed the Oxylabs Litigation in view of the PTAB proceedings.

server ↔ web server architecture. Appx1144, Appx1159(2:8-39), Appx7160-7161(¶49), Appx7166(¶57). A POSA would have known that the use of an intermediary proxy protects the identity of the requesting client device. *Id.* However, the specification explains that the use of intermediary proxy **servers** has high infrastructure costs because a proxy server would “need to be deployed at every point around the world.” Appx1159(2:24-39). To deploy this many commercial servers around the world, “the capital investment would be in the range of billions of dollars.” *Id.*

To solve the prior art problems, the claimed inventions recite methods for using a client device located between two servers to fetch fresh web content. This is a non-traditional architecture with different types of networks components (client devices vs. servers) arranged in a specific way, as recognized by the district court during litigation and by the jury at trial. *See* Section VI.B *infra*.

This non-traditional architecture keeps the benefits present in prior art proxy server solutions (*e.g.*, provides anonymity) yet addresses the problems in the prior art (*e.g.*, lowers infrastructure costs, is able to handle dynamic content well). *See, e.g.*, Appx1159(1:54-57), Appx1159(2:24-41), Appx3208, Appx7160-7161(¶¶48-49), Appx7166-7167(¶¶57-58), Appx7201-7202(¶¶135-137), Appx7223-7224(¶187), Appx6786. By utilizing computers of consumers as proxies, dramatically fewer proxy servers are needed, thereby lowering infrastructure costs,

given that there are many millions of consumer computers available for use as proxy client devices worldwide. *E.g.*, Appx1159(2:24-41), Appx7167(¶58), Appx7223-7224(¶187). These proxy client devices use residential IP addresses (as opposed to proxy servers using commercial IP addresses) which reduces the risk of blocking/spoofing by the web server. *E.g.*, Appx7166(¶57), Appx7201-7202(¶¶135-137).

C. SUMMARY OF THE INVENTIONS

The claimed methods operate within the same non-traditional architecture and recite a **second server**, a **first client device**, and a **first/web server**^{11,12}. The non-traditional architecture is shown below:

second server ↔ **first client device** ↔ **first/web server**

Claim 1 of each of the ‘342, ‘319, ‘510, and ‘344 Patents recite steps that are performed by the **first client device**. In operation, the method steps can generally be described as follows:

¹¹ The ‘319 Patent recites a “first server”, while the ‘342, ‘510, and ‘344 Patents recite a “web server”. It is undisputed that the “first server” of the ‘319 Patent corresponds to a web server.

¹² It is noted that independent claim 24 of the ‘344 Patent recites a “first device” rather than a first client device. This particular claim is included in this appeal because Crowds does not disclose a “second server”. *See infra*, at 54-57.

- The **first client device** receiving a request comprising the content identifier (*e.g.*, uniform resource locator (URL)) from the **second server**;
- The **first client device** sending a request comprising the content identifier to the **web server**;
- The **first client device** receiving a response comprising the requested content from the **web server**; and
- The **first client device** sending a response comprising the requested content to the **second server**.

As the following annotated figure shows, a POSA would have understood that the **second server** corresponds to a proxy server and that the **first client device** corresponds to a proxy client device. Appx7171-7173(¶64).¹³ A POSA would have understood that the **second server** and **first client device** are both intermediary proxies, where the proxy client device (and not the proxy server) is the “exit node” that communicates with the web server.

¹³ A POSA would have understood from the disclosure that proxy server 6 of Fig. 1 could be arranged between client 102 and agent 122 of Fig. 3, as shown in Modified Fig. 3, provided by Dr. Williams. Appx7171-7173(¶64), Appx42630-42632(112:4-114:2). It is not disputed that using a proxy server as an intermediary was well known prior to October 8, 2009. *E.g.*, Appx6493(93:16-24), Appx1144.

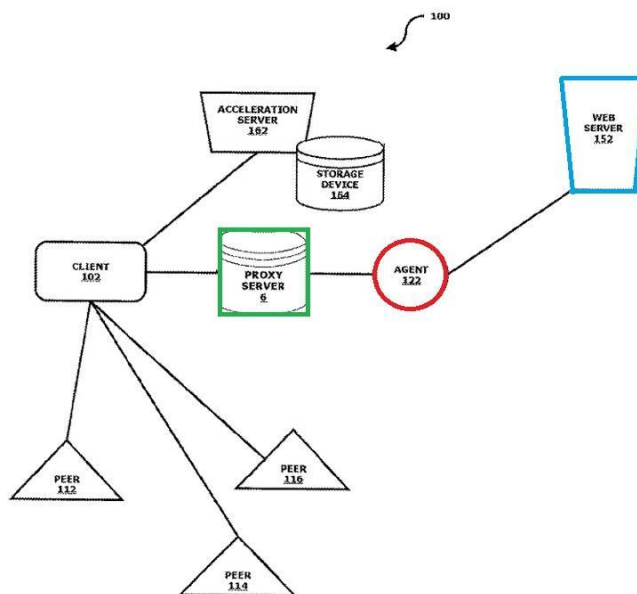


FIG. 3

Appx7171-7173(¶64).

The specification discloses “client devices” (including clients, peers, and agents) are communication devices that are “computers of consumers,” i.e., consumer computers, and it distinguishes client devices from servers. *See, e.g.*, Appx1159(2:44-46), Appx1160(3:17-28), Appx1160(4:41-50), Appx1160-61(4:62-5:34), Appx1163(9:12-50), Appx7170-7171(¶63), Appx1166(15:39-42), Appx1166(15:51-52), Appx1166(15:63-16:11); Appx1149.¹⁴ This differentiation is consistent with the prosecution history statements, where for example, Bright Data

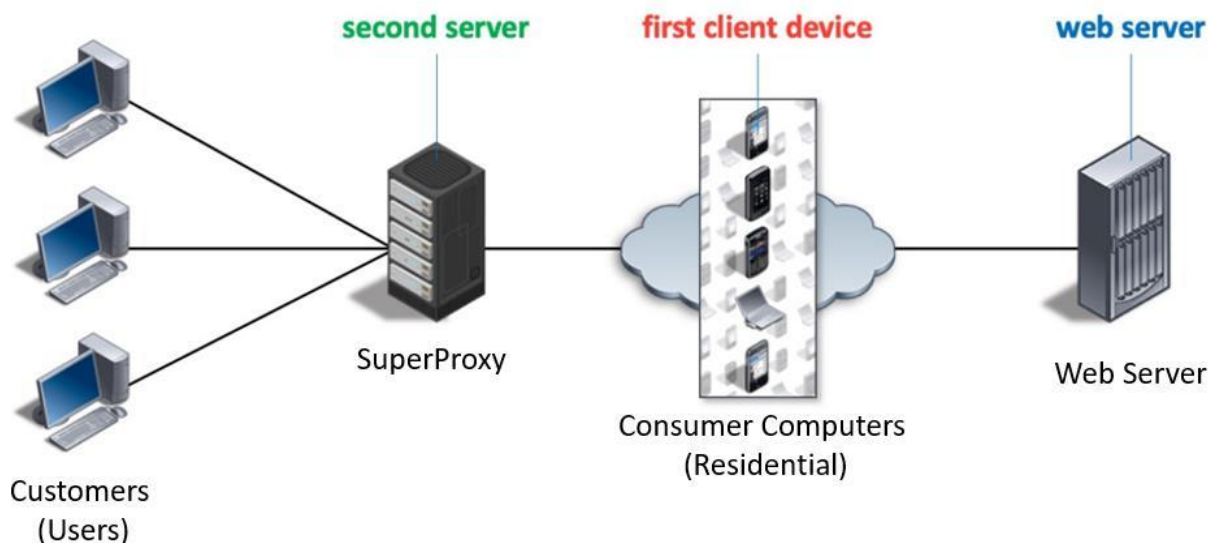
¹⁴ *See also* Appx1159(2:40-43) (contrasting client devices from servers), Appx1160(4:43-50) (server not included as communication device), Appx1160(4:6-13) (identifying Figs. 4-6 as illustrating “a communication device of the communication network of FIG. 3”), Appx1149 (Fig. 6 showing modules 224, 226, 228 loaded onto a communication device, not a server).

stated: “the claims disclose a **server** receiving information from another **server** via a **client device**.” Appx3208 (emphasis added).

The specification discloses a proxy server may be placed between one or more client devices. Appx1159(2:10-12). The specification also discloses an acceleration server may be used with client devices. Appx1166-1167(16:47-17:13).

D. COMMERCIAL EMBODIMENT OF THE INVENTIONS

Bright Data provides a residential proxy service that embodies the claimed inventions. Bright Data’s residential proxy service uses residential consumer computers having residential IP addresses as proxy client devices according to the claimed methods. Appx7198-7199(¶¶130-131) Appx7201(¶134). An exemplary representation of Bright Data’s residential proxy network is shown below:



Appx7295, Appx7201(¶134). Bright Data’s non-traditional use of a proxy client device created a worldwide network of tens of millions of proxy client devices, in approximately 195 countries, to overcome the problems associated with prior art systems. Appx7199(¶131), Appx7201-7202(¶136). According to an independent report from Frost & Sullivan, Bright Data dominated the market for “Internet Protocol Proxy Networks (IPPN)” with approximately 53.1% market share in 2018. Appx6836.¹⁵ The next biggest competitor was Oxylabs at 13.3%. *Id.*

E. LITIGATION HISTORY

The ‘342 and ‘344 Patents have not been asserted in any district court litigation. The ‘319 and ‘510 Patents have been asserted in district court litigation, including *Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Oxylabs, UAB f/k/a Teso LT, UAB, et al.*, No. 2:19-cv-395 (E.D. Tex.) (“Oxylabs Litigation”) and *Bright Data Ltd. f/k/a Luminati Networks Ltd. v. NetNut Ltd*, No. 2:21-cv-225 (E.D. Tex.) (“NetNut Litigation”).¹⁶

¹⁵ Residential proxy services accounted for approximately 73.6% of the IPPN. Appx6833.

¹⁶ The defendants in the Oxylabs Litigation were petitioners in IPR2022-00103, IPR2022-00353, IPR2021-01492, and IPR2021-01493. Teso LT, UAB is now known as Oxylabs.

1. Bright Data prevailed in the Oxylabs Litigation where the district court repeatedly recognized the claims use different types of network components arranged in a specific way.

Bright Data filed a complaint for infringement of the ‘319 and ‘510 Patents against Teso LT, UAB, *et. al.* (“Oxylabs”) in the Oxylabs Litigation. Appx18218-18265.

Prior to the district court claim construction order, Oxylabs filed IPR2020-01266 and IPR2020-01358 against the ‘319 and ‘510 Patents, respectively. Appx27404-27485, Appx27486-27572. Oxylabs alleged anticipation and obviousness of the independent claims of the ‘319 and ‘510 Patents based on primary references Crowds, Border, and Morphmix.¹⁷ *Id.* The PTAB denied institution of those IPRs, finding that the merits did not outweigh other factors favoring discretionary denial. Appx27389, Appx27401.

The district court’s subsequent Claim Construction Order construed the term “client device” to mean “communication device that is operating in the role of a client.” Appx2946 (emphasis added). And the district court construed the term “second server” to mean “server that is not the client device.” Appx2948 (emphasis added), Appx3011 (maintaining construction).

The district court later denied Oxylabs’ motion challenging the eligibility of the ‘319 and ‘510 Patents. Appx6319-6330. As the court explained, the

¹⁷ These same references are at issue in this appeal.

independent claims use a “non-traditional network structure with a client device acting as a proxy” and are not abstract. Appx6328. The district court recognized that a client device located between two servers is a non-traditional architecture. *Id.* The district court expressly rejected Oxylabs’ attempt to ignore that the claims recite different types of network components arranged in a specific way.

Appx6326-6327 (“If the claimed methods in this case were simply the receipt and forwarding of information over the Internet, [Oxylabs] might have a compelling argument. However, **it is the use of non-traditional client devices that transforms the Asserted Claims into non-abstract subject matter.**”) (emphasis added).

The district court also rejected Oxylabs’ arguments for summary judgment of invalidity of the ‘319 and ‘510 Patents, alleging anticipation by Crowds.¹⁸ Appx69372-69405, Appx6306.

After trial in the Oxylabs Litigation, the jury found that the asserted patents were not invalid and that Oxylabs’ infringement was willful. Appx6334-6336. Specifically, the jury found that the independent claims of the ‘319 and ‘510 Patents were not anticipated by Crowds.¹⁹ Appx53405-53406, Appx58751-58752.

¹⁸ This same reference and substantially similar arguments are at issue in this appeal.

¹⁹ This same reference and substantially similar arguments are at issue in this appeal.

The district court *sua sponte* stayed the Oxylabs Litigation in view of the pending USPTO proceedings.

2. The district court expressly rejected purely role-based constructions in the NetNut Litigation.

Concurrent with the Oxylabs Litigation, Bright Data sued NetNut Ltd. (“NetNut”) for infringement of the ‘319 and ‘510 Patents.²⁰ Appx42187.

NetNut then filed IPR2021-01492 and IPR2021-01493 against the ‘319 and ‘510 Patents, respectively. Like Oxylabs, NetNut alleged anticipation and obviousness of the independent claims of the ‘319 and ‘510 Patents based on primary references Crowds, Border, and Morphmix. Appx38947-39032, Appx46015-46099.

The district court’s Claim Construction Order maintained its same constructions of the terms “client device” and “second server” as in the Oxylabs Litigation. Appx6592, Appx6599. NetNut had proposed a construction of “client device” as a “device operating in the role of a client”, but the district court expressly rejected referring to a generic device operating in the role of a client, maintaining that a client device must specifically be a “communication device”. Appx6586, Appx6592. The district court also expressly rejected construing

²⁰ Bright Data also alleged infringement of U.S. Patent Nos. 10,491,713, 11,050,852, and 11,044,346, which are in the same patent family.

“second server” as a generic device operating in the role of a server. Appx6593-6594, Appx6599.

When the parties settled the NetNut litigation, NetNut was terminated as petitioner in IPR2021-01492 and IPR2021-01493. Appx39238-39241, Appx46300-46303. Oxylabs had filed joinder petitions and ultimately became the petitioner in those IPRs.²¹

3. The PTAB entered final written decisions based on art and arguments that were already rejected by the district court in the Oxylabs Litigation and the NetNut Litigation.

The PTAB invalidated the independent claims of the ‘319 and ‘510 Patents adopting Crowds-based arguments that were already rejected by the district court at the summary judgment stage and rejected by the jury in the Oxylabs Litigation. *See infra*, at 10 and 53-57. The PTAB also invalidated the independent claims of the ‘342 and ‘344 Patents adopting substantially similar Crowds-based arguments. *See id.*

In all IPRs at issue here, the PTAB reached its invalidity decisions using purely role-based constructions that the district court expressly rejected in the NetNut Litigation. *See infra*, at 19-20 and 53-66.

²¹ Major Data, UAB had also filed joinder petitions, but joinder was denied and IPR2022-00915 and IPR2022-00916 continued independently. Appx64264-64270, Appx71292-71298.

V. SUMMARY OF THE ARGUMENT

This appeal is about claim construction. Once the claim terms “client device” and “second server” are properly construed under *de novo* review, all invalidity determinations necessarily fail. Even under the PTAB’s incorrect constructions, the invalidity determinations are clearly erroneous.

The patents clearly set forth that “client devices” are “computers of consumers” (that is “consumer computers”) and that servers are expensive commercial hardware devices. The patentee acted as a lexicographer to define “client devices” this way, confirmed the hardware differences between client devices and servers in prosecution history both during the original prosecution and in response to rejected IPR petitions, consistently distinguished client devices and other “communications devices” from servers in the specification, set forth the problem of using commercial servers that was solved by creating a novel new network of client device proxies, and used the terms in a manner that only makes sense applying the hardware definitions in the claims themselves. Thus, Bright Data’s proposed constructions that “client devices” are “computers of consumers” (or “consumer computers”) and servers are commercial equipment that are “servers that are not client devices” are the only reasonable constructions for these terms. After conducting its *de novo* review, this Court should adopt those constructions.

Meanwhile, the PTAB's constructions are clearly incorrect. The PTAB adopted purely role-based constructions pursuant to the HTTP protocol, which is not at all how the patents use those terms, leading the PTAB to incorrectly construe "client device" as any device "operating in the role of a client" and "second server" as any device "operating in the role of a server". Such a determination contradicts the express definition of the term "client device", ignores definitive prosecution history, ignores the very purpose of the patents as set forth in the Background and Summary of the Invention, is inconsistent with the specification, and contradicts the use of the terms in the claims, leading to illogical and untenable results.

The PTAB applied its incorrect constructions when analyzing the prior art. And even under its incorrect constructions, the PTAB committed clear error because none of the prior art references disclose the novel **second server** ↔ **first client device** ↔ **web server** architecture of the claims. Thus, under Bright Data's constructions or the PTAB's incorrect constructions, the anticipation and obviousness arguments fail.

Lastly, because the PTAB used incorrect claim constructions in its analysis, the PTAB erred in rejecting Bright Data's showing of nexus. The overwhelming commercial success is a direct result of residential proxy services performing the recited methods using proxy consumer computers located between two servers.

VI. ARGUMENT

A. STANDARD OF REVIEW

This Court reviews the PTAB’s legal conclusions *de novo* and factual findings for substantial evidence. *See, e.g., IXI IP, LLC v. Samsung Elecs. Co.*, 903 F.3d 1257, 1263 (Fed. Cir. 2018). “Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Id.* (internal citations omitted).

Claim Construction is a question of law reviewed *de novo* based on underlying facts. *See, e.g., Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 321-22 (U.S. 2015).

Anticipation is a question of fact reviewed for substantial evidence. *See, e.g., Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015).

Obviousness is a question of law reviewed *de novo* based on underlying facts. *See, e.g., Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

B. BRIGHT DATA’S CONSTRUCTIONS THAT “CLIENT DEVICE” IS A “COMPUTER OF A CONSUMER” AND “SECOND SERVER” IS A “SERVER THAT IS NOT A CLIENT DEVICE” ARE CORRECT

There are five independent reasons why Bright Data’s constructions of “client device” as a “computer of a consumer” (*i.e.*, “consumer computer”) and “server” as the commercial networking equipment that was known as a “server that

is not a client device”: (1) lexicography; (2) prosecution history disclaimer; (3) the specific architecture and use of the terms in the specification; (4) the meaning of the claim terms to a POSA supported by expert testimony; and (5) the claim language itself that makes sense if client devices and servers are different types of hardware but not if one applies purely role-based software definitions.

1. The patentee acted as a lexicographer by specifically defining “client devices” as “computers of consumers” and distinguishing them from commercial network “servers.”

When a patentee expressly sets forth the definition of a claim term, the claim term must be given that meaning. *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, (Fed. Cir. 1996) (“Although the words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.”). One way a patentee acts as a lexicographer is to use the phrase “referred to herein as.” See *Kyocera Senco Indus. Tools, Inc. v. ITC*, 22 F.4th 1369, 1379 (Fed. Cir. 2022).

Here, the patentee expressly defined “client devices” to mean “computers of consumers,” Appx1159(2:44-46), and the Court should follow the basic claim construction principle of lexicography and give the term the exact meaning that the patentee said it had. The patentee expressly used the phrase “referred to herein as”

to define “client devices”: “In the network 50, files are stored on **computers of consumers, *referred to herein as client devices*** 60.” Appx1159 (2:44-46) (emphasis added). The prosecution history also refers to client devices as “consumer owned and operated.” Appx3410.²²

To the extent the PTAB determined that there was no express lexicography in the specification (Appx32-33), that is an incorrect application of the law of lexicography, and it fails to consider the consistent usage of the term “client device” and “server” as two types of network components that differ from each other. In another setting, the District Court for the Eastern District of Texas found that “the use of non-traditional client devices” in a new architecture instead of having servers interact with web servers gave meaning to the ‘319 and ’510 patents. Appx6326-6327.

²² The use of the word consumer in the specification does not deviate from its common understanding. A “consumer” is commonly defined as a “person who buys goods or services for their own use” or “someone who buys goods or services for personal use.” Appx6632, Appx6633, Appx6644, Appx6649, Appx6651, Appx6664, Appx7177-7178(¶78).

2. Prosecution history precludes constructions that are role-based by confirming the importance of the hardware differences between “client devices” and “servers.”

A patentee can define and narrow the scope of the meaning of claim terms via prosecution history estoppel/disclaimer or by otherwise providing meaning of claim language during prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (“[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.”) (internal citation omitted). Such prosecution history supports Bright Data’s proposed constructions here.

a. The Patentee defined and limited the meaning of “client devices” and “servers” in the original prosecution.

When a patentee expressly disclaims or limits the scope of a claim term during prosecution, courts must recognize those statements. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir. 2017) (explaining that the doctrine of prosecution disclaimer is deeply rooted in Supreme Court precedent and has become "a fundamental precept in our claim construction jurisprudence") (internal citations omitted). Even when statements do not rise to the level of disclaimer, they nonetheless inform the public about the meaning of terms, and such statements are highly relevant in claim construction. *See Phillips*, at 1317.

Here, the patentee confirmed during the original prosecution that “clients” or “client devices” as used in the patents are hardware in contrast to “servers” and thus cannot be the same as servers. Whereas servers are expensive, dedicated, commercial hardware, client devices are those prevalent computing devices owned by consumers.

First, in the prosecution history of predecessor U.S. Patent No. 10,069,936 (Appx3907-3934), Bright Data expressly differentiated client devices and servers as having different attributes. Those statements are clear enough to inform a POSA as to the meaning of the terms, whether under disclaimer, estoppel, or otherwise. Specifically, the patentee stated:

- (1) That servers are known to be “dedicated devices” in contrast to client devices (Appx3410); and
- (2) That a client device is a “non-server”, *i.e.*, not a server. Appx3413. These are different types of network components. Bright Data expressly stated this differentiation is known in the art Appx3410.

The patentee also distinguished prior art references to obtain the claims by arguing that “client devices” are consumer devices whereas “servers” are not, and emphasizing that in the claims a “server” cannot be the component that acts as a proxy with between the network server and the web server:

- Bright Data expressly stated that Garcia’s intermediary server does not correspond to an intermediary client device. Appx3413-3414 (“the Garcia reference in general, and the cited paragraph in particular, are silent regarding selecting [a] non-cache server in general, a non-server in particular, and further regarding selecting a client device as recited in the claim.”) (emphasis in original).
- Bright Data explained that “[c]lient devices, such as client 105 in the Garcia reference, are end-units that request information from servers, use client-related software such as Web browser software, communicate over the Internet using ISP connection, and are typically consumer owned and operated...” Appx3410. “[A] client device typically connects to the Internet via an ISP using a single connection.” Appx3410. “Clients are inherently [re]sources limited, such as in bandwidth and storage capability.” Appx3411. These attributes distinguish client devices from servers.
- The examiner necessarily accepted Bright Data’s arguments that a server cannot be equated to a client device because in the next rejection, the

examiner abandoned its prior reliance on servers and instead relied on the intermediary peer nodes of Yu. Appx3390-3391.²³

- Moreover, during prosecution of the ‘319 Patent, Bright Data explained 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.” Appx3207.

Not only did the patentee clearly set forth hardware limitations to client devices and servers, those limitations were accepted by the examiner. Appx3207.

Further, during prosecution of the ‘342 Patent and the ‘344 Patent, the examiner reviewed the Crowds reference (alleged prior art reference at issue here) and allowed the claims. Appx5626, Appx5664.²⁴ The examiner found that a client device ↔ client device ↔ web server architecture does not invalidate the non-traditional second server ↔ client device ↔ web server architecture recited in the claimed methods.

²³ Bright Data explained that Yu was not properly combinable and that the combination did not teach the claims (Appx3379-3383) and the examiner ultimately withdrew the rejections based on Garcia (Appx3362). *See also* Appx3356.

²⁴ It appears that the examiner reviewed at least 22 other peer-to-peer systems during prosecution of these patents and no prior art rejections were made. Appx1137-1143(code 56), Appx1229-1235(code 56).

Bright Data’s expert Dr. Williams offered further support that based on the prosecution history, a POSA would have known these different types of components (client devices vs. servers) have different attributes. Appx7179(¶¶81-82), Appx7196-7197(¶¶126-127).

Thus, irrespective of what other definitions a POSA might attribute to the terms “client device” and “server” in other contexts, the original prosecution of relevant patents informed the public and a POSA that as used in these patents, a “client device” is a consumer computer, and a “server” is a dedicated commercial computer that is not a client device. The claims clearly distinguish a client device located between two servers from other architectures.

b. The Patentee’s Statements in Response to IPR Petitions Constitute Relevant Prosecution History.

A patentee also can disclaim and/or limit the meaning of terms in statements made during subsequent Patent Office proceedings, including in response to petitions for *inter partes* review. Such statements are part of the intrinsic record and applicable to claim construction in subsequent proceedings, including all IPRs on appeal. *Aylus Networks, Inc.*, 856 F.3d at 1361; *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1266 (Fed. Cir. 2012); *Cuozzo Speed Technologies, LLC v. Lee*, 136 S. Ct. 2131, 195 L. Ed. 2d 423 (2016).

In addition to the original prosecution, prior to the filing of any of the IPRs on appeal here, the PTAB reviewed the ‘319 Patent in IPR2020-01266 and ultimately denied institution. Appx27389. In the preliminary response, **Bright Data expressly stated that the term “client device” means consumer computer.** Appx9453. **Bright Data also made clear that a “client device” is not a server and that a “second server” is not a client device.** Appx9451-9452, Appx9457. Bright Data expressly rejected a purely role-based interpretation of the claim terms “client device” and “second server”. *Id.* Bright Data expressly stated that none of Crowds, Border, or MorphMix (alleged prior art references at issue here) anticipate or render obvious the claims.²⁵ Bright Data made consistent statements with respect to the ‘510 Patent in IPR2020-01358. Appx21964-22019.

In view of the above, Bright Data’s prosecution history statements could not have more clearly established meanings of “client device” as anything other than a hardware restriction of a “computer of a consumer” and “server” as anything other

²⁵ Bright Data expressly stated that jondo 4 of Crowds does not correspond to the claimed “second server” and that Crowds does not disclose or teach the non-traditional architecture of the claims. Appx9467-9469. Bright Data expressly stated that upstream proxy server 107 of Border does not correspond to the claimed “first client device” and that Border does not disclose or teach the non-traditional architecture of the claims. Appx9471-9473. Bright Data expressly stated that node b of MorphMix does not correspond to the claimed “second server” and that MorphMix does not disclose or teach the non-traditional architecture of the claims. Appx9476-9477.

than a commercial server that is not a client device. This Court should define the terms accordingly.

3. The claim terms must be read in light of the specification, which supports Bright Data's constructions.

Furthermore, to understand the meaning of claim terms, Courts must always review them in light of the specification and ensure that constructions are consistent with the way the terms are used in the context of the patent. *Phillips*, 415 F.3d at 1315 (“[C]laims must be read in view of the specification, of which they are a part... the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.”) (internal citations omitted).

Here, such a review confirms that the patentee used “client devices” to mean “computers of consumers” and “servers” to mean commercial hardware that are not client devices.

a. The specification and claims set out a specific architecture that requires “client devices” be used as proxies between a network server and a web server.

As set forth throughout the patents, the inventive embodiments of the common specification requires the claimed client device to be configured in a specific way (*e.g.*, as an “agent”) in order to perform the specific steps recited in the claimed methods.

As described in the specification, “each communication device may serve as a client, peer, or agent” (Appx1160(4:48-49)) which informs a POSA that client 102; peers 112, 114, 116; and agent 122 are all “client devices” in the context of the specification. Appx7175(¶71), Appx1160(4:44-50), Appx1161(5:21-29), Appx1163(9:12-50). The specification discloses how a communication device can be configured to serve as a client, peer, or agent. Appx7175-7176(¶73), Appx1160(4:44-50), Appx1161(5:21-29), Appx1163(9:12-50). The specification discusses specific modules executed by the communication device to perform the client/peer/agent roles.²⁶ Appx1163(9:12-50). Therefore, a POSA would have understood that a client device is a consumer computer with specific software to operate in accordance with the claims. *Id.*

The figures of the specification also make clear that a network of client device proxies is novel and different from (and better than) using the prior art server proxies:

- Fig. 1 (prior art) shows an intermediary proxy server. Appx1144. Fig. 3 (inventive embodiment) shows an intermediary client device. Appx1146.
- Proxy server 6 of Fig. 1 operates in the role of a server with respect to the requesting client devices 14, 16 and operates in the role of a client with

²⁶ Figure 6 and the associated text disclose communication devices having client, peer, and agent modules, **but no server module**. Appx1149, Appx1163(9:12-50).

respect to the web servers 30, 32, 34. Appx7184-7186(¶¶94-97). Proxy server 6 is an intermediary, which necessarily toggles roles for different connections. *Id.* Proxy server 6 is a server, regardless of the role being performed.

- Agent 122 of Fig. 3 also toggles roles for different connections. Appx7186-7187(¶¶98-102). Just because agent 122 operates in the role of a server with respect to client 102, agent 122 does not transform into an actual server. Agent 122 is a client device regardless of the role being performed.
- Whether an intermediary is operating in the role of a client versus operating in the role of a server does not inform a POSA whether that intermediary is a client device versus a server. Appx7187-7188(¶¶103-104).

The claim terms refer to different types of network components, known to have different attributes. Appx7179(¶¶81-82), Appx7196-7197(¶¶126-127). As claimed, the agent 122 must be a client device (not a server) that communicates between the second server and the web server:

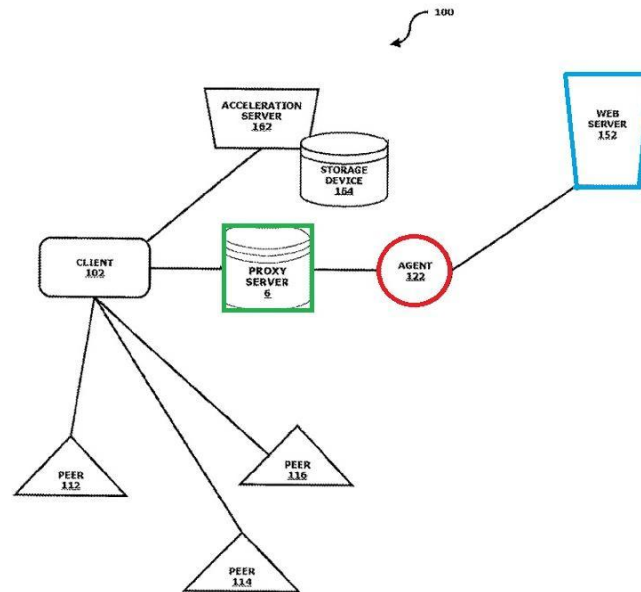


FIG. 3

Appx7171-7173(¶64). It is clear from claim 1 of each of the ‘342, ‘319, ‘510, and ‘344 Patents that the “first client device” is arranged between two servers. This is a non-traditional architecture. *See supra* at ii-iv and 10-15.

This Court has consistently found that the architecture of method claims is significant. *Amdocs Isr. Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1303 (Fed. Cir. 2016) (“The collection, filtering, aggregating, and completing steps all depend upon the invention’s **unique distributed architecture** ...”) (emphasis added); *Thales Visionix, Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017) (“[System claim 1 and method claim 22] specify a **particular configuration** of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a

moving platform. The mathematical equations are a **consequence of the arrangement** of the sensors and the unconventional choice of reference frame in order to calculate position and orientation. Far from claiming the equations themselves, **the claims seek to protect only the application of physics to the unconventional configuration of sensors as disclosed.**”) (emphasis added); *Trading Techs. Int’l, Inc. v. CQG, Inc.*, 675 F. App’x 1001, 1004 (Fed. Cir. 2017) (“The [method] claims require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure that is addressed to and resolves a specifically identified problem in the prior state of the art.”).

This Court has maintained this significance of the architecture over time. *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1295 (Fed. Cir. 2020) (“[Method claim 1] goes beyond managing access to objects using multiple levels of encryption, as required by “multilevel . . . security.” Notably, it expressly requires, as well, accessing an “object-oriented key manager” and specified uses of a “label” as well as encryption for the access management ... **To disregard those express claim elements is to proceed at “a high level of abstraction” that is “untethered from the claim language” and that “overgeneralize[es] the claim.**”) (internal citations omitted) (emphasis added); *see also BlephEx, LLC v. Myco Indus.*, 24 F.4th 1391, 1401-1402 (Fed. Cir. 2022) (explaining a method claim is limited to specific

recited structures and connections between those structures for purposes of anticipation).

Thus, according to the extensive and consistent guidance from this Court about the importance of disclosed system architecture, Bright Data's constructions, which conform exactly to the architecture as set forth throughout the specification and the claims, are correct.

b. The Background and Summary of the Invention make clear that the proxy problem is the use of expensive commercial hardware “servers” that is solved by creating a new network of “client devices” that are computers of consumers.

A review of the Background and Summary of the Invention make clear that the type of hardware (client devices versus servers) is critically important to the identification of the problem and the solution in the Challenged Patents, and that the patents cannot be understood without defining client devices as computers of consumers in contrast to commercial server equipment.

As set forth in the Background of the Invention, “[t]he 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, has become a major issue.” Appx1159(1:54-57). “One solution that has been in use is called a ‘proxy’ ... A proxy, or proxy server 4, 6, 8 is a device that is placed between one or

more clients...” Appx1159(2:9-12). The prior art servers would act as proxies that interact with web servers. Appx1159(2:12-23).

However, the background notes that there are critical problems with using servers (commercial server equipment) as proxies, including that to be effective “the proxy servers of FIG. 1 would need to be deployed at every point around the world where the Internet is being consumed...” Appx1159(2:24-27). Using servers (commercial server equipment) is too cumbersome and “would lead to massive costs that are impractical.” Appx1159(2:30-31). In addition, proxy solutions requiring caching cannot deal well with dynamic data that is prevalent now on the Web. Appx1159(2:31-32).

Having recited the problem, the background discusses peer-to-peer networks that rely on client devices instead of expensive commercial servers that have limited distribution. Appx1159(2:40-47). Such “computers of consumers, referred to herein as client devices” solve the problem with trying to use server equipment as proxies, but peer-to-peer networks have their own problems. Appx1159-1160(2:52-3:3).

The patent then provides its own solution, relying on client devices not simply as peers in a peer-to-peer network, but as “agents” that interact with web servers instead of having commercial server equipment do that. Appx1160(3:11-

55). Fig. 3 (inventive embodiment) also shows an intermediary client device referred to as an “agent.” Appx1146.

Since these client devices are computers already owned by consumers around the world, building a network of such devices avoids the cost and logistical impracticability of commercial server equipment while allowing for users to obtain dynamic content via proxies.

None of the above discussion makes any sense if a client device is the same type of hardware as a server. The problems identified are problems with expensive commercial server equipment with limited distribution, and the problem is solved by instead building a new proxy network of computers of consumers, referred to as “client devices,” to obtain content from web servers and deliver that content to network servers. Maintaining the hardware distinction between these claim terms is thus critical to the entire purpose of the Challenged Patents—for the patent to make any sense, client devices and servers must differ from each other, where a client device is a consumer computer and a server is not.

c. The specification clearly distinguishes “servers” from “client devices”

The specification repeatedly differentiates “client devices” (clients, peers, and agents) and “servers” (proxy servers, acceleration servers, and web servers) as different types of network components. *E.g.*, Appx1160(3:17-28) (describing

“client communication device”, “agent communication device”, “peer communication device”), Appx1160(4:41-61) (describing client devices as communication devices operating as clients/peers/agents), Appx1160-1161(4:62-5:34) (describing different servers versus communication devices).²⁷ This differentiation is consistent with the prosecution history statements, where for example, Bright Data stated: “the claims disclose a **server** receiving information from another **server** via a **client device**.” Appx3208 (emphasis added); *see also* Appx7175-76(¶71-¶73), Appx1163(9:12-50).

As recognized by the district court in the Oxylabs Litigation, “[t]he patents do not include servers as a type of ‘communication device.’” Appx2946, Appx3010.

Furthermore, the patents use different symbols to distinguish client devices from servers. Whereas all client devices are shown as circles, rounded corner rectangles, or triangles, servers are never shown using those symbols. Instead, the patent uses only cylinder and rhombus shapes for servers, and never uses those shapes for client devices. Appx1144, Appx1146.

²⁷ *See also* Appx1159(2:40-43) (contrasting client devices from servers), Appx1160(4:43-50) (server not included as communication device), Appx1160(4:6-13) (identifying Figs. 4-6 as illustrating “a communication device of the communication network of FIG. 3”), Appx1149 (Fig. 6 showing modules 224, 226, 228 loaded onto a communication device, not a server).

Consistent with the specification, Bright Data's constructions distinguish client devices from servers.

d. A POSA would have understood from the specification that "client devices" are distinct hardware from "servers"

Consistent with the specification, a POSA would have understood that "client devices" are distinct hardware from "servers."

A POSA would have understood a "client device" to be a computer of a consumer, more specifically, a consumer computer like a laptop, desktop, tablet, or smartphone. Appx7177(¶77). Furthermore, a POSA would have understood that a client device is typically portable and easily moved, like, for example, a laptop, desktop, tablet or smartphone. Appx7179(¶81).

As discussed in the patent, these client devices have a major advantage over commercial servers, which is that they are already everywhere and therefore can be integrated into a new proxy network effectively at low cost. But these client devices also differ from commercial servers because they (a) are regularly switched off and taken offline, (b) can only process a limited number of request at a time, and/or (c) have less fault tolerance, reliability, and scalability, prioritizing value to client device users over system costs. Appx7179(¶82).

A POSA would have understood a “‘client’ network component (hardware) to be consistent with Bright Data’s construction for “client device”. Appx7179-7180(¶83). For example, Tanenbaum’s “Computer Networks” explains “the employees have simpler machines, called clients, on their desks, with which they access remote data, for example, to include in spreadsheets they are constructing.” Appx6677, Appx6684.

Based upon the specification, a POSA also would understand there are differences between client devices and servers, Appx7180(¶85), where a “server” is a dedicated, always-on, robust network component capable of a large number of connections. Appx7196-7197(¶126), Appx3410. As such, a POSA would have known that a server is a commercial network element, not a consumer device, and not easily portable or moved about by a consumer. Appx7196-7197(¶126). A POSA would have understood servers to have other attributes that are part of them being in a network environment and not a consumer computer, for example, always-on, able to handle lots of traffic, usually having no graphical interface, having high tolerance and low failure rates. Appx7197(¶127). These known attributes distinguish a server from a client device.

A POSA would have understood and been able to identify a server at the time of invention. Appx3410. The “Network Fundamentals Study Guide” explains “[s]ervers are often dedicated, meaning that they perform no other tasks besides

their server tasks.” Appx6668. Tanenbaum’s “Computer Networks” similarly explains “data are stored on powerful computers called servers” (Appx6677) and “one server can handle a large number (hundreds or thousands) of clients simultaneously” (Appx6678). *See also* Appx6684. This is clearly how the term “server” is used in the patents rather than based on a software protocol definition.

4. The claim language itself makes sense only if “client device” and “server” are distinguished from each other as different types of hardware used in a novel architecture.

The claim language itself also distinguishes between a “client device” and “servers” to recite a novel architecture. The claims only make sense if “client devices” and “servers” are different types of hardware.

For example, claim 1 of the ‘319 patent recites a method “by the first client device comprising: ²⁸ [1a] receiving, from the second server, the first content identifier; and [1d] sending, the first content by the first client device to the second server.” Under the HTTP definition this is impossible—the definition of “client” is limited to a program for “sending requests” only, not receiving requests or sending content. Appx2425. Under HTTP, receiving requests and sending responses are actions only “server” software performs. *Id.* In contrast, if it is understood that a “client device” is a “computer of a consumer” instead of attempting to define it by

²⁸ The parties agreed that this preamble is limiting. Appx2943, Appx6584, *see also* Appx44(note 14), Appx536(note 13).

the role it plays, there is no inconsistency in having the client device receive requests and send responses. Appx7187-7188(¶¶103-104). It makes all the more sense in the context of the patent, which deploys agents that are client devices instead of or in addition to server hardware, to avoid the problems associated with using commercial servers as proxies.

C. THE PTAB’S CONSTRUCTIONS OF “CLIENT DEVICE” AND “SECOND SERVER” THAT ADOPT ROLE-BASED HTTP SOFTWARE DEFINITIONS ARE INCORRECT AND INCONSISTENT WITH THE SPECIFICATION, PROSECUTION HISTORY, AND USAGE IN THE CLAIMS

On appeal, claim construction is *de novo*, so once the Court determines the correct constructions of “client device” and “server,” the reasons why the PTAB selected incorrect constructions are no longer relevant. Nevertheless, the PTAB failed to follow the law of claim construction and opted to use software definitions that ignore the differences clearly set out in the patent as well as render the claims incomprehensible, and therefore its constructions could not be correct in any event.

“[T]he Board’s construction cannot be divorced from the specification and the record evidence” and “must be consistent with the one that those skilled in the art would reach.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) (en banc) (citations and internal quotation marks omitted). “A construction that is unreasonably broad and which does not reasonably reflect

the plain language and disclosure will not pass muster.” *Id.* (citation and internal quotation marks omitted).

1. The PTAB failed to apply basic claim construction principles in view of lexicography, the prosecution history, and the claim terms in the context of the patent specification.

The PTAB expressly rejected any meaningful distinction between client devices and servers in the context of the Challenged Patents. The PTAB construed “client device” as a “communication device that is operating in the role of a client” (Appx38, Appx185, Appx358, Appx530, Appx672, Appx39170-39172, Appx751, Appx987, Appx1074), but then eviscerated any distinction between client devices and servers by asserting that any device that facilitates communication between other devices is a “communication device” (*e.g.*, Appx45-46) (at odds with the district court, which refused to find that a server is a communication device, Appx2946).

Similarly, the PTAB construed “second server” as a “server that is not the client device” and that it is a “device that is operating in the role of a server and that is not the first client device” (Appx38-40, Appx186-188, Appx358-360, Appx530-532, Appx672, Appx39170-39172, Appx987-991, Appx1074-1076), but found that the same device can be a client device and server, rejecting that there are any structural (hardware) aspects of the “second server” other than serving in the

role of a server, *i.e.*, any computer that receives requests and sends responses (*e.g.*, Appx39).

Such a position directly contradicts the intrinsic evidence from the Challenged Patents including from the specification, prosecution history²⁹, and the claims, all of which expressly distinguish communication devices (client devices) from servers. *See* Section VI.B, *supra* at 23-44.

2. The PTAB’s constructions of “client device” and “server” contradict the express claim language.

“Client device” cannot be construed to mean the same thing as “server,” because hornbook claim construction requires that every term in a claim is presumed to have an independent meaning. *See Bd. of Regents v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008). The PTAB’s analysis violates that claim

²⁹ The PTAB reliance on *Telcordia* and *Inverness* to minimize the significance of the patent prosecution history statements is misplaced. Appx36, *Telcordia Technologies, Inc. v. Cisco Systems, Inc.*, 612 F.3d 1365, 1375 (Fed. Cir. 2010), *Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380–82 (Fed. Cir. 2002). In *Telcordia*, this Court found that although the prosecution history stated it may be possible for a frame to contain multiple data packets, the specification clearly limited the disclosed mechanism to one packet. *Telcordia Technologies, Inc.*, 612 F.3d at 1374-1375. That is simply inapplicable here, where both the specification and prosecution history clearly limit the term “client device” to hardware that is a consumer computer and not a server. Similarly, this Court noted that the ambiguity of the prosecution history in *Inverness* made the prosecution history statements less relevant to claim construction. *Phillips*, 415 F.3d at 1317 (citing *Inverness Med. Switz. GmbH*, 309 F.3d at 1380–82). Here there is no such ambiguity.

construction law by treating a client device and a server both as simply any computer. The other limitations in the claims are method steps each device performs, but under the PTAB's incorrect construction, the term "client device" and "server" can both be replaced with the generic term "computer" without changing the meaning or scope of the claims, thus inappropriately depriving the claim terms of independent meaning.

The preamble of exemplary claim 1 of the '319 Patent specifically recites that the method is performed by the "first client device, for use with a first server that comprises a web server ... and for use with a second server."³⁰ As discussed above, under the PTAB's analysis any device that can operate in the role of a client meets the PTAB's construction of "client device". Thus, the PTAB deprives these claim terms from having any meaning and removes any distinction between an intermediary client device and an intermediary server.

Limitation 1[a] of the '319 Patent recites the first client device "receiving, from the second server, the first content identifier" and Limitation 1[d] of the '319 Patent recites "sending, the first content by the first client device to the second server..." Under the PTAB's constructions, the "first client device" would have to be a server and not a client device because in these steps the claimed "first client

³⁰ The parties agree that the preamble is limiting. Appx2943, Appx6584; *see also* Appx44(note 14), Appx536(note 13).

device” is operating in the role of a server by receiving a request for content and sending a response. Consequently, the PTAB’s constructions contradict the express claim language. The same contradictions are apparent in limitation 1[d] of the ‘342 Patent; limitation 1[d] of the ‘510 Patent; and limitations 1[b] and 1[e] of the ‘344 Patent where the “first client device” is operating in the role of a server.³¹

A simple baseball analogy exposes the error in the PTAB’s analysis. Consider the baseball players, pitcher and catcher. If “pitcher” is construed as “a player who throws a ball” and “catcher” is construed as “a player who catches a ball”, then when the catcher returns the ball to the pitcher, the act of “throwing” would mean the catcher now meets the role-based construction for “pitcher”. Similarly, when the pitcher is catching the ball, the pitcher would meet the role-based construction for “catcher”. This cannot be correct. The catcher remains a “catcher” regardless of whether the catcher is throwing or catching a ball. Similarly, the pitcher remains a “pitcher” regardless of whether the pitcher is throwing or catching a ball. The pitcher and the catcher are different types of baseball players. In the context of the Challenged Patents, the “first client device” and the “second server” are different types of network components.

³¹ It is further noted that the “second server” is not operating in the role of a server during any of the method steps recited in the independent claims of the ‘342, ‘319, ‘510, and ‘344 Patents.

3. The PTAB’s constructions improperly render the discussed differences between the prior art and the invention moot by failing to recognize any difference between proxy servers and agents

The PTAB constructions further eviscerate the very purpose of the invention by incorrectly construing “client devices” the same as prior art “proxy servers” in a way that treats them both as the same generic proxy. For example, Fig. 1 (prior art) shows proxy server 6 (which is a server) as an intermediary between a client and web server. Appx1144. Proxy server 6 as a proxy operates in the HTTP-defined role of a server with respect to the requesting client devices 14, 16 and operates in the HTTP-defined role of a client with respect to the web servers 30, 32, 34. Appx7184-7186(¶¶94-97).³² But as shown in the patents, proxy server 6 is a server, regardless of the role being performed.

Whereas Fig. 1 is prior art, Fig. 3 shows an inventive embodiment. In it, agent 122 (which is a client device) is a proxy that toggles roles for different connections. Appx1146, Appx7186-7187(¶¶98-102). But a critical teaching of the

³² HTTP terminology in RFC 2616 relied upon by the PTAB states explicitly that a “proxy” is an “intermediary program which acts as both a server and a client for the purpose of making requests on behalf of other clients.” Appx2426. If any device that acts in the role of a client is a client device, and any device that acts in the role of a server is a server, and a proxy acts in both roles, then pursuant to the PTAB’s construction there is no difference between any proxy and any other proxy in the claims. That conclusion must be wrong given that the Challenged Patents describe the problem with proxy *servers* and explain why they should be replaced or supplemented with proxy *client devices*.

Challenged Patents is that using agent 122 instead of or in addition to a proxy server solves problems that were present in the prior art. *See supra*, at 37-39.

Despite receiving requests, agent 122 does not transform into a server. Agent 122 is a client device regardless of the role being performed.

Fig. 1 – Prior Art
(excerpted & annotated)

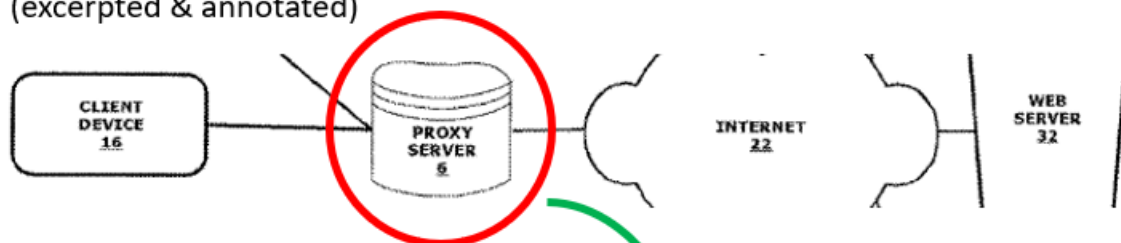
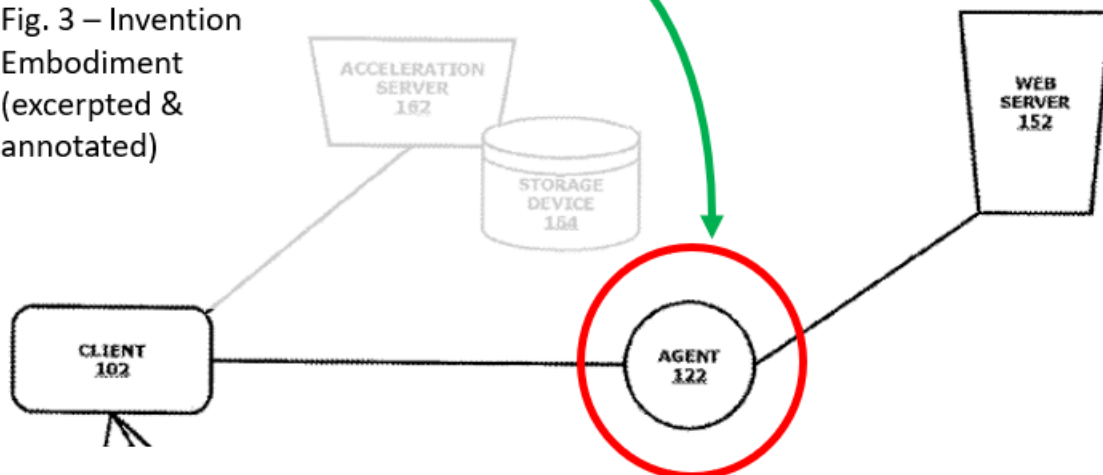


Fig. 3 – Invention
Embodiment
(excerpted & annotated)



Under the PTAB’s constructions, agent 122 would be both a “client device” and a “second server” because it would meet both constructions. The PTAB’s constructions cannot be correct. There is nothing to distinguish the PTAB’s two constructions that fail to differentiate the prior art’s use of proxy server 6 (which is a server) from the inventive embodiment’s use of agent 122 (which is a client

device). Whether an intermediary is operating in the role of a client versus the role of a server does not inform a POSA whether that intermediary is a client device versus a server as the terms are used in the Challenged Patents. Appx7187-7188(¶¶103-104).

4. Nowhere do the Challenged Patents incorporate role-based HTTP software definitions.

In contrast to the above intrinsic evidence showing that the Challenged Patents contrasted servers and client devices as distinct hardware, the patent specification did not include any support for defining servers or client devices based upon HTTP software definitions. On the contrary, the patent specification notes that the invention does not need to use HTTP at all and can rely on other protocols. Appx1167(17:14-26). Since the inventions do not require HTTP, it was incorrect for the PTAB to rely on HTTP-based definitions for the claim terms.

Moreover, the patent never states that “client device” is a term used as set forth in RFC 2616. The only reference in the patents to RFC 2616 is a statement that “the HTTP protocol, RFC 2616, outlines specific methods that Web servers can define with the HTTP headers....” Appx1166(16:21-23). The fact that the patents refer to RFC 2616 but never with respect to the meaning of “client devices”

indicates that the patentee did not intend for RFC 2616 to define “client devices.”³³

Instead, the patents discuss client devices elsewhere in hardware terms.³⁴

A POSA upon reading the common specification would have understood that the PTAB’s constructions relying extensively on HTTP software role-based definitions do not make sense to the usage of the terms in the Challenged Patents. The claim terms refer to different types of network components, known to have different attributes. Appx7179(¶¶81-82), Appx7196-7197(¶¶126-127).³⁵

³³ RFC 2616 has no definition of “client device.” It defines “client” as a “program that establishes connections for the purpose of sending requests” (Appx2425), but the Challenged Patents refer to client devices not as programs but as devices that are computers of consumers.

³⁴ The PTAB noted that the specification discloses each ‘communication device’ (clients, peers, agents) assume different client/peer/agent roles. Appx24, Appx1160(4:46-50). However, the PTAB misinterpreted this disclosure as support for its constructions. In the inventive embodiments, these client/peer/agent roles are only disclosed as being assumed by communication devices (*i.e.*, client devices) as opposed to servers. These client/peer/agent roles have special meaning in the context of the common specification and do not relate to client/server roles discussed in RFC 2616.

³⁵ The PTAB also wrongly found that in briefing in the Oxylabs Litigation, Bright Data equated client 102 of Fig. 3 to the “second server” in an annotated figure, which the PTAB contents supports its purely role-based constructions. Appx21-23. This is simply not true. First, Bright Data always argued that “client device” and “server” are different hardware devices where “client device” is a “consumer computer” and “server” is not. Second, in the shown figure, this annotation was merely illustrating the lines of communication. The point being made was never that “client 102” was a server but that a server could also be located where “client 102” was shown in addition to a client device. Appx1775, Appx9451-9452, Appx21989-21990, Appx22(note 9), Appx172(note 6), Appx344(note 12). That is consistent with Fig. 1, that shows exactly that—instead of just a client, Fig. 1

D. THE PTAB ERRED IN ITS ANALYSIS OF THE PRIOR ART BOTH BY FAILING TO APPLY CORRECT CLAIM CONSTRUCTIONS AND BY MISAPPLYING ITS OWN CLAIM CONSTRUCTIONS

Because the PTAB applied its incorrect constructions to its prior art analysis, reversal on claim construction would necessarily require reversal and/or remand on the prior art findings. *ABS Glob., Inc. v. Cytonome/St, LLC*, 84 F.4th 1034, 1042 (Fed. Cir. 2023).

Under Bright Data's constructions, none of the prior art references disclose or teach the non-traditional **second server** ↔ **first client device** ↔ **first/web server** architecture of the claims. So, the PTAB's prior art analysis could not stand even if nothing more was incorrect. But there is more.

Even under the PTAB's incorrect constructions, none of the prior art references disclose or teach the non-traditional architecture of the claims. For that

shows a client plus a server. And the patent expressly states that a server “is placed between one or more clients” (Appx1159(2:10-11)) which can include between client 102 and agent 122. That mapping also is consistent with other figures that were involved in the same litigation, including at Appx18580 regarding U.S. Patent No. 10,469,614 that expressly shows how a client device can be placed with a client plus a server. Also, client 102 does not correspond to the “second server” because it never operates in the role of server (never receives requests).

reasons, the PTAB committed clear error in determining that the independent claims of the ‘342, ‘319, ‘510, and ‘344 Patents are invalid.³⁶

1. Crowds does not invalidate the independent claims of the ‘342, ‘319, ‘510, and ‘344 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions.

Crowds discloses a client device ↔ client device ↔ client device ↔ web server architecture. With respect to Fig. 2 of Crowds (reproduced below), Crowds describes jondos 1-6 as identical user computers running “jondo” software that blend into a “crowd.” Appx2398. Notably, the “crowd” does not include any servers and the disclosure indicates that servers are different from user computers by using squares for servers and circles for user computers.

³⁶ The PTAB determined that independent claim 1 of each of the ‘342, ‘319, ‘510, and ‘344 Patents is invalid as anticipated by Crowds, Plamondon, Border, and MorphMix. Appx73, Appx234, Appx407, Appx567, Appx710-711, Appx799, Appx1042, Appx1134. The PTAB relied on its anticipation analysis for its obviousness determinations. Appx56-57, Appx549-551, Appx686, Appx703, Appx708-710, Appx771, Appx789, Appx795, Appx1013, Appx1103. Because the PTAB’s anticipation determinations show clear error, the PTAB’s obviousness determinations also show clear error.

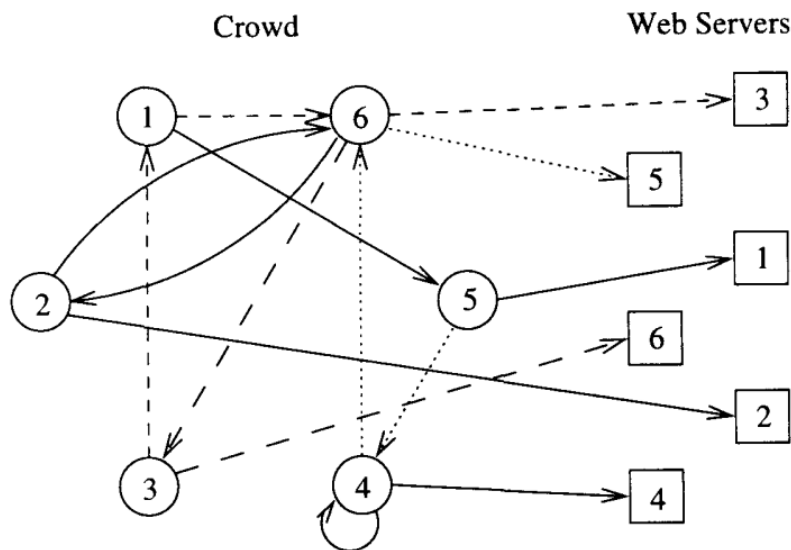


Fig. 2. Paths in a crowd (the initiator and web server of each path are labeled the same).

Appx2399.

The PTAB primarily analyzed the jondo 5 → jondo 4 → jondo 6 → web server 5 pathway. Appx44-53, Appx536-545, Appx676-683, Appx757-764, Appx995-1004, Appx1081-1091.³⁷ The PTAB determined that jondo 4 corresponds to the claimed “second server” and that jondo 6 corresponds to the claimed “first client device”. *Id.*

The PTAB did not consistently analyze jondos 4 and 6 of Crowds. The PTAB committed clear error because Crowds does not disclose the **second server** ↔ **first client device** ↔ **web server** architecture of the independent claims. The

³⁷ The PTAB found that web server 3 corresponds to the “additional web server” in claim 24 of the ‘344 Patent. Appx549-551, Appx32756.

jondos of Crowds are all the same type of network component, not different types of network components.

It is wrong to deem one jondo 4 a “server” and another identical jondo 6 a “client device”. The jondos are the same type of user computers. The jondos are client devices, not servers. The PTAB provided no analysis showing that jondo 4 is an actual server, or could be modified to be an actual server.

Under the PTAB’s own constructions, jondo 4 would be a “client device”, not a server. During the method steps of the independent claims, jondo 4 operates only in the role of a client.³⁸ But, contradicting its own constructions, the PTAB deemed jondo 4 a server.

And the PTAB compounded that error by deeming jondo 6 a “client device” because it sends requests/receives responses. Consistent application of the logic the PTAB applied to jondo 4 should mean that they are both the same – that they are both “client devices” because they both sends requests/receives responses. But the PTAB deemed jondo 6 a “client device” and jondo 4 a “server”.³⁹

³⁸ Jondo 4 is operating in the role of a client during the method steps recited in limitation 1[d] of the ‘342 Patent; limitations 1[a] and 1[d] of the ‘319 Patent; limitation 1[d] of the ‘510 Patent; and limitations 1[b], 1[e], 24[a], 24[d], and 24[e] of the ‘344 Patent.

³⁹ To the extent the PTAB analyzed the fact that jondo 4 operates in the role of a server with respect to **jondo 5** in order to deem jondo 4 a server (*e.g.*, Appx48), the

The PTAB maintained that jondo 6 is a “client device” even though jondo 6 does not meet the PTAB’s construction for “client device” during the particular method steps recited in limitation 1[d] of the ‘342 Patent; limitations 1[a] and 1[d] of the ‘319 Patent; limitation 1[d] of the ‘510 Patent; limitations 1[b] and 1[e] of the ‘344 Patent. During these method steps, jondo 6 is receiving requests from and sending responses to jondo 4. Jondo 6 is not operating in the role of a client.

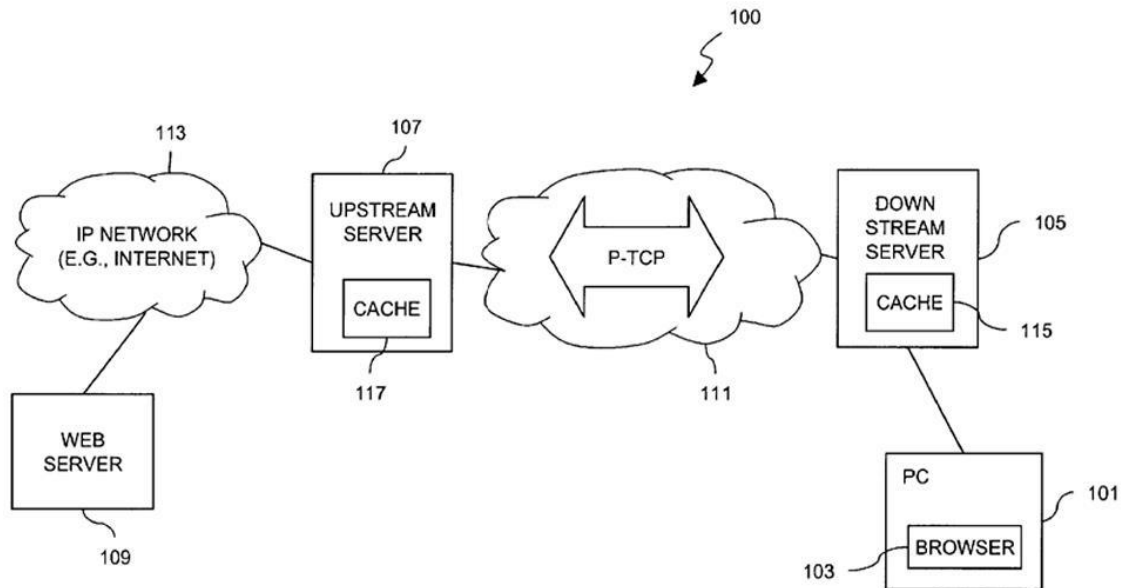
The PTAB’s analysis of Crowds is clearly erroneous in multiple ways. Crowds does not anticipate or render obvious the independent claims.

2. Border does not invalidate the independent claims of the ‘319 and ‘510 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions.

Border discloses a client device ↔ proxy server ↔ proxy server ↔ web server architecture. With respect to Fig. 1 of Border (reproduced below), Border discloses two intermediary proxy servers 105 and 107. Appx41505(3:34-48). It is noted that the orientation of Fig. 1 is reversed with the web server 109 shown on the left and the requesting PC 101 shown on the right.

independent claims do not recite any connection between a “second server” and a requesting client device. The PTAB fails to acknowledge that jondo 4 only operates in the role of a client with respect to jondo 6 in the claimed method steps. The PTAB fails to consider the particular connection recited in a particular method step.

FIG. 1



Appx41497.

The PTAB found that the downstream proxy server 105 corresponds to the claimed “second server” and that the upstream proxy server 107 corresponds to the claimed “first client device”. Appx699-701, Appx786-788, Appx1035-1038, Appx1126-1130.

The PTAB did not consistently analyze the proxy servers of Border. The PTAB committed clear error because Border does not disclose the **second server** ↔ **first client device** ↔ **web server** architecture of the independent claims. The proxy servers of Border are the same type of network component, not different types of network components.

It is clearly erroneous to deem proxy server 105 a “server” and another identical proxy server 107 a “client device”. The proxy servers are the same type of component and perform the same roles as intermediaries. The proxy servers are servers, not client devices. The PTAB provided no analysis showing that proxy server 107 is an actual client device.

Under the PTAB’s constructions, downstream proxy server 105 would be a “client device”, not a server. Server 105 operates only in the role of a client during the method steps of the independent claims.⁴⁰ But the PTAB deemed server 105 a server.

And the PTAB deemed upstream proxy server 107 a “client device” because it sends requests/receives responses, but applying that same logic consistently would mean that downstream server 105 is also a “client device”. But again the PTAB contradicted itself by deeming one a “client device” and the other a “server”.

The PTAB maintained that upstream proxy server 107 is a “client device” even though server 107 does not meet the PTAB’s construction for “client device” during the particular method steps recited in limitations 1[a] and 1[d] of the ‘319

⁴⁰ Downstream server 105 is operating in the of a client during the method steps recited in limitations 1[a] and 1[d] of the ‘319 Patent and limitation 1[d] of the ‘510 Patent.

Patent and limitation 1[d] of the ‘510 Patent because server 107 is not operating in the role of a client.

The PTAB’s analysis of Border is clearly erroneous. Border does not anticipate the independent claims.

3. Morphmix does not invalidate the independent claims of the ‘319 and ‘510 patents under Bright Data’s constructions or under the PTAB’s incorrect constructions.

MorphMix discloses a client device ↔ client device ↔ client device ↔ web server architecture. With respect to Fig. 5 of MorphMix (reproduced below), MorphMix describes nodes a, b, c as identical user computers running the MorphMix software as part of the “mix”. Appx40685, Appx40687. Notably, the “mix” does not include any servers.

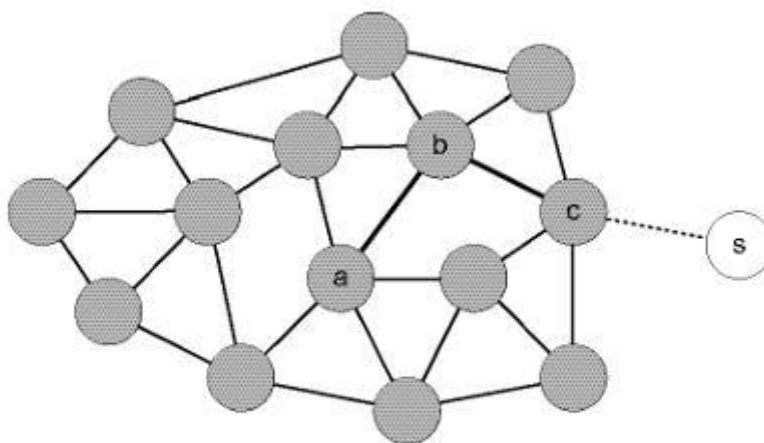


Figure 5.1: *Basic idea of MorphMix.*

Appx40687.

The PTAB found that node b corresponds to the claimed “second server” and that node c corresponds to the claimed “first client device”. Appx706-707, Appx793-794.

The PTAB did not consistently analyze the nodes of MorphMix. The PTAB committed clear error because MorphMix does not disclose the **second server ↔ first client device ↔ web server** architecture of the independent claims. The nodes of MorphMix are all the same type of network component, not different types of network components.

It is clearly erroneous to deem node b a “server” and another identical node c a “client device”. The nodes are the same type of user computers and perform the same roles as intermediaries. The nodes are client devices, not servers. The PTAB provided no analysis showing that node b is an actual server.

Under the PTAB’s constructions, node b would be a “client device”, not a server. Node b operates only in the role of a client during the method steps of the independent claims.⁴¹ But the PTAB deemed node b a “server”.

The PTAB deemed node c a “client device” because it sends requests/receives responses, but applying that same logic consistently would mean

⁴¹ Node b is operating in the role of a client during the method steps recited in limitations 1[a] and 1[d] of the ‘319 Patent and limitation 1[d] of the ‘510 Patent.

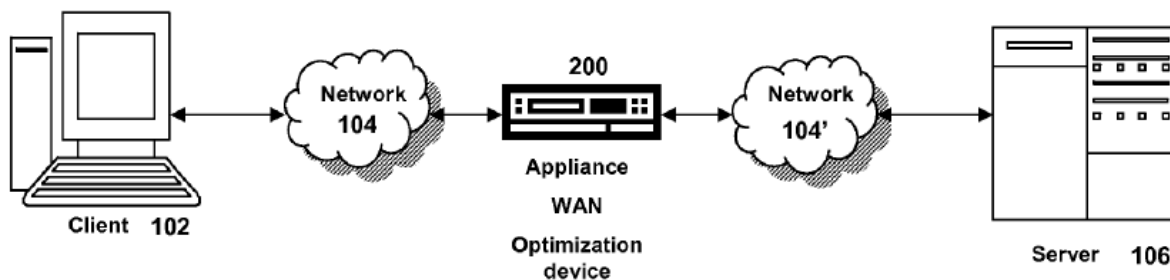
that node b is also a “client device”. Yet the PTAB contradicted itself by deeming one a “client device” and the other a “server”.

The PTAB maintained that node c is a “client device” even though node c does not meet the PTAB’s construction for “client device” during the particular method steps recited in limitations 1[a] and 1[d] of the ‘319 Patent and limitation 1[d] of the ‘510 Patent because node c is not operating in the role of a client.

The PTAB’s analysis of MorphMix is clearly erroneous. MorphMix does not anticipate the independent claims.

4. Plamondon does not invalidate the independent claims of the ‘319 and ‘510 Patents under Bright Data’s constructions or under the PTAB’s incorrect constructions.

Plamondon discloses a client device ↔ proxy server ↔ web server architecture. With respect to Fig. 1C of Plamondon (reproduced below), Plamondon client 102, appliance 200, and server 106 operating on a corporate network. Appx9552(¶203), Appx9552(¶205).



Appx9496.

The PTAB determined that client 102 corresponds to the claimed “second server” and that appliance 200 corresponds to the claimed “first client device”. Appx191-202, Appx363-375.

The PTAB did not consistently analyze client 102 and appliance 200 of Plamondon. The PTAB committed clear error because Plamondon does not disclose the **second server** ↔ **first client device** ↔ **web server** architecture of the independent claims.

Under the PTAB’s constructions, client 102 would be a “client device”, not a server. During the method steps of the independent claims, client 102 operates only in the role of a client. But the PTAB deemed client 102 a “server”.

The PTAB reached exactly the opposite conclusion in deeming appliance 200 a “client device” because it sends requests/receives responses. Consistent application of the PTAB’s own constructions would mean that client 102 is also a “client device”.⁴² But the PTAB deemed client 102 a “server”.

The PTAB maintained that appliance 200 is a “client device” even though appliance 200 does not meet the PTAB’s construction for “client device” during the particular method steps recited in limitations 1[a] and 1[d] of the ‘319 Patent and

⁴² Client 102 is operating in the role of a client during the method steps recited in limitations 1[a] and 1[d] of the ‘319 Patent and limitation 1[d] of the ‘510 Patent.

limitation 1[d] of the ‘510 Patent. Appliance 200 is not operating in the role of a client during these method steps.

Plamondon does not disclose the claimed components as arranged in the claim. The PTAB erred in determining that client 102 could be implemented on a “client device” (hardware) and that appliance 200 could be implemented on a “server” (hardware). This implementation is not disclosed in Plamondon and directly contradicts the teachings of Plamondon.

The PTAB stated that Plamondon discloses client 102 can function as an application server for other clients 102a-n. Appx196, Appx369-370. But this analysis does not relate to the particular connection between client 102 and appliance 200 consistent with the claim language; client 102 never operates in the role of a server with respect to appliance 200.

Also, Plamondon does not disclose client 102 acting as an “application server” to clients 102a-n and also fetching content from server 106 via appliance 200. With respect to Fig. 1C of Plamondon, client 102 is not disclosed as an intermediary for fetching content. Plamondon merely discusses that client 102 may be an application server “providing access to hosted applications for other clients” which is not the same as the claimed “second server”. *See* Appx9553(¶210), Appx9558(¶247).

The PTAB's analysis also relied on Plamondon's disclosure that "computing device 100 can be any workstation, desktop computer, laptop or notebook computer, server, handheld computer, mobile telephone, smart phone, any other computer, or other form of computing or telecommunications device that is capable of communication and *that has sufficient processor power and memory capacity to perform the operations described herein.*" Appx9557(¶238) (emphasis added), Appx195-198, Appx369-371. The PTAB's findings are clearly erroneous because a POSA would not at once envisage implementing client 102 on a server AND implementing appliance 200 on a client device AND implementing server 106 on a server, as required by the independent claims of the '319 and '510 Patents. *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1069 (Fed. Cir. 2017). That is, a POSA reading Plamondon would not "at once envisage" the specific architecture in which the claims operate. *Id.*

Examining Fig. 1C of Plamondon, a POSA would not at once envisage implementing client 102 on an actual server. Rather, a POSA would understand client 102 to be implemented on a traditional client device.

Moreover, a POSA would not at once envisage implementing appliance 200 on an actual client device. Rather, a POSA would understand appliance 200 to be implemented on some type of server. Plamondon is directed at corporate networks and appliance 200 is disclosed as a dedicated network component having a fixed

location. Appx9552(¶205). The systems and methods of Plamondon would not operate as intended if appliance 200 was implemented on, for example, a mobile telephone which is regularly powering on/off and switching connections between cellular/WiFi. The corporate network would fail.

Nothing in Plamondon suggests that a client device has “sufficient processor power and memory capacity” to perform the operations of appliance 200 described in Plamondon. Appx9557(¶238). And nothing in Plamondon suggests that a client device has the capabilities for performing the operations of appliance 200 described in Plamondon. Appx9555(¶229).

The PTAB’s analysis of Plamondon is clearly erroneous. Plamondon does not anticipate the independent claims.

E. THE PTAB ERRED IN ITS NEXUS ANALYSIS

The PTAB committed clear error by using incorrect claim constructions in its nexus analysis. Appx60-64, Appx553-558, Appx691-694, Appx777-781, Appx1019-1023, Appx1109-1113.

Bright Data’s residential proxy service embodies and is coextensive with claim 1 of each of the ‘342, ‘319, ‘510, and ‘344 Patents. Appx7198-7202(¶¶130-137), Appx45236-45240(¶¶262-269), Appx52520-52524(¶¶267-274), Appx38198-38202(¶¶133-140). Bright Data provided evidence of secondary considerations that

is the direct result of the claimed inventions' unique characteristics. *Id.*, Appx7222-7226(¶¶186-192), Appx45241-45246(¶¶270-277), Appx52524-52530(¶¶275-282), Appx38222-38226(¶¶190-196).

VII. CONCLUSION

For the above reasons, Bright Data respectfully asks this Court to reverse the PTAB's constructions and adopt Bright Data's proposed constructions for the disputed claim terms; vacate the PTAB's final written decisions; remand the underlying IPRs to the PTAB; and instruct the PTAB to enter a finding of no invalidity, or alternatively, instruct the PTAB to reconsider the prior art as well as the evidence of secondary considerations of non-obviousness in light of the correct constructions.

/s/ Robert M. Harkins, Jr.
ROBERT M. HARKINS, JR.
CHERIAN LLP
2001 Addison Street, Suite 275
Berkeley, CA 94704
(510) 944-0187
bobh@cherianllp.com

KORULA T. CHERIAN
CHERIAN LLP
2001 Addison Street, Suite 275
Berkeley, CA 94704
(510) 944-0190
sunnyc@cherianllp.com

THOMAS M. DUNHAM
CHERIAN LLP
1901 L Street NW, Suite 700
Washington, DC 20036
(202) 838-1567
tomd@cherianllp.com

RONALD R. WIELKOPOLSKI
CHERIAN LLP

1901 L Street NW, Suite 700
Washington, DC 20036
(202) 838-1568
ronw@cherianllp.com

Counsel for Appellant

FORM 19. Certificate of Compliance with Type-Volume Limitations

Form 19
July 2020**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT****CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATIONS****Case Number:** 23-2144, -2145, -2146, -2147, -2414, -2415, -2442, -2443**Short Case Caption:** Bright Data Ltd. v. Code200, UAB**Instructions:** When computing a word, line, or page count, you may exclude any items listed as exempted under Fed. R. App. P. 5(c), Fed. R. App. P. 21(d), Fed. R. App. P. 27(d)(2), Fed. R. App. P. 32(f), or Fed. Cir. R. 32(b)(2).

The foregoing filing complies with the relevant type-volume limitation of the Federal Rules of Appellate Procedure and Federal Circuit Rules because it meets one of the following:

- ☒ the filing has been prepared using a proportionally-spaced typeface and includes 13,585 words.
- ☐ the filing has been prepared using a monospaced typeface and includes _____ lines of text.
- ☐ the filing contains _____ pages / _____ words / _____ lines of text, which does not exceed the maximum authorized by this court's order (ECF No. _____).

Date: 02/06/2024Signature: /s/ Robert M. Harkins, Jr.Name: Robert M. Harkins, Jr.