

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

METACLUSTER LT, UAB,

Petitioner

v.

BRIGHT DATA LTD.,

Patent Owner

Case IPR2022-00687

Patent No. 11,190,622

PATENT OWNER RESPONSE

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

I. INTRODUCTION	1
II. PERSON OF ORDINARY SKILL IN THE ART (“POSA”).....	2
III. INTRODUCTION TO THE ‘622 PATENT	2
A. BACKGROUND	5
B. DETAILED DESCRIPTION.....	5
IV. CLAIM CONSTRUCTION	9
A. APPARENTLY UNDISPUTED CLAIM TERMS/PHRASES	9
B. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE COURT’S CLAIM CONSTRUCTION ORDERS.....	10
1. COURT’S CONSTRUCTION FOR “CLIENT DEVICE”	11
2. COURT’S CONSTRUCTION FOR “SECOND SERVER”.....	13
C. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE CODE200 ALICE ORDER	14
D. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE TESO ALICE ORDER	16
E. PURELY-ROLE BASED CONSTRUCTIONS CONTRADICT THE EXPRESS CLAIM LANGUAGE	18

F. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE FIGURES OF THE SPECIFICATION	20
1. REVIEW OF FIGURE 1.....	21
2. REVIEW OF FIGURE 3.....	22
3. COMPARISON OF FIGURES 1 AND 3.....	23
G. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE APPLICANT’S PROSECUTION HISTORY STATEMENTS.....	23
1. PROSECUTION HISTORY OF GREAT GRANDPARENT PATENT NO. 10,069,936.....	24
2. PROSECUTION HISTORY OF GRANDPARENT PATENT NO. 10,225,374.....	26
3. PROSECUTION HISTORY OF PARENT PATENT NO. 10,484,511..	27
4. PROSECUTION HISTORY OF THE ‘622 PATENT	28
H. PETITIONER MISPLACES ITS RELIANCE ON RFC 2616 FOR THE PURELY ROLE-BASED CONSTRUCTIONS.....	28
I. PATENT OWNER’S PROPOSED CONSTRUCTION FOR “CLIENT DEVICE”	30
J. PATENT OWNER’S PROPOSED CONSTRUCTION FOR “FIRST SERVER”	36

V. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH CLAIM 1	39
A. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH THE CLAIM 1 PREAMBLE UNDER PURELY ROLE-BASED CONSTRUCTIONS	39
B. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH LIMITATION 1C UNDER PURELY ROLE-BASED CONSTRUCTIONS	40
C. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH LIMITATION 1D UNDER PURELY ROLE-BASED CONSTRUCTIONS	40
D. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH LIMITATION 1G UNDER PURELY ROLE-BASED CONSTRUCTIONS	41
E. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH LIMITATION 1H UNDER PURELY ROLE-BASED CONSTRUCTIONS	42
F. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH LIMITATIONS 1B OR 1F UNDER EITHER SET OF CONSTRUCTIONS	42
1. SELECTION OF PROXY SERVERS IN THE PROXY CHAIN	43
2. SELECTION OF WHICH FEATURES OF WHICH PROXY SERVERS ARE TO BE USED FOR A PARTICULAR URL	44
3. PROXY SERVER 17 MERELY APPLIES AN APPLETT	46

VI. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH THE CHALLENGED, DEPENDENT CLAIMS UNDER EITHER SET OF CONSTRUCTIONS.....	49
A. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH CLAIMS 2-13, 16 OR 26	50
VII. COHEN DOES NOT DISCLOSE OR TEACH CLAIM 1.....	53
A. COHEN DOES NOT DISCLOSE OR TEACH THE CLAIM 1 PREAMBLE UNDER PURELY ROLE-BASED CONSTRUCTIONS	53
B. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1C UNDER PURELY ROLE-BASED CONSTRUCTIONS.....	54
C. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1D UNDER PURELY ROLE-BASED CONSTRUCTIONS.....	55
D. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1G UNDER PURELY ROLE-BASED CONSTRUCTIONS.....	55
E. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1H UNDER PURELY ROLE-BASED CONSTRUCTIONS.....	56
F. COHEN DOES NOT DISCLOSE OR TEACH THE ARCHITECTURE OF CLAIM 1 UNDER PATENT OWNER’S PROPOSED CONSTRUCTIONS	56

G. TEACHING AWAY BY COHEN	58
VIII. COHEN DOES NOT DISCLOSE OR TEACH THE CHALLENGED, DEPENDENT CLAIMS UNDER EITHER SET OF CONSTRUCTIONS	60
A. COHEN DOES NOT DISCLOSE OR TEACH CLAIMS 2-13 OR 26.....	60
B. PETITIONER FAILS TO SHOW THAT COHEN DISCLOSES OR TEACHES CLAIM 30.....	63
IX. BRIGHT DATA PRACTICES THE CHALLENGED CLAIMS.....	64
X. CONCLUSION.....	75

<u>PATENT OWNER’S LIST OF EXHIBITS</u>	
EX.2001	Order, <i>Bright Data Ltd. v. Code200, UAB, et al.</i> , No. 2:19-cv-00396, Dkt. 255 (E.D. Tex. Nov. 17, 2021)
EX.2002	Order, <i>Bright Data Ltd. v. Code200, UAB, et al.</i> , No. 2:19-cv-00396, Dkt. 254 (E.D. Tex. Oct. 20, 2021)
EX.2003	Defendants’ Disclosure Pursuant to 35 U.S.C. § 282, <i>Bright Data Ltd. v. Code200, UAB, et al.</i> , No. 2:19-cv-00396, Dkt. 243 (E.D. Tex. July 16, 2021)
EX.2004	Joint Stipulation and Motion to Dismiss with Prejudice Patent Infringement Claims against Metacluster LT, UAB, <i>Bright Data Ltd. v. Code200, UAB, et al.</i> , No. 2:19-cv-00396, Dkt. 239 (E.D. Tex. July 1, 2021)
EX.2005	Order, <i>Bright Data Ltd. v. Code200, UAB, et al.</i> , No. 2:19-cv-00396, Dkt. 240 (E.D. Tex. July 2, 2021)
EX.2006	Jury Verdict, <i>Bright Data Ltd. v. Teso LT, UAB, et al.</i> , No. 2:19-cv-00395, Dkt. 516 (E.D. Tex. Nov. 5, 2021)
EX.2007	Order, <i>Bright Data Ltd. v. Tefincom S.A.</i> , No. 2:19-cv-00414, Dkt. 176 (E.D. Tex. Nov. 17, 2021)
EX.2008	Docket Control Order, <i>Bright Data Ltd. v. Tefincom S.A.</i> , No. 2:19-cv-00414, Dkt. 31 (E.D. Tex. Feb. 9, 2021)
EX.2009	Office Action dated 6/21/2022 in Reexamination Control No. 90/014,827
EX.2010	U.S. Patent No. 10,484,511
EX.2011	Declaration of Dr. Tim A. Williams (previously submitted in <i>Major Data UAB v. Bright Data Ltd.</i> , IPR2022-00915, Exhibit 2025 (PTAB June 23, 2022))

EX.2012	Website, “The Story of Tesonet” published on October 30, 2017; accessed at https://tesonet.com/culture/the-story-of-tesonet/ on June 16, 2022
EX.2013	LinkedIn Profile, “Tom Okman”; accessed at https://www.linkedin.com/in/tokmanas/ on June 16, 2022
EX.2014	Wikipedia Article, “Tom Okman”; accessed at https://en.wikipedia.org/wiki/Tom_Okman on June 16, 2022
EX.2015	Website, “Who Owns NordVPN? Can You Really Trust This VPN?”; accessed at https://www.technadu.com/who-owns-nordvpn/295187/ on June 16, 2022
EX.2016	Defendants’ Motion to Stay Case Pending Mediation, <i>Bright Data Ltd. v. Teso LT, UAB, et al.</i> , No. 2:19-cv-00395, Dkt. 534 (E.D. Tex. Dec. 1, 2021)
EX.2017	Declaration of Robert M. Harkins
EX.2018	Deposition Transcript of Dr. James Olivier, dated December 29, 2022
EX.2019	U.S. Patent No. 10,257,319
EX.2020	U.S. Patent No. 10,484,510
EX.2021	U.S. Patent No. 10,491,713
EX.2022	U.S. Patent No. 11,050,852
EX.2023	Claim Construction Order, <i>Bright Data Ltd. v. NetNut Ltd.</i> , Case No. 2:21-cv-00225, Dkt. 146 (E.D. Tex. May 10, 2022)
EX.2024	Order, <i>Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Teso LT, UAB a/k/a UAB Teso LT, et al.</i> , Case No. 2:19-cv-395-JRG, Dkt. 303 (E.D. Tex. Feb. 12, 2021)

EX.2025	Order, <i>Bright Data Ltd. f/k/a Luminati Networks Ltd. v. Code200, UAB, et al.</i> , Case No. 2:19-cv-396-JRG, Dkt. 98 (E.D. Tex. Feb. 9, 2021)
EX.2026	U.S. Patent No. 10,637,968
EX.2027	U.S. Patent No. 10,069,936
EX.2028	Prosecution History of U.S. Patent No. 10,069,936
EX.2029	Select portions of the prosecution history of U.S. Patent No. 10,225,374
EX.2030	Definition “Consumer”, Cambridge English Dictionary; accessed at https://dictionary.cambridge.org/us/dictionary/english/consumer on June 10, 2022
EX.2031	Definition “Consumer”, Cambridge Advanced Learner’s Dictionary, copyright 2008, ISBN 978-0-521-71266-8
EX.2032	Definition “Consumer”, Cambridge Academic Content Dictionary, copyright 2009, ISBN 978-0-521-69196-3
EX.2033	Definition “Consumer”, Collins English Dictionary; accessed at https://www.collinsdictionary.com/us/dictionary/english/consumer on June 10, 2022
EX.2034	Definition “Consumer”, Collins COBUILD Advanced Dictionary of American English, copyright 2007, ISBN 978-1-4240-0363-1
EX.2035	Network Fundamentals Study Guide, published February 17, 2015; accessed at https://www.webopedia.com/reference/network-fundamentals-studyguide/#topologies on June 14, 2022
EX.2036	Excerpts from Tanenbaum, A., et al., “Computer Networks – Fifth Edition”, copyright 2011, ISBN 0-13-212695-8

HIGHLY CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY

IPR2022-00687 of Patent No. 11,190,622

EX.2037	Excerpts from Tanenbaum, A, “Computer Networks – Fourth Edition”, copyright 2003, ISBN 0-13-066102-3
EX.2038	U.S. Patent No. 10,225,374
EX.2039	Bright Data, “Buy Datacenter Proxies”, accessed at https://brightdata.com/proxy-types/datacenter-proxies on December 12, 2022
EX.2040	Source Code File - HIGHLY CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY – SOURCE CODE
EX.2041	Declaration of Dr. Tim A. Williams – HIGHLY CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY
EX.2042	Bright Data, “What is Proxy Manager?”, accessed at https://help.brightdata.com/hc/en-us/articles/4413135708561 on January 19, 2023
EX.2043	Bright Data, “Is communication between relays encrypted?”, accessed at https://help.brightdata.com/hc/en-us/articles/4413418365713-Is-communication-between-relays-encrypted- on January 19, 2023
EX.2044	Bright Data, “Which ports and protocols are supported by Bright Data?”, accessed at https://help.brightdata.com/hc/en-us/articles/4413222000017-Which-ports-and-protocols-are-supported-by-Bright-Data- on January 19, 2023
EX.2045	Bright Data, Network Diagram – HIGHLY CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY
EX.2046	Joint Protective Order
EX.2047	Redlined version of the Joint Protective Order (compared to Default Protective Order)

IPR2022-00687 of Patent No. 11,190,622

EX.2048	Executed Acknowledgements from Dr. Tim A. Williams, by lead counsel for Patent Owner, and by first back-up counsel for Patent Owner
---------	---

I. INTRODUCTION

Patent No. 11,190,622 (“the ‘622 Patent”) contains 32 claims with only claim 1 being independent. As discussed herein, the method of claim 1 operates within a specific architecture shown below:

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

Patent Owner respectfully submits that Petitioner fails to meet its burden for at least three reasons.

First, Petitioner fails to show that Kocherlakota or Cohen disclose or teach the challenged claims under purely role-based constructions, which focus only on the role being performed by a network component at a particular point in time and not the physical structure of the component. The purely role-based constructions are not appropriate in the context of the ‘622 Patent. Even so, Patent Owner explains herein why Kocherlakota and Cohen do not disclose or teach the challenged claims under the purely role-based constructions.

Second, Petitioner fails to show that Kocherlakota or Cohen discloses or teaches the challenged claims under Patent Owner’s proposed constructions, which are consistent with intrinsic and extrinsic evidence as discussed herein.

Third, there are strong secondary considerations of non-obviousness in view of Patent Owner’s data center proxy service that embodies the claimed features.

II. PERSON OF ORDINARY SKILL IN THE ART (“POSA”)

Patent Owner proposes a POSA would, as of 10/8/2009, have a Master’s Degree or higher in the field of Electrical Engineering, Computer Engineering, or Computer Science or had a Bachelor’s Degree in the same fields and two or more years of experience in Internet communications. EX.2041 at ¶25. Patent Owner’s analysis herein does not change under the Board’s preliminary definition of a POSA. Paper 11 at 8; EX.2041 at ¶26.

III. INTRODUCTION TO THE ‘622 PATENT

Independent claim 1 recites a method performed by the “**first server**” within a **first client device** ↔ **first server** ↔ **first/second web server** architecture as shown, for example, in the following annotated table:

‘622 Patent
1. A method for fetching, by a first client device, a first content that comprises a web-page, an audio, or a video content, and is identified by a first Uniform Resource Locator (URL) and stored in a first web server, for fetching, by the first client device, a second content that comprises a web-page, an audio, or a video content, and is identified by a second URL and stored in a second web

server, for use with a **first server** that stores a group of IP addresses, the method by the **first server** comprising:

[1a] receiving, from the **first client device**, the first URL;

[1b] selecting, in response to the receiving of the first URL from the **first client device**, an IP address from the group;

[1c] sending, in response to the selecting, the first URL to the **first web server** using the selected IP address;

[1d] receiving, in response to the sending of the first URL, the first content from the **first web server**;

[1e] receiving, from the **first client device**, the second URL;

[1f] selecting, in response to the receiving of the second URL from the **first client device**, an additional IP address from the group;

[1g] sending, in response to the selecting, the second URL to the **second web server** using the selected additional IP address; and

[1h] receiving, in response to the sending of the second URL, the second content from the **second web server**.

As discussed below, a POSA would understand that the specification discloses a **requesting client device** ↔ **proxy server** ↔ **web server** architecture relating to claim 1. EX.2041 at ¶50.¹

A POSA would also understand that there may be additional intermediaries located between the **first server** and the **first/second web servers**. EX.2041 at ¶50. The preamble of claim 1 recites a “group of IP addresses” which a POSA would understand is a group of possible proxy IP addresses. *Id.* For example, claim 2 makes clear that each of the IP addresses is associated with a **proxy client device**.

As discussed below, a POSA would understand that the specification also discloses a **requesting client device** ↔ **proxy server** ↔ **proxy client device** ↔ **web server** architecture relating to, for example, claims 3-5. *Id.*²

¹ Related patents with a common specification, e.g., Patent Nos. 10,484,511 (EX.2010) and 10,637,968 (EX.2026), claim methods performed within a similar **first/requesting client device** ↔ **first/second server** ↔ **first/web server** architecture. See EX.2041 at ¶51.

² Related patents with a common specification, e.g., Patent Nos. 10,491,713 (EX.2021) and 11,050,852 (EX.2022), claim methods performed by the

A. BACKGROUND

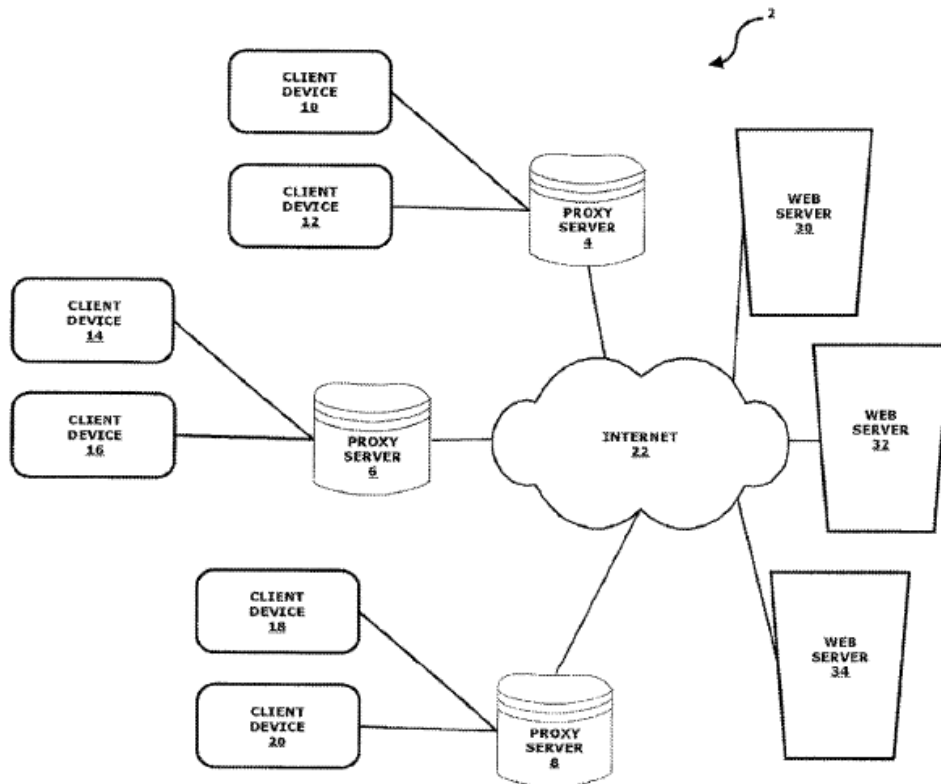
The common specification distinguishes two prior art systems. EX.2041 at ¶54; EX.1001 at 2:8-3:3. The common specification explains that the prior art systems are cost prohibitive and do not handle dynamic content due to the typical cache-storage methods. EX.2041 at ¶54. As one example, the traditional use of a proxy server would require a proxy server in almost every city within the United States and across the world. *Id.* As another example, the traditional use of a proxy server may still result in being blocked/spoofed by the web server, if the IP address of the proxy server is used so regularly that it becomes recognizable. *Id.*

B. DETAILED DESCRIPTION

The specification provides several exemplary embodiments in the detailed description and figures showing that both servers and client devices can be

“**requesting client device**” within a **requesting client device** ↔ **second server** ↔ **first client device** ↔ **first/web server**. See EX.2041 at ¶53. There are also related patents with a common specification, e.g., Patent Nos. 10,257,319 (EX.2019) and 10,484,510 (EX.2020), that claim methods performed by the “**first client device**” within a **second server** ↔ **first client device** ↔ **first/web server** architecture. See EX.2041 at ¶52.

configured to operate as intermediaries. For example, Figure 1 and the associated discussion show a proxy server between one or more client devices and a web server in a communication pathway. *E.g.*, EX.1001 at Fig. 1 and 2:8-15.

**FIG. 1**

Similarly, Figure 3 shows an exemplary embodiment of network 100 with an agent serving as an intermediary between a client and web server. As described in the specification, the communication network comprises ‘communication devices’ that can serve as a client, peer, or agent. EX.1001 at 4:41-5:10. The communication network also comprises servers. *Id.*

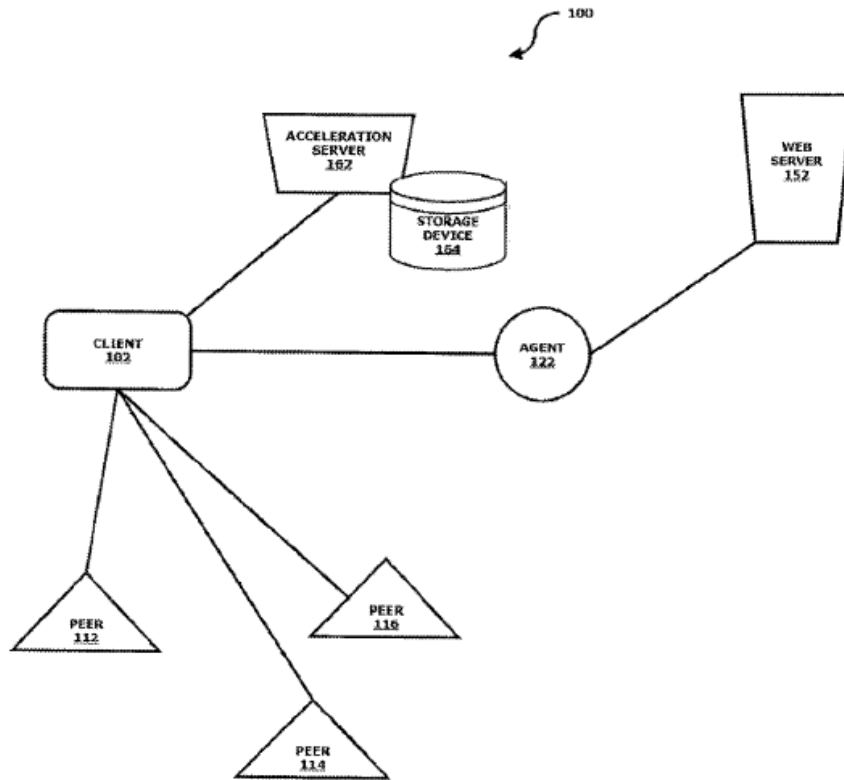
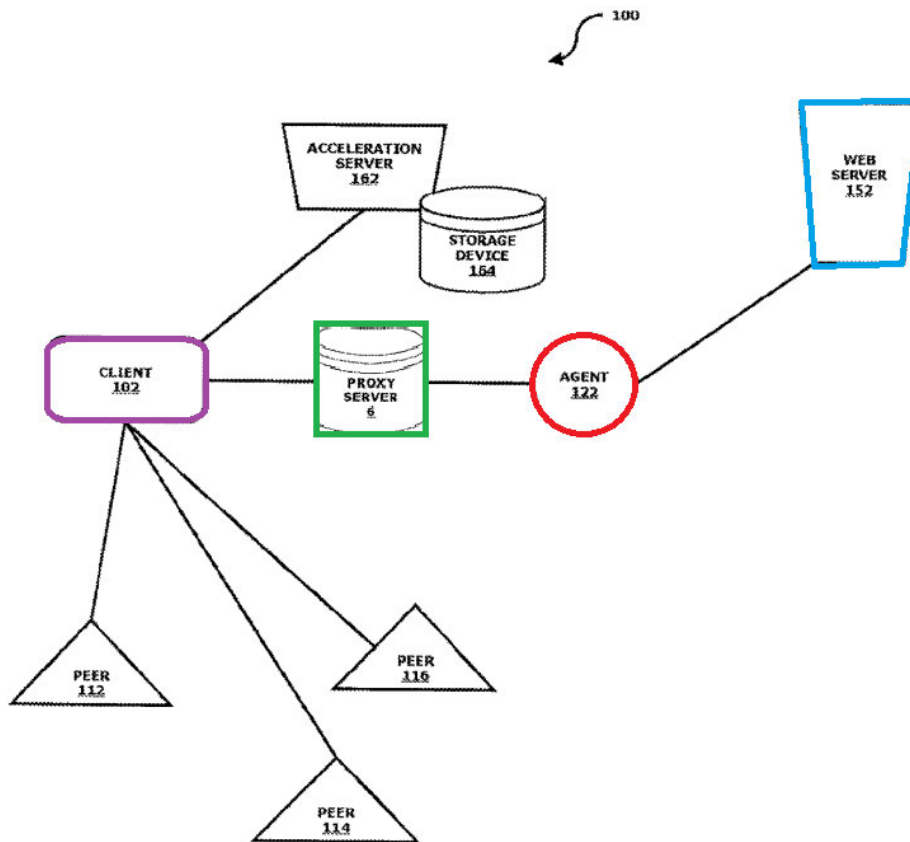


FIG. 3

As each communication device is configured to operate as a client, agent or peer as necessary, a POSA would understand client 102 and agent 122 to both be client devices. EX.2041 at ¶57; *see also id.* at ¶¶58-59 (citing EX.1001 at 4:44-50; 5:21-29; 9:12-50; 15:39-42; 15:51-52; 15:63-16:11 and Figure 6).

A POSA would understand that proxy server 6 of Figure 1 could be inserted between client 102 and agent 122 of Figure 3, as shown below in a modified

version of Figure 3.³ EX.2041 at ¶60. A POSA would understand the **requesting client device** ↔ **second server** ↔ **first client device** ↔ **web server** corresponds to client 102 ↔ proxy server 6 ↔ agent 122 ↔ web server 152, as annotated in the modified figure below.



³ Petitioners’ expert agreed that as of 10/8/2009, using a proxy server between a requesting client device and a web server would be well known to a POSA.
EX.2018 at 33:16-25.

IV. CLAIM CONSTRUCTION

Petitioner appears to propose that the Board should apply the district court claim constructions from Case No. 2:19-cv-396 (E.D. Tex.) (“Code200 Litigation”) in this IPR. Petition at 18-20. As discussed below, there appears to be no dispute regarding certain claim terms/phrases identified in the petition. However, there is a dispute regarding the claim terms “client device” and “first server”.

A. APPARENTLY UNDISPUTED CLAIM TERMS/PHRASES

Patent Owner proposes that the preamble of claim 1 is limiting. EX.2041 at ¶64. This is consistent with the Court’s Claim Construction Orders. EX.1010 at 9; EX.1011 at 9; EX.2023 at 8. Petitioner did not take a position on the preamble in the petition, but Petitioner analyzes the preamble as if it were limiting. *E.g.*, Petition at 28-30 and 59-61.

Patent Owner proposes that the phrase “selecting, in response to the receiving of the [first/second] URL” would have its plain and ordinary meaning and does not require a construction. EX.2041 at ¶65. Petitioner appears to agree. Petition at 20-21.

Patent Owner proposes that the phrase “sending ... to the [first/second] web server using the selected IP address” would have its plain and ordinary meaning

and does not require a construction. EX.2041 at ¶66. Petitioner appears to agree.

Petition at 21; *see also* EX.1013 at 7.

Patent Owner proposes that the phrase “...using the selected IP address as a source address” would have its plain and ordinary meaning. EX.2041 at ¶67. Patent Owner disagrees with the Court’s construction for the term “source address” in the Code200 Litigation as meaning “address of the web server”. EX.1011 at 27; EX.2041 at ¶67. A POSA would understand that source address does not refer to the source of the content. EX.2041 at ¶67. Petitioner’s expert appears to agree. *See, e.g.*, EX.2018 at 35:24-36:5; 37:17-38:7; 38:22-39:6; EX.1002 at ¶43; EX.2018 at 34:23-35:8. This phrase appears undisputed given that the Petitioner applied the common understanding for “source address” as the address of the sender of the communication. *E.g.*, Petition at 33, 48, 64, 76.

B. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE COURT’S CLAIM CONSTRUCTION ORDERS

The Court previously construed the terms “client device” and “first/second server” in claims of related patents in the context of the common specification. As discussed below, Petitioner deviated from the Court’s construction for the term “client device” and does not attribute any special meaning to the term “communication device.” EX.2041 at ¶69. Also, Petitioner deviated from the

Court’s construction for the term “second server” (corresponding to the “first server” of the ‘622 Patent claims) attempting to remove the requirement that it be a server. Petition at 19-20.

1. COURT’S CONSTRUCTION FOR “CLIENT DEVICE”

In the Teso Litigation⁴ and in the Code200 Litigation⁵, the Court construed the term “client device” as “**communication device** that is operating in the role of a client.” EX.1010 at 12 (emphasis added); EX.1011 at 13 (emphasis added). The Court found that the specification does not include servers as a type of communication device. EX.1010 at 12.

In the NetNut Litigation⁶, Defendant NetNut Ltd. (“NetNut”) proposed a construction of “client device” as “a device operating in the role of a client” and thereby remove the requirement that it be a “communication device.” EX.2023 at

⁴ Case No. 2:19-cv-395 (E.D. Tex.)(“Teso Litigation”) involving Patent Nos. 10,257,319 (“the ‘319 Patent”) and 10,484,510 (“the ‘510 Patent”).

⁵ Case No. 2:19-cv-396 (E.D. Tex.)(“Code200 Litigation”) involving Patent Nos. 10,484,511 (“the ‘511 Patent”) and 10,637,968 (“the ‘968 Patent”).

⁶ Case No. 2:21-cv-225 (E.D. Tex.)(“NetNut Litigation”) involving the ‘319 and ‘510 Patents as well as Patent Nos. 10,491,713; and 11,050,852.

10. **The Court expressly rejected removing the word “communication” from its construction of this term.** EX.2023 at 14. A POSA would understand that the term ‘communication device’ has a special meaning in the context of the specification as referring to a ‘client device’. EX.2041 at ¶74. A communication device is not simply any device that communicates over the Internet. *Id.* The Court repeatedly emphasized that a “client device” in the context of the specification is not merely a general-purpose computer. *E.g.*, EX.2023 at 14-15.

“Each communication device may serve as a client, peer, or agent.”. EX.1001 at 4:48-49. For example, Fig. 3 discloses client 102, peers 112, 114, 110; and agent 122, all of which are “client devices” in the context of the specification. EX.2041 at ¶75. The Court acknowledged that “communication device” has a special meaning in the context of the specification and that servers are not a type of communication device. *See id.*

The purely role-based constructions are not appropriate because they fail to recognize the special meaning of “communication device” in the context of the specification. EX.2041 at ¶79. The purely role-based constructions therefore contradict the Court’s construction for the term “client device”. The purely role-based constructions are not appropriate because they genericize this claim term. *E.g.*, EX.2018 at 42:6-14 (Petitioner’s expert testifying regarding ‘communication

device’). The purely role-based constructions are not appropriate because the Court expressly rejected referring to this claim term as a generic device operating in a particular role. EX.2041 at ¶79.

2. COURT’S CONSTRUCTION FOR “SECOND SERVER”

In the Teso Litigation, the Court construed the term “second server” of the ‘319 and ‘510 Patents as “server that is not the client device.” EX.1010 at 14 (emphasis added); EX.1013 at 11 (“The Court is not changing the construction of “first server” and “second server”). As discussed herein, the “second server” of the ‘319 and ‘510 Patents corresponds to the “first server” of the ‘622 Patent.

In the Code200 Litigation, the Court similarly construed the term “first server” of the ‘511 Patent as “server that is not the client device or the web server.” EX.1011 at 15 (emphasis added).

During the NetNut Litigation, NetNut proposed that the term “second server” should mean “a device operating in the role of a server”. **The Court expressly rejected referring generically to a device and removing the word “server” from its construction of this term.** EX.2023 at 20. The Court reiterated that “second server” means “server that is not the client device.” EX.2023 at 23 (emphasis added).

The specification discloses “servers” as proxy servers, acceleration servers, or web servers. *E.g.*, Figures 1 and 3. The Court acknowledged that servers are not disclosed as a type of “communication device” in the specification. EX.1010 at 12.

The purely role-based constructions fail to recognize that the “first server” of the ‘622 Patent claims is indeed a server. EX.2041 at ¶79. The purely role-based constructions also fail to recognize that a server is not a “communication device”. *Id.* The purely role-based constructions therefore contradict the Court’s construction for the term “first server”. The purely role-based constructions are not appropriate because they genericize this claim term. *E.g.*, EX.2018 at 43:16-24; 44:7-13; 44:24-45:23 (Petitioner’s expert testifying regarding server). The purely role-based constructions are not appropriate because the Court expressly rejected referring to this claim term as a generic device operating in a particular role. EX.2041 at ¶79.

C. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE CODE200 ALICE ORDER

The purely role-based constructions contradict the technical reasoning provided by the Court in the Code200 Alice Order finding the claims of the ‘511 and ‘968 Patents non-abstract. EX.2041 at ¶80; EX.2025. The independent claims

of the ‘511 and ‘968 Patents are directed at methods performed within a specific **first/requesting client device** ↔ **second server** ↔ **first/web server** architecture, as recognized by the Court. EX.2041 at ¶82.

The defendants in the Code200 Litigation argued that the claimed inventions of the ‘511 and ‘968 Patents “are directed to nothing more than receiving, requesting, sending, and identifying information”. EX.2025 at 5.

The Court found that the defendants “boil[] the asserted claims down to nothing more than the actions of ‘requesting,’ ‘sending,’ and ‘identifying.’” EX.2025 at 10. The Court found that such simplification of the claims of the ‘511 and ‘968 Patents is improper. EX.2025 at 10.

The Court found that the claims of the ‘511 and ‘968 Patents were not abstract at least because the claims “are directed to an architecture comprised of[] clients, servers, and web servers configured into an architecture to facilitate providing requested content using an IP address that is selected from a group of IP addresses and used to fetch the content.” EX.2025 at 8.

The purely role-based constructions are improper in the context of the ‘622 Patent because they genericize the claimed components and fail to distinguish client devices and servers. EX.2041 at ¶83. Like in the Code200 Litigation, Petitioner ignores the specific architecture of the ‘622 Patent claims and instead

focuses only on the actions of sending and receiving information. *Id.* The purely role-based constructions do not consider which component is performing which method step in the ‘622 Patent claims, which is contrary to the technical reasoning in the Code200 Alice Order. *Id.* Petitioner’s purely role-based constructions are improper in the context of the common specification and the ‘622 Patent claims. *Id.*

For at least these reasons, the purely role-based constructions are not appropriate because they contradict the Court’s Code200 Alice Order.

D. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE TESO ALICE ORDER

The purely role-based constructions contradict the technical reasoning provided by the Court in the Teso Alice Order finding the claims of the ‘319 and ‘510 Patents non-abstract. EX.2041 at ¶84; EX.2024. The independent claims of the ‘319 and ‘510 Patents are directed at methods performed within a specific **second server** ↔ **first client device** ↔ **web server** architecture, as recognized by the Court. EX.2041 at ¶84.

The defendants attempted to reduce the claimed invention to general purpose computers sending or receiving information over the Internet. EX.2024 at 6-7.

The Court expressly stated that “[i]f the claimed methods in this case were simply the receipt and forwarding of information over the Internet, [Defendants] 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.” EX.2024 at 8-9. The Court also found that “it is not the individual steps of the method that render the Asserted Claims non-abstract, it is the network architecture as a whole.” EX.2024 at 9.

The purely role-based constructions are not appropriate in the context of the ‘622 Patent because they genericize the claimed components and fail to distinguish client devices and servers. EX.2041 at ¶85. Like in the Teso Litigation, Petitioner ignores the specific architecture of the ‘622 Patent claims and instead, focuses only on the actions of sending and receiving information. *Id.* The purely role-based constructions do not consider which component is performing which method step in the ‘622 Patent claims, which is contrary to the technical reasoning in the Teso Alice Order. *Id.* Petitioner is attempting to treat client devices and servers as interchangeable general use computers which is directly contrary to the Court’s Alice Order and improper in the context of the common specification and the ‘622 Patent claims. EX.2041 at ¶86.

For at least these reasons, the purely role-based constructions are not appropriate because they contradict the Court’s Teso Alice Order.

E. PURELY-ROLE BASED CONSTRUCTIONS CONTRADICT THE EXPRESS CLAIM LANGUAGE

The preamble of claim 1 recites a “first server”. The preamble makes clear that the method steps of claim 1 are performed by the “first server.” EX.2041 at ¶87. Therefore, a POSA would understand that the claimed “first server” is a server, not a client device, regardless of the role being performed at a particular point in time for a particular method step. *Id.* A POSA would understand that the “first server” is necessarily and consistently a server as the claimed methods are performed. *Id.* The purely role-based constructions do not account for the express claim language at least because, under the purely role-based constructions, the “first server” would sometimes be operating in the role of a client. *Id.* Therefore, the purely role-based constructions directly contradict the express claim language. *Id.*

As one example, limitation 1c recites “sending... the first URL to the first web server....” At this point in time, under the purely role-based constructions, the “first server” would be operating in the role of a client, not a server. EX.2041 at ¶88. As another example, limitation 1d recites “receiving... the first content from

the first web server...” At this point in time, under the purely role-based constructions, the “first server” would be operating in the role of a client, not a server. *Id.* Thus, the purely role-based constructions contradict the express claim language which makes clear that the “first server” is a server regardless of the role being performed at a particular point in time. Based on the claim language, a POSA would understand that the “first server” is an intermediary which changes roles at different points in time.⁷ As discussed below, there would be nothing to distinguish an intermediary server from an intermediary client device under the purely role-based constructions. *Id.*

For at least this reason, the purely role-based constructions are not appropriate because they contradict the express claim language.

⁷ For example, during the method steps recited in limitations 1a and 1e, the “first server” is operating in the role of a server under the purely role-based constructions. EX.2041 at ¶88, note 2. During the method steps recited in limitations 1c, 1d, 1g, and 1h, the “first server” is operating in the role of a client under the purely role-based constructions. *Id.*

F. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE FIGURES OF THE SPECIFICATION

The purely role-based constructions are not appropriate because they contradict the figures of the specification. EX.2041 at ¶91. Under the purely role-based constructions, a POSA would not be able to identify whether an intermediary is a client device or a server. *Id.*

As discussed below, upon reviewing the specification in general, and Figures 1 and 3 in particular, a POSA would understand that proxy server 6 must be structurally different from agent 122. EX.2041 at ¶92. However, under the purely role-based constructions, proxy server 6 of Figure 1 and agent 122 of Figure 3 would be operating in the same roles at a given point in time. Therefore, under the purely role-based constructions, there would be nothing to distinguish proxy server 6 of Figure 1 and agent 122 of Figure 3. *Id.* **Under the purely role-based constructions, Figure 3 (inventive embodiment) collapses onto Figure 1 (prior art).** *Id.*

The figures inform a POSA that a server is not a client device and that a client device is not a server. EX.2041 at ¶93. Proxy server 6 of Figure 1 (prior art) must be structurally different from agent 122 of Figure 3 (inventive embodiment). *Id.* The purely role-based constructions do not account for the structural

differences between a proxy server (in Figure 1) and a proxy client device (in Figure 3) and therefore, the purely role-based constructions are not appropriate. *Id.*

1. REVIEW OF FIGURE 1

For example, Figure 1 depicts prior art. EX.1001 at 3:66-67. Figure 1 shows proxy server 6 between client devices 14,16 and web server 32. A POSA would understand that client devices 14,16 are client devices and not servers; and a POSA would understand that web server 32 is a server and not a client device. EX.2041 at ¶94.

In Figure 1, the exemplary intermediary is proxy server 6. EX.2041 at ¶96. **A POSA would understand that proxy server 6 is a server and not a client device.** *Id.*

As shown in Figure 1, proxy server 6 (i) receives requests from client devices 14,16 and (ii) sends requests to web server 32. EX.2041 at ¶96. If a POSA were to apply the purely role-based constructions, proxy server 6 would be (i) operating in the role of a server and (ii) operating in the role of a client. *Id.*

Additionally, proxy server 6 (iii) receives responses from web server 32 and (iv) sends the received responses from web server 32 to client devices 14,16. EX.2041 at ¶97. If a POSA were to apply the purely role-based constructions,

proxy server 6 would be (iii) operating in the role of a client and (iv) operating in the role of a server. *Id.*

2. REVIEW OF FIGURE 3

Figure 3 is an exemplary inventive embodiment. EX.1001 at 4:3-5. Figure 3 shows agent 122 between client 102 and web server 152. A POSA would understand that client 102 is a client device and not a server; and a POSA would understand that web server 152 is a server and not a client device. EX.2041 at ¶98.

In Figure 3, the exemplary intermediary is agent 122. EX.2041 at ¶100. **A POSA would understand that agent 122 is a client device and not a server.** See *id.*

As shown in Figure 3, agent 122 (i) receives requests from client devices and (ii) sends requests to web server 152. EX.2041 at ¶101. If a POSA were to apply the purely role-based constructions, agent 122 would be (i) operating in the role of a server and (ii) operating in the role of a client. *Id.*

Additionally, agent 122 (iii) receives responses from web server 152 and (iv) sends the received responses from web server 152 to client device 102. EX.2041 at ¶102. If a POSA were to apply the purely role-based constructions, agent 122 would be (iii) operating in the role of a client and (iv) operating in the role of a server. *Id.*

3. COMPARISON OF FIGURES 1 AND 3

If a POSA were to apply the purely role-based constructions, proxy server 6 (in Figure 1) and agent 122 (in Figure 3) would be operating in the same roles at a given point in time. EX.2041 at ¶103. **If one were to apply the purely role-based constructions, there is nothing to distinguish the architectures of Figure 1 and Figure 3.** *See id.* The figures inform a POSA that a server is not a client device and that a client device is not a server. That is, proxy server 6 is not the same as agent 122 and vice versa. *Id.* The purely role-based constructions are not appropriate because they fail to account for these structural differences between proxy servers and proxy client devices. EX.2041 at ¶104.

G. PURELY ROLE-BASED CONSTRUCTIONS CONTRADICT THE APPLICANT’S PROSECUTION HISTORY STATEMENTS

The purely role-based constructions contradict the applicant’s prosecution history statements, discussed below. Based on these statements, a POSA would understand a “client device” is not a “server” and vice versa. EX.2041 at ¶105. A POSA would understand that the determination of whether a component is a “client device” or a “server” is not based on the role being performed at a given point in time. *Id.*

**1. PROSECUTION HISTORY OF GREAT GRANDPARENT
PATENT NO. 10,069,936**

The prosecution history of the great grandparent ‘936 Patent, clearly distinguishes client devices from servers. EX.2041 at ¶107. Applicant responded to rejections over the Garcia reference, stating that the cache server 306 of Garcia “is clearly **a dedicated device and performs a server functionality**. The Garcia reference is silent, and actually teaches away from identifying and using another client device for supporting a content request by a specific client.” EX.2028 at 215 (emphasis in original). The examiner responded that the arguments are moot in view of new ground(s) of rejection. EX.2028 at 172. Applicant repeatedly argued that client devices are different from servers. EX.2028 at 163-164 and 96-97. Ultimately, the examiner withdrew rejections based on Garcia and issued new rejections based on other references. EX.2028 at 77.

The examiner recognized a server cannot be equated to a client device regardless of the role being performed at a given moment in time. EX.2041 at ¶109. This understanding is consistent with other statements by Applicant during prosecution as discussed below. *Id.*

Applicant stated that “[t]here is a clear distinction in the art and as taught by the Garcia reference between clients and servers.” EX.2028 at 163. Applicant stated that “[c]lient devices ... 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...**” EX.2028 at 163 (emphasis added). “[A] client device typically connects to the Internet via an ISP using a single connection.” EX.2028 at 163. “Clients are inherently **[re]sources limited**, such as in bandwidth and storage capability.” EX.2028 at 164 (emphasis added).

Applicant clearly distinguished servers from client devices: “In contrast, server devices are known in the art to be dedicated devices to store information objects, to be provided to clients upon request.” EX.2028 at 163.

In the Notice of Allowance, the examiner acknowledged that “the limitations of the independent claims, **within its environment**, is allowable subject matter over the prior art, in light of the specification”. EX.2028 at 44 (emphasis added). The examiner’s acknowledgement of the “environment” in which the claims operate shows that the examiner appreciated the unique architecture disclosed in the common specification and the novel use of a proxy client device within that architecture. EX.2041 at ¶112.

**2. PROSECUTION HISTORY OF GRANDPARENT PATENT
NO. 10,225,374**

The prosecution history of the grandparent ’374 Patent further shows that servers and client devices are not interchangeable general use computers. EX.2041 at ¶114. The grandparent ’374 Patent operates within a **first client device ↔ first server ↔ second client device ↔ second/web server** architecture.

The applicant stated that “the claimed invention clearly defines a unique information delivery structure that involves not only content delivery, but also exchange of various identifiers of networked devices.” EX.2029 at 11.

The Applicant also distinguished the claimed invention from the cited primary reference which disclosed peer-to-peer direct communication. EX.2029 at 14. A POSA would understand that traditional peer-to-peer systems typically consist of client devices and is therefore not the same as the specific architecture in which the claimed methods of the ’374 Patent operate. EX.2041 at ¶116.

In the Notice of Allowance, the Examiner agreed that the limitations of the independent claim “within its environment” constitute allowable subject matter. EX.2029 at 6.

**3. PROSECUTION HISTORY OF PARENT PATENT NO.
10,484,511**

As discussed above, the parent ‘511 Patent recites methods that operate within a **first client device** ↔ **first server** ↔ **web server** architecture. EX.2041 at ¶119.

During prosecution of the ‘511 Patent, the applicant stated that “the claimed invention clearly defines a unique information delivery structure that involves not only content delivery, but also exchange of various identifiers of networked devices.” EX.1008 at 240. The Applicant also distinguished the claimed invention from the cited primary reference which disclosed peer-to-peer direct communication. EX.1008 at 243. A POSA would understand that a traditional peer-to-peer system typically consists of client devices and is therefore not the same as the specific architecture in which the claimed methods of the ‘511 Patent operate. EX.2041 at ¶120.

In the Notice of Allowance, the examiner agreed the limitations of the independent claim “within its environment” constitute allowable subject matter. EX.1008 at 38; EX.2041 at ¶121.

4. PROSECUTION HISTORY OF THE ‘622 PATENT

In the Notice of Allowance, the examiner again acknowledged that the “environment” of the claimed methods was novel over the prior art. EX.1007 at 43; EX.2041 at ¶122.

H. PETITIONER MISPLACES ITS RELIANCE ON RFC 2616 FOR THE PURELY ROLE-BASED CONSTRUCTIONS

In its analysis, Petitioner applied purely role-based constructions where any device “operating in the role of a client” is a client device and any device “operating in the role of a server” is a server. *E.g.*, Petition at 18-20; EX.2018 at 42:6-14 and 48:3-20. Petitioner appears to rely on RFC 2616 as support for the purely role-based constructions. Petition at 19-20; *see also* EX.2041 at ¶123.

As discussed below, Petitioner’s application of the purely role-based constructions to Kocherlakota and Cohen contradicts the RFC 2616. EX.2041 at ¶159. RFC 2616 defines “proxy” as an “intermediary program which acts as both a server and a client.” EX.1005 at 9. Petitioner’s expert testified that RFC 2616 confirmed his understanding of how a POSA would view the terms “client” and “server.” EX.2018 at 16:13-22. Petitioner’s expert testified that there is “no restriction on the type of computer architecture” with respect to RFC 2616 and that the type of device is “immaterial” to RFC 2616. EX.2018 at 28:24-29:24.

RFC 2616 explains that “our use of these terms [server and client] refers only to the role being performed by the program **for a particular connection.**” EX.1005 at 8 (emphasis added). The definitions in RFC 2616, referring only to the role being performed for a particular connection, actually supports Patent Owner’s criticism of the purely role-based constructions where an intermediary may be operating in different roles at different points in time for different connections. EX.2041 at ¶160.⁸ **Petitioner ignores the different roles being performed at different points in time for different connections in order to improperly map the prior art onto the claims. See id.**

If applied consistently with the teachings of RFC 2616, the role-based constructions **must** be analyzed at a particular point in time for a particular connection. EX.2041 at ¶161. Based on his deposition testimony, it appears that Petitioner’s expert agrees. EX.2018 at 126:7-16 (“it’s important that it have the capability and can work at it and does work at it at a particular time”).

⁸ Petitioner’s expert agreed that receiving a packet and sending a packet are different points in time. EX.2018 at 32:15-33:3. Petitioner’s expert agreed that an intermediary is acting as a client and acting as a server at different points in time. EX.2018 at 32:15-33:3; *see also id.* at 33:4-15.

As discussed above, the purely role-based constructions contradict the express language and for at least this reason, they are not appropriate in the context of the ‘622 Patent. EX.2041 at ¶162. Moreover, Petitioner’s application of the purely role-based constructions contradicts the very RFC 2616 on which Petitioner relies for support.

**I. PATENT OWNER’S PROPOSED CONSTRUCTION FOR
“CLIENT DEVICE”**

A POSA would understand the term “client device” to mean a “consumer computer.” EX.2041 at ¶112 (citing EX.1001 at 2:44-46). Alternatively, a POSA would understand the term “client device” to mean a “consumer communication device”. *Id.* These proposed constructions are consistent with the claim language, the specification, and the prosecution histories distinguishing client devices and servers. *Id.*

The Court previously rejected Patent Owner’s proposed construction of “client device” as “consumer computer” in the Teso Litigation for three reasons.⁹

⁹ Patent Owner notes that, in the Code200 Litigation, the Court adopted its reasoning and ruling from the Teso Litigation. EX.1011 at 13.

First, the Court found no express lexicography in the specification. EX.1010 at 11. Patent Owner disagrees. The specification expressly states that “computers of consumers” are “**referred to herein as** client devices” and the term “client device” is used in the claims. EX.1001 at 2:44-46. In a recent decision, the Federal Circuit found “[b]ecause the patentee clearly defined “driven position” in the written description, that definition controls.” *Kyocera Senco Indus. Tools, Inc. v. ITC*, 22 F.4th 1369, 1379 (Fed. Cir. 2022). Acting as their own lexicographers, the patentees defined “driven position” in the specification by stating: “This bottom position is also sometimes **referred to herein as** the ‘driven position.’” *Id.* at 1378 (emphasis added). This clear definition in the *Kyocera* case is the same type of definition provided in the ‘622 Patent where the patentee used the phrase “referred to herein as” to define the claim term “client device”. Thus, the term “client device” has a special meaning in the context of the ‘622 Patent. Therefore, upon reading the specification, a POSA would understand a “client device” is a consumer computer in the context of the ‘622 Patent. EX.2041 at ¶132.

Second, the Court found that the term “consumer” was used in the specification as a consumer of content as opposed to a broadcaster of content. EX.1010 at 11. Patent Owner disagrees that the term “consumer” as used in the specification deviates 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”. EX.2030; EX.2031 at 5; EX.2032 at 4; EX.2033; EX.2034 at 4; EX.2041 at ¶133. In the financial context, consumer use or individual, personal use is often distinguished from commercial use. *E.g.*, 15 U.S.C. § 6809(9) and 12 C.F.R. § 332.3(e)(1). This is also consistent with the prosecution history statements discussed above, where the applicant stated that client devices are “typically consumer owned and operated.” EX.2041 at ¶133 (citing EX.2028 at 163).

Third, the Court found that the term “consumer” does not appear in connection with the description of the claimed inventions. EX.1010 at 11. Patent Owner disagrees. The lexicography in the specification defines client devices as consumer computers. Patent Owner also refers to the prosecution history statements discussed above.

In the context of the ‘622 Patent, a client device is not a server. In the Teso Litigation, the Court found that Patent Owner’s briefing did not cite to a sufficient reason for including the negative limitation that a client device is unable to act as a server in all cases. EX.1010 at 12. However, the Court did not have the benefit of the detailed discussion with respect to, for example, Figs. 1 and 3, showing that client devices are not servers and vice versa. Additionally, Patent Owner

respectfully submits that, even if, under the purely role-based constructions, a client device would be “operating in the role of a server” at certain points in time, but that does not transform a physical client device into a physical server. *See* EX.2041 at ¶128. Patent Owner respectfully submits that, upon reviewing at least the intrinsic evidence, a POSA would understand that a client device is not a server in the context of the ‘622 Patent.

Patent Owner respectfully submits that the term “client device” means “consumer computer” which is distinct from a server, as further explained below.

A POSA would understand a client device is a ‘communication device’ in the context of the specification. EX.2041 at ¶128; *see also* EX.1010; EX.1011; EX.1013; EX.2023; *see also* EX.1001 at 4:44-50; 5:21-29; 9:12-50. In the context of the specification, a client device is a consumer computer with specific software to operate in accordance with the claims. EX.2041 at ¶¶129-130.

In the context of the specification, a client device would be understood to be, more specifically, a consumer computer like a laptop, desktop, tablet, or smartphone. EX.2041 at ¶132. This is also consistent with the prosecution history statements discussed above. *Id.* A POSA would understand that a consumer device is distinguished from a commercial device. *Id.* A POSA would also understand that a consumer device is not a dedicated proxy server. *Id.*

The recited architectures in the claims of related patents distinguish between client devices and servers, e.g., **proxy client device** versus **proxy server**. EX.2041 at ¶134. The Court has repeatedly acknowledged that a client device is not merely a general purpose computer. *E.g.*, EX.2023 at 14-15. This understanding is consistent with the Code200 Alice Order finding the claimed methods of the ‘511 and ‘968 Patents are not abstract. *E.g.*, EX.2025 at 8 (“the Court notes that [the claims of the ‘511 and ‘968 Patents] are directed to an architecture comprised of a clients, servers, and web servers configured into an architecture...”). This understanding is also consistent with the Teso Alice Order finding the claimed methods of the ‘319 and ‘510 Patents are not abstract. *E.g.*, EX.2024 at 8-9 (“If the claimed methods in this case were simply the receipt and forwarding of information over the Internet, Teso 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”).

A POSA would understand that a client device is typically portable and easily moved, like, for example, a laptop, desktop, tablet or smartphone. EX.2041 at ¶136. This is consistent with the prosecution history statements that a client device is not a dedicated network element, unlike a server. *Id.* This is also consistent with the prosecution history statements that a client device typically uses

a single or relatively few connections, unlike a server. *Id.* A POSA would also understand a client device is resource limited (e.g., bandwidth and storage), unlike a server. *Id.*

A POSA would understand “client” to be consistent with its plain and ordinary meaning in the context of “client device” discussed above. EX.2041 at ¶138. A POSA’s understanding of client and client device is further evidenced by extrinsic materials with a definition of client as “an application that runs on a personal computer or workstation and relies on a server to perform some operations.” EX.2035; EX.2036 at 5 (“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”); EX.2037 at 7; EX.2041 at ¶138.

Further, a POSA would understand that a client device is typically understood (a) to be regularly switched off and taken offline; (b) to be capable of processing only a limited number of requests at any given time, which may for example include a single user login; and/or (c) to have lesser fault tolerance, lesser reliability, and lesser scalability, prioritizing value to client device users over system costs. EX.2041 at ¶137. These client device-attributes distinguish a client device from a server. *Id.*

A POSA would understand there are structural differences between client devices and servers in the context of the specification and there is no contradictory disclosure in the specification or in the prosecution histories. EX.2041 at ¶140. Rather, client devices are repeatedly distinguished from servers in the specification and the prosecution histories. *Id.*

J. PATENT OWNER’S PROPOSED CONSTRUCTION FOR “FIRST SERVER”

A POSA would understand the term “first server” to mean “server that is not a client device”. EX.2041 at ¶144 (emphasis added). This proposed construction is consistent with the claim language, the specification, and the prosecution histories distinguishing servers from client devices. *Id.* For example, the Court construed “client device” as a communication device and based on that construction, a server is not a client device at least in part because a server is not a communication device. *Id.*

Consistent with the specification, the claim language itself distinguishes servers and client devices. EX.2041 at ¶141. In the context of the specification, it would be improper to call one component a server and another identical component a client device. *Id.* There are many prosecution history statements that servers and client devices are different physical elements, they are different types

of network components. *Id.* In allowing the issued claims, the examiner necessarily found that servers are not client devices. *Id.*

A server is structurally different from a client device. EX.2041 at ¶143. As discussed above comparing Figures 1 and 3, a POSA would understand that a proxy server is structurally different from a proxy client device. *Id.* A POSA would understand that proxy server 6 of Figure 1 is not the same as agent 122 of Figure 3. *Id.*

The Court repeatedly acknowledged that a server is not a communication device. *E.g.*, EX.1010 at 12; EX.1013 at 10. Even if, under the purely role-based constructions, a server would be “operating in the role of a client” at some points in time, that does not transform a server into a “client device” in the context of the ‘622 Patent. EX.2041 at ¶142. Regardless of the role being performed, a server is not a client device. *Id.*

A POSA would understand that a server is not a consumer computer. EX.2041 at ¶145. A POSA would consider a server to be a commercial network element, rather than a consumer device. *Id.* A POSA would understand that, unlike a client device, a server is not portable or moved about by a consumer. *Id.* This is consistent with the prosecution history statements that a server is a dedicated network element, unlike a client device. *Id.* This is also consistent with the

prosecution history statements that a server is typically capable of a large number of connections, unlike a typical client device. *Id.*

Further, a POSA would understand a server (a) to remain online with greater availability and maximum up time to receive requests almost all of the time (switching off servers can be catastrophic to a network); (b) to efficiently process multiple requests from multiple client devices at the same time; (c) to generate various logs associated with the client devices and traffic from/to the client devices; (d) to primarily interface and respond to the client devices, oftentimes without a Graphical User Interface (“GUI”); (e) to have greater fault tolerance and higher reliability with lower failure rates; and/or (f) to provide scalability for increasing resources to serve increasing client demands. EX.2041 at ¶146. These server-attributes distinguish a server from a client device. *Id.*

A POSA’s understanding of server is further evidenced by extrinsic materials with a definition of server as “[a] computer or device on a network that manages network resources. Servers are often dedicated, meaning that they perform no other tasks besides their server tasks.” EX.2035; EX.2036 at 5 (“data are stored on powerful computers called servers”) and 6 (“one server can handle a large number (hundreds or thousands) of clients simultaneously”); EX.2037 at 7; EX.2041 at ¶147.

Overall, treating client devices and servers as interchangeable, general purpose computers is inconsistent with the disclosure in the ‘622 Patent, the prosecution histories, and the Court’s Orders. EX.2041 at ¶148.

V. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH CLAIM 1

A. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH THE CLAIM 1 PREAMBLE UNDER PURELY ROLE-BASED CONSTRUCTIONS

The preamble of claim 1 recites a “first server”. Petitioner alleges that proxy server 17 corresponds to the “first server”. Petition at 28.

Kocherlakota does not disclose a “first server” as recited in the preamble of claim 1 under the purely role-based constructions. EX.2041 at ¶177. There is no way for a POSA to determine whether proxy server 17 is a client device or a server under the purely role-based constructions because, as discussed below, proxy server 17 operates in different roles at different points in time. *Id.*

A POSA would understand the “first server” is necessarily and consistently a server during the performance of method claim 1. EX.2041 at ¶177. For at least this reason, Kocherlakota does not disclose or teach the claim 1 preamble under the purely role-based constructions. *Id.*

**B. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH
LIMITATION 1C UNDER PURELY ROLE-BASED
CONSTRUCTIONS**

Limitation 1c recites the first server “sending... the first URL to the first web server....” Petitioner alleges that proxy server 17 meets this limitation.

Petition at 28 and 32-33. However, Petitioner fails to apply the purely role-based constructions at the particular point in time, for the particular transaction, recited in limitation 1c. EX.2041 at ¶¶178-179.

Under the purely role-based constructions, when proxy server 17 sends the first URL to the first web server, proxy server 17 is operating in the role of a client, not a server. EX.2041 at ¶180. Petitioner’s expert appears to agree. EX.2018 at 26:1-12; 26:19-27:5; 27:19-28:4. Therefore, under the purely role-based constructions, proxy server 17 cannot be a server during performance of this method step. EX.2041 at ¶180.

For at least this reason, Kocherlakota does not disclose or teach claim 1 under the purely role-based constructions for “client device” and “first server.”

**C. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH
LIMITATION 1D UNDER PURELY ROLE-BASED
CONSTRUCTIONS**

Limitation 1d recites the first server “receiving... the first content from the first web server....” Petitioner alleges that proxy server 17 meets this limitation.

Petition at 34-35. However, Petitioner fails to apply the purely role-based constructions at the particular point in time, for the particular transaction, recited in limitation 1d. EX.2041 at ¶¶182-183.

Under the purely role-based constructions, when proxy server 17 receives a response from the first web server, proxy server 17 is operating in the role of a client, not a server. EX.2041 at ¶184. Petitioner’s expert appears to agree. EX.2018 at 30:21-31:9; 31:10-31:21; 31:22-32:2. Therefore, proxy server 17 cannot be a server during performance of this method step. EX.2041 at ¶184.

For at least this reason, Kocherlakota does not disclose or teach claim 1 of under the purely role-based constructions for “client device” and “first server”.

**D. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH
LIMITATION 1G UNDER PURELY ROLE-BASED
CONSTRUCTIONS**

Limitation 1g recites the first server “sending... the second URL to the second web server...”. For the same reasons discussed regarding limitation 1c, Kocherlakota does not disclose or teach limitation 1g under the purely role-based constructions. EX.2041 at ¶¶186-187.

**E. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH
LIMITATION 1H UNDER PURELY ROLE-BASED
CONSTRUCTIONS**

Limitation 1h recites the first server “receiving... the second content from the second web server.” For the same reasons discussed above regarding limitation 1d, Kocherlakota does not disclose or teach limitation 1h under the purely role-based constructions. EX.2041 at ¶¶188-189.

**F. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH
LIMITATIONS 1B OR 1F UNDER EITHER SET OF
CONSTRUCTIONS**

Limitation 1b recites “selecting, in response to the receiving of the first URL from the first client device, an IP address from the group”. Petitioner alleges that upon receiving the first URL, proxy server 17 selects the IP address of either proxy server 19 or proxy server 21 from the group of those IP addresses to route the URL through the proxy chain. Petition at 31.

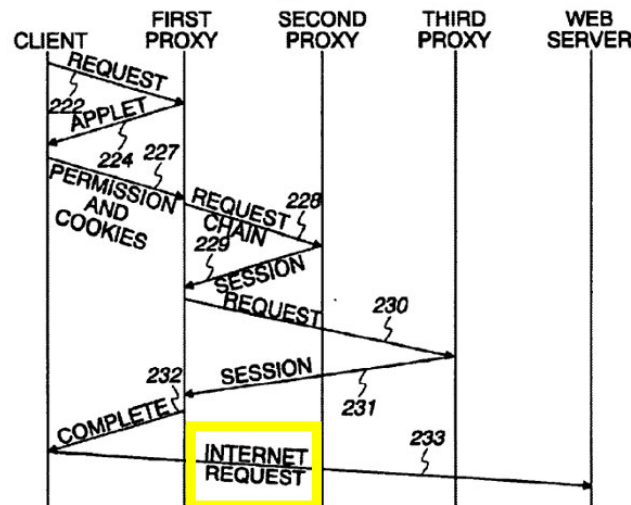
Limitation 1f recites “selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group”. Petitioner alleges that upon receiving the second URL, proxy server 17 selects the IP address of proxy server 21 from the group of IP addresses. Petition at 36.

Kocherlakota does not disclose or teach limitation 1b or limitation 1f for at least three reasons discussed below. EX.2041 at ¶192.

1. SELECTION OF PROXY SERVERS IN THE PROXY CHAIN

Kocherlakota teaches that the client wants to take advantage of the anonymity, French language, and wait avoidance features offered by proxies 17, 19, and 21, respectively. EX.1003 at 2:63-3:3 and 4:32-35; EX.2041 at ¶193. Kocherlakota teaches that client 11 visits each proxy server directly and establishes any necessary relationship during the visits. EX.1003 at 3:10-20. An “applet” is used to provide information associated with the visited proxy servers. EX.1003 at 3:24-33 and Fig. 2. The applet is sent to a first of the proxy servers, e.g., proxy server 17. EX.1003 at 3:66-67. Upon receiving the applet (not the request comprising the first/second URLs), proxy server 17 analyzes the applet information and contacts the named proxy servers to form the proxy chain. EX.1003 at 3:66-4:4 and 4:9-11.

Kocherlakota expressly discloses that the proxy chain, including proxy servers 17, 19, and 21, is established before the internet request comprising the first/second URL is received by proxy server 17. EX.1003 at 4:29-31 and Fig. 6 (reproduced below with annotation); EX.2041 at ¶194. Petitioner’s expert agreed. EX.2018 at 57:14-20; 58:12-18; 69:12-22.

Fig. 6

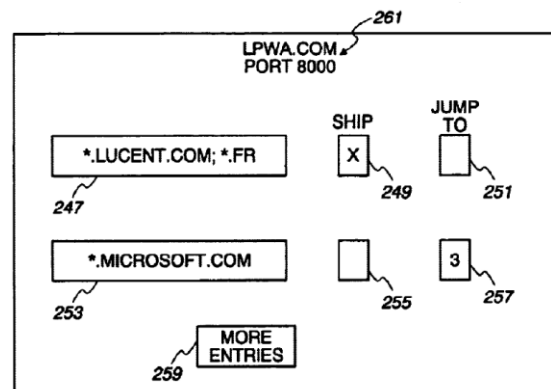
Because the proxy chain is established before the internet request is received by proxy server 17, the selection of proxies in the chain cannot be performed in response to proxy server 17 receiving the internet request comprising the first/second URL. EX.2041 at ¶195. The selection of proxies in the chain occurs when the client enters identities of proxies in the applet. *Id.*; see EX.1003 at 3:30; Figs. 2 and 7.

2. SELECTION OF WHICH FEATURES OF WHICH PROXY SERVERS ARE TO BE USED FOR A PARTICULAR URL

As discussed above, the applet includes information associated with each proxy server in the proxy chain. In more detail, the applet contains information, including the data shown in Fig. 2 of Kocherlakota, such as URLs, port numbers, user names and passwords (EX.1003 at 3:26-37), as well as “advanced features”

shown in Fig. 7 of Kocherlakota, such as URLs (as that term is used in Kocherlakota) for which a particular proxy is to be skipped or jumped (EX.1003 at 5:8-13). Specifically, Fig. 7 shows URLs (e.g., 247, 253) in a text window and an indication of whether the first proxy (e.g., 261) is to be “skipped” (e.g., 249, 255) or “jump to” another proxy (e.g., 251, 257) for the particular URL (EX.1003 at 4:63-5:26). Thus, the received applet defines which features are to be employed for predetermined URLs. *Id.*; EX.1003 at 4:32-35; EX.2041 at ¶196.

Fig. 7



The selection of which features of which proxies are to be used for a particular URL is indicated in the applet which is received before the internet request comprising the first/second URL is received by proxy server 17. EX.2041 at ¶197; *see, e.g.*, Fig. 6. Petitioner’s expert agreed. EX.2018 at 68:5-24.

Because the desired features are determined before the internet request is received by proxy server 17, the selection of proxy features cannot be performed in

response to proxy server 17 receiving the internet request. EX.2041 at ¶198. The selection of which features of which proxies are to be used for a particular URL occurs when the client enters information in the applet. *Id.*

3. PROXY SERVER 17 MERELY APPLIES AN APPLET

Kocherlakota teaches that the established proxy chain includes proxy server 17, proxy server 19, and proxy server 21. EX.2041 at ¶199. Once an internet request is received by proxy server 17, there is no teaching in Kocherlakota that proxy server 17 “selects” a particular proxy server for a particular URL as recited in claim 1. *Id.* Proxy server 17 merely applies the applet. *Id.*

Regarding limitation 1b, Petitioner relies on (1) “pathway 1”: the pathway where a URL does match the criteria in text windows 247 or 253 of Fig. 7 and the request passes via the chained proxy servers 17, 19, and 21 (Petition at 31) as well as (2) “pathway 2”: the pathway where a URL matches the criteria in text window 247 of Fig. 7 (indicating a “skip” function) and the request passes via the chained proxy servers 17, 19, and 21 (Petition at 31-32).

In pathway 1, the internet request is sent through proxy servers 17, 19, and 21. EX.2041 at ¶201. Petitioner’s expert agreed. EX.2018 at 77:5-78:16. A POSA would understand that is because the applet identified proxy servers 17, 19, and 21 and no advanced features were selected. EX.2041 at ¶201. Proxy server 17 did not

“select” proxy server 19 as opposed to proxy server 21 in pathway 1, but merely applied the applet. *Id.*

In pathway 2, the request will still pass through proxy servers 17, 19, 21. EX.2041 at ¶202. Petitioner’s expert agreed. EX.2018 at 64:5-14; 65:1-20; 78:17-79:10. As shown above, Figure 7 relates to the first proxy, e.g., proxy server 17. EX.1003 at 5:4. As described, “when a URL matching *.fr is transmitted to the first proxy, the services of that proxy are to be skipped as defined by the “x” in box 249.” EX.1003 at 5:18-21 (emphasis added). Therefore, the anonymity features of proxy server 17 are skipped for the URL matching *.fr. See EX.1003 at 2:63-64. Proxy server 17 does not “select” proxy server 19 as opposed to proxy server 21 in pathway 2; proxy server 17 merely applies the applet for the particular URL. EX.2041 at ¶203.

Regarding limitation 1f, Petitioner relies on (3) “pathway 3”: the pathway where a URL matches the criteria in text window 253 of Fig. 7 (indicating a “jump” function) and the request allegedly passes from proxy server 17 to proxy server 21. Petition at 36; EX.2018 at 80:11-81:11.

As shown in Figure 7 and described by Kocherlakota, “whenever a URL of *.companyx.com is sent to the first proxy, the first proxy will skip the second proxy and jump to the third proxy because the number 3 is entered into the jump to

box 251.” EX.1003 at 5:21-24. Proxy server 17 does not “select” proxy server 21 in pathway 3, but merely applies the applet. EX.2041 at ¶205. Petitioner fails to show that proxy server 17 “selects” proxy server 21 instead of proxy server 19 in response to receiving the second URL. *Id.*

A POSA would understand that the proxy chain involving proxy servers 17, 19, and 21 is established before the first/second URL is received by proxy server 17. EX.2041 at ¶206. Additionally, a POSA would understand that the selection of which features of which proxies are to be used for a particular URL is made before the first/second URL is received by proxy server 17. *Id.* Proxy server 17 merely applies the applet. *Id.* Proxy server 17 therefore does not perform the “selecting” steps recited in limitations 1b and 1f. *Id.* For example, there is no disclosure or teaching in Kocherlakota regarding any intelligent selection by proxy server 17. *Id.*

Further, a POSA would understand that proxy server 17 does not select which proxies are to be part of the proxy chain. EX.2041 at ¶207. Proxy server 17 does not select which features of which proxy server are to be used for a particular URL. *Id.* Rather, the client makes this selection in the applet before the internet request is sent to proxy server 17, as discussed above regarding Figure 6 of Kocherlakota. *Id.* Proxy server 17 merely applies the applet. *Id.*

In contrast to Kocherlakota, the disclosure of the ‘622 Patent shows that the “selecting” of an IP address requires some intelligent decision-making by the first server to determine, for example, the numerical closeness of the possible proxy IP addresses relative to the destination web server. EX.2041 at ¶207; *see, e.g.*, EX.1001 at 13:25-29. Although the first server may be instructed to determine, for example, which proxy IP address is numerically close to the IP address of the destination web server, this still requires some intelligent decision-making by the first server in performing the “selecting” steps by evaluating the possible proxy IP addresses. *Id.* There is no such decision-making by the proxy server 17 of Kocherlakota. *Id.*

For at least these reasons, Kocherlakota does not disclose or teach limitations 1b or 1f.

VI. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH THE CHALLENGED, DEPENDENT CLAIMS UNDER EITHER SET OF CONSTRUCTIONS

Because Kocherlakota does not disclose or teach independent claim 1 for the reasons discussed above, Kocherlakota does not disclose or teach dependent claims 2-14, 16-17, 20-24, or 26-32 under either set of constructions. *See* Paper 11 at 6.

A. KOCHERLAKOTA DOES NOT DISCLOSE OR TEACH CLAIMS 2-13, 16 OR 26

Claim 2 recites “each of the IP addresses in the group is associated with a respective client device that is identified over the Internet using a respective IP address.” Claims 3-10 depend from claim 2. Petitioner alleges that proxy servers 19 and 21 correspond to the respective client devices. Petition at 38-39. Patent Owner disagrees.

As discussed above, a POSA would be unable to determine whether an intermediary is a client device or a server under the purely role-based constructions. EX.2041 at ¶211. Intermediary proxy servers 17, 19, 21 are operating in different roles at different points in time. *Id.* Petitioner’s expert agreed. EX.2018 at 82:23-84:1.

Petitioner’s analysis of proxy servers 17, 19, and 21 is inconsistent. EX.2041 at ¶212. Petitioner argues that proxy server 17 meets the construction of “first server” because it is a device operating in the role of a server and it is not the same physical device as client computer 11. *See* Petition at 29-30. Applying the same logic to proxy servers 19 and 21 would make proxy servers 19 and 21 servers, not client devices. EX.2041 at ¶212; EX.1003 at 3:12-14, 4:29-31. In the context of the ‘622 Patent, it is improper for Petitioner to identify proxy server 17 as a “server” and another identical proxy server 19/21 as a “client device”. EX.2041 at ¶212.

Petitioner genericizes the claimed “client device” in its analysis. EX.2041 at ¶213. Petitioner argues that proxy servers 19 and 21 each meet the construction of “client device” because “each is a device that communicates over the Internet and operate in the role of a client by establishing a connection down the proxy chain to make requests.” Petition at 38. Applying the same logic to proxy server 17 would make proxy server 17 a client device, not a server. EX.2041 at ¶213; EX.2018 at 42:15-19. Petitioner fails to recognize the differences between client devices and servers in the context of the ‘622 Patent. EX.2041 at ¶213.

Additionally, Petitioner’s analysis does not apply the purely role-based constructions at a particular point in time. EX.2041 at ¶215. For example, regarding claim 4, under the purely role-based constructions, proxy server 19 is operating in the role of a client when sending the first URL to the first web server; and proxy server 19 is operating in the role of a server when receiving the first content from the first web server. *Id.* A POSA would be unable to determine whether, for example, proxy server 19 is a client device or a server under the purely role-based constructions. *Id.*

A POSA would understand that proxy servers 17, 19, and 21 are servers, not client devices. EX.2041 at ¶216; *see, e.g.*, EX.1003 at Abstract. There is no teaching in Kocherlakota that would suggest proxy servers 17, 19, and 21 are

“client devices” under Patent Owner’s proposed constructions. EX.2041 at ¶216.

Petitioner provides no analysis of these components under Patent Owner’s proposed constructions. *Id.* Petitioner’s expert agreed there is no disclosure in Kocherlakota that suggests implementing proxies 17, 19, or 21 on something other than a proxy server. EX.2018 at 86:7-11.

A POSA would understand that proxy servers 17, 19, and 21 are not consumer computers or consumer communication devices in the context of the ‘622 Patent. EX.2041 at ¶216. It would not be obvious to a POSA to use a client device, having limited resources unlike a server, as an intermediary proxy. *Id.*

Regarding claim 11, Petitioner maintains that proxy servers 19 and 21 correspond to “client devices”. Petition at 55. Claims 12 and 13 depend from claim 11. As discussed above, a POSA would be unable to determine whether proxy servers 19 and 21 are client devices or servers under the purely role-based constructions. EX.2041 at ¶217. Also, as discussed above, proxy servers 19 and 21 are servers, not client devices, under Patent Owner’s proposed constructions. EX.2041 at ¶217. RFC 1122 does not cure these deficiencies.

Additionally, regarding claim 16, the claim language recites “geographic location of the client device” which Petitioner alleges would correspond to the geographic location of proxy server 19. Petition at 43-44. For the same reasons

discussed above, Petitioner fails to show that proxy server 19 is a client device under either set of constructions. EX.2041 at ¶218.

Also, regarding claim 26, the claim language recites “use with a second client device” which Petitioner alleges would correspond to use of proxy server 19. Petition at 47. For the same reasons discussed above, Petitioner fails to show that proxy server 19 is a client device under either set of constructions. EX.2041 at ¶219.

For at least these reasons, Petitioner fails to show that Kocherlakota discloses or teaches dependent claims 2-13, 16, or 26.

VII. COHEN DOES NOT DISCLOSE OR TEACH CLAIM 1

**A. COHEN DOES NOT DISCLOSE OR TEACH THE CLAIM 1
PREAMBLE UNDER PURELY ROLE-BASED CONSTRUCTIONS**

The preamble of claim 1 recites a “first server”. Petitioner alleges that proxy redirector 104 corresponds to the “first server”. Petition at 60-61.

Cohen does not disclose a “first server” as recited in the preamble of claim 1 under the purely role-based constructions. EX.2041 at ¶223. There is no way for a POSA to determine whether proxy redirector 104 is a client device or a server under the purely role-based constructions because, as discussed below, proxy redirector 104 operates in different roles at different points in time. *Id.*

A POSA would understand the “first server” is necessarily and consistently a server during the performance of method claim 1. *Id.* For at least this reason, Cohen does not disclose or teach the claim 1 preamble under the purely role-based constructions. *Id.*

B. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1C UNDER PURELY ROLE-BASED CONSTRUCTIONS

Limitation 1c recites the first server “sending... the first URL to the first web server....” Petitioner alleges that proxy redirector 104 meets this limitation. Petition at 59-61 and 64. However, Petitioner fails to apply the purely role-based constructions at the particular point in time, for the particular transaction, recited in limitation 1c. EX.2041 at ¶¶224-225.

Under the purely role-based constructions, when proxy redirector 104 sends the first URL, proxy redirector 104 is operating in the role of a client, not a server. EX.2041 at ¶226. Petitioner’s expert appears to agree. EX.2018 at 26:1-12; 26:19-27:5; 27:19-28:4. Therefore, under the purely role-based constructions, proxy redirector 104 cannot be a server during performance of this method step. EX.2041 at ¶226.

For at least this reason, Cohen does not disclose or teach claim 1 under the purely role-based constructions.

**C. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1D
UNDER PURELY ROLE-BASED CONSTRUCTIONS**

Limitation 1d recites the first server “receiving... the first content from the first web server...” Petitioner alleges that proxy redirector 104 meets this limitation. Petition at 65. However, Petitioner fails to apply the purely role-based constructions at the particular point in time, for the particular transaction, recited in limitation 1d. EX.2041 at ¶¶228-229.

Under the purely role-based constructions, when proxy redirector 104 receives a response, proxy redirector 104 is operating in the role of a client, not a server. EX.2041 at ¶230. Petitioner’s expert appears to agree. EX.2018 at 30:21-31:9; 31:10-31:21; 31:22-32:2. Therefore, proxy redirector 104 cannot be a server during performance of this method step. EX.2041 at ¶230.

For at least this reason, Cohen does not disclose or teach claim 1 under the purely role-based constructions.

**D. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1G
UNDER PURELY ROLE-BASED CONSTRUCTIONS**

Limitation 1g recites the first server “sending... the second URL to the second web server...”. For the same reasons discussed regarding limitation 1c, Cohen does not disclose or teach limitation 1g under the purely role-based constructions. EX.2041 at ¶¶232-233.

**E. COHEN DOES NOT DISCLOSE OR TEACH LIMITATION 1H
UNDER PURELY ROLE-BASED CONSTRUCTIONS**

Limitation 1h recites the first server “receiving... the second content from the second web server.” For the same reasons discussed above regarding limitation 1d, Cohen does not disclose or teach limitation 1h under the purely role-based constructions. EX.2041 at ¶¶234-235.

**F. COHEN DOES NOT DISCLOSE OR TEACH THE
ARCHITECTURE OF CLAIM 1 UNDER PATENT OWNER’S
PROPOSED CONSTRUCTIONS**

Cohen does not disclose or teach that proxy redirector 104 is a “first server” located between a first client device and a web server as recited in claim 1. EX.2041 at ¶236. Cohen expressly states that proxy redirector 104 is a “L4 switch”. EX.1004 at 5:12-14; 6:26-28. Cohen explains that the L4 switch is necessary to redirect an object request to a proxy cache connected somewhere on the network. EX.1004 at 2:66-3:1. A POSA would understand that a switch is not a server under Patent Owner’s proposed constructions. EX.2041 at ¶236.

Petitioner argued that proxy redirector 104 “meets the construction of “first server” because it is a device operating in the role of a server by receiving client 101-1’s web requests and sending the responses back to client 101-1 and because it is not the same physical device as client 101-1.” Petition at 60-61. As discussed above, operating in the role of a server at certain points in time does not make the

proxy redirector 104 an actual server in the context of the ’622 Patent. EX.2041 at ¶237.

Additionally, Petitioner’s expert testified that a server “couldn’t be a wire... connecting, receiving a request and sending back a response – or a router that was receiving a request and sending back a response”. EX.2018 at 49:21-50:11; *see also* EX.2018 at 51:11-52:9 (distinguishing a server from a wire/router). A POSA would understand that a switch is similar to a router, neither of which is a server. EX.2041 at ¶238.

The preferred embodiment of proxy redirector 104 is a Linux machine with a programmable network element. EX.1004 at 7:55-8:10 and Fig. 2. Cohen teaches that programs are loaded onto the switch via a local program injector 211 or remote program injector 212 via the admission daemon 210. EX.1004 at 7:49-8:10. Based on the teaches of Cohen, a POSA would understand that a switch is not a server under Patent Owner’s proposed constructions. EX.2041 at ¶¶239-240. Proxy redirector 104 does not have the typical attributes of a server. *Id.*

At least because proxy redirector 104 is not a server, Cohen does not disclose or teach claim 1 under Patent Owner’s proposed constructions. EX.2041 at ¶241.

G. TEACHING AWAY BY COHEN

Cohen teaches away from the claimed methods of the ‘622 Patent for at least 5 reasons. EX.2041 at ¶247. A POSA would not be motivated to arrive at the claimed inventions based on the teachings of Cohen.¹⁰

First, contrary to the claimed methods, Cohen teaches that the client 101 does not “know” that its request is being redirected to a proxy cache. EX.1004 at 16:34-37; EX.2018 at 103:11-14. Instead, client 101 thinks its request is being sent directly to the origin server. E.g., EX.1004 at 6:47-67; EX.2018 at 112:5-10. In the claimed methods, the first client device is purposely using a first server and possibly, additional intermediaries, to request content from the target web server. EX.2041 at ¶248.

¹⁰ It is also noted that Petitioner’s expert testified he only analyzed the embodiment of Cohen involving the proxy redirector 104, not any other embodiments. EX.2018 at 103:4-10.

Second, Cohen teaches that the requested object is always obtained using an additional intermediary proxy cache.¹¹ EX.2018 at 95:2-10. In contrast, claim 1 does not require the use of additional intermediaries. EX.2041 at ¶249.

Third, because Cohen teaches that every request must go through a proxy cache, the IP address of the proxy cache is not hidden from the origin server. EX.2041 at ¶250. Cohen teaches the same proxy cache may be used for multiple requests, in particular, when a proxy cache is selected based on the IP header. EX.1004 at 7:46-48; EX.2018 at 125:7-13; 121:12-122:22. Over time, the IP address of the proxy cache may be blocked/spoofed by the origin server. EX.2041 at ¶250. In contrast, using different proxy IP addresses according to the claimed methods reduces the risk of blocking/spoofing by the target web server. *Id.*

Fourth, Cohen teaches obtaining content from a proxy cache rather than from an origin server. EX.2041 at ¶251; EX.1004 at 1:12-14; 1:43-48. In contrast, the claimed methods recite methods for fetching content directly from the target web server. EX.2041 at ¶251.

¹¹ Dr. Williams discusses in detail Cohen’s teachings regarding a complete versus absolute URL due to use of a proxy cache. EX.2041 at ¶¶242-246.

Fifth, Cohen teaches that it is the proxy cache that determines whether to obtain content from the web server. EX.2041 at ¶252. In contrast, the claimed methods recite methods for fetching content directly from the target web server. *Id.*

For at least these reasons, a POSA reading Cohen would not be motivated to arrive at the claimed methods. EX.2041 at ¶253.

VIII. COHEN DOES NOT DISCLOSE OR TEACH THE CHALLENGED, DEPENDENT CLAIMS UNDER EITHER SET OF CONSTRUCTIONS

Because Cohen does not disclose or teach independent claim 1 for the reasons discussed above, Cohen does not disclose or teach dependent claims 2-14, 17, 20-24, or 26-32 under either set of constructions. *See* Paper 11 at 6.

A. COHEN DOES NOT DISCLOSE OR TEACH CLAIMS 2-13 OR 26

Claim 2 recites “each of the IP addresses in the group is associated with a respective client device that is identified over the Internet using a respective IP address.” Claims 3-10 depend from claim 2. Petitioner alleges that proxy caches 110-1, 110-2, 115, and/or 117 each correspond to a “client device”. Petition at 67. Patent Owner disagrees.

As discussed above, a POSA would be unable to determine whether an intermediary is a client device or a server under the purely role-based

constructions. EX.2041 at ¶256. Intermediary proxy caches 110, 115, and/or 117 are operating in different roles at different points in time. *Id.*

Petitioner’s analysis of proxy caches 110, 115, and/or 117 is inconsistent. EX.2041 at ¶257. Petitioner previously argued that proxy redirector 104 “meets the construction of “first server” because it is a device operating in the role of a server and it is not the same physical device as client 101-1. *See* Petition at 60-61. Applying the same logic to proxy caches 110, 115, 117 would make the proxy caches servers, not client devices. EX.2041 at ¶257.

Petitioner’s analysis is also inconsistent because Petitioner argues that each proxy cache is a device that communicates over the Internet and operates in the role of a client by establishing a connection between the origin server and proxy redirector 104. Petition at 67. Petitioner ignores that each proxy cache operates in the role of a server with respect to the proxy redirector 104. EX.2041 at ¶258; EX.2018 at 118:6-12 and 119:14-24. As discussed above, Petitioner fails to consider which role is being performed at a particular point in time. EX.2041 at ¶258.

A POSA would understand that proxy caches of Cohen are caching proxy servers. EX.2041 at ¶259. In the context of the ‘622 Patent, a server is not a client device as discussed above. *Id.* The proxy caches of Cohen are not client devices

under Patent Owner’s proposed constructions. *Id.* For example, unlike a typical client device, a proxy cache needs greater resources to store copies of requested objects. *Id.* It would not be obvious to a POSA to use a client device, having limited resources unlike a server, as an intermediary proxy. *Id.* As another example, Cohen teaches that proxy caches are commercial devices, typically owned by large Internet Service Providers (ISP). *See, e.g.*, EX.1004 at 1:38-43. In contrast, client devices are consumer owned and operated in the context of the ‘622 Patent. EX.2041 at ¶259.

Additionally, regarding claim 11, Petitioner maintains that proxy caches 110, 115, 117 correspond to “client devices”. Claims 12 and 13 depend from claim 11. For at least the reasons discussed above, proxy caches are not “client devices” under either set of constructions. EX.2041 at ¶260.

Regarding claim 26, Petitioner’s analysis is inconsistent. EX.2041 at ¶261. Petitioner analyzes client 101-2 as the “second client device” rather than one of the proxy caches 110, 115, 117. Petition at 76. Petitioner previously analyzed the group of IP addresses as corresponding to the IP addresses of proxy caches 110, 115, 117. *E.g.*, Petition at 67. Petitioner fails to explain why the IP address of client 101-2 would be added to the group of IP addresses allegedly including the IP addresses of proxy caches 110, 115, 117. EX.2041 at ¶261. Client 101-2 is not the

same as proxy caches 110, 115, 117. *Id.* Petitioner fails to explain its inconsistent analysis of intermediary client devices. *Id.* Client 101-2 is not a proxy cache. *Id.*

For at least these reasons, Petitioner fails to show that Cohen discloses or teaches dependent claims 2-13 or 26.

B. PETITIONER FAILS TO SHOW THAT COHEN DISCLOSES OR TEACHES CLAIM 30

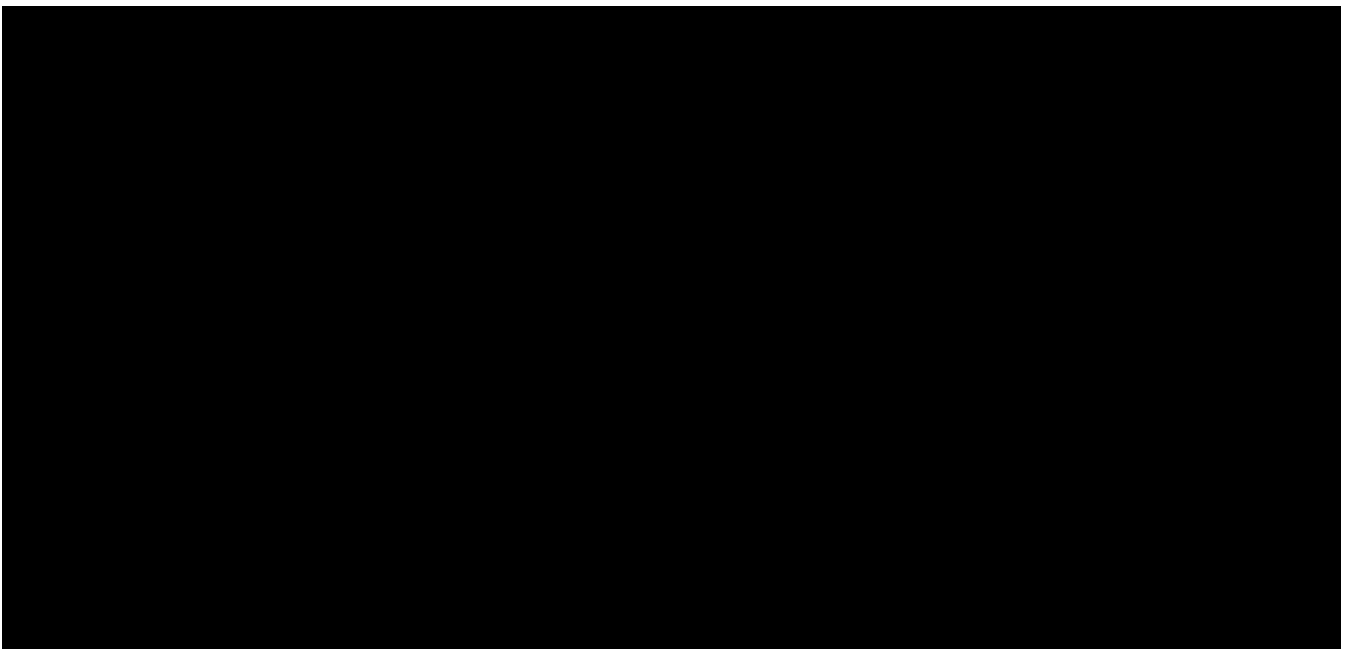
Petitioner alleges that proxy redirector 104 uses a server operating system because the preferred embodiment runs on a Linux machine which “a POSITA would understand this to intrinsically disclose a server operating system.” Petition at 79. Patent Owner disagrees.

It appears that Petitioner is using circular logic. EX.2041 at ¶263. Petitioner argues that because proxy redirector 104 is a server it must be using a server operating system. EX.2018 at 127:25-128:5 (“because it’s a server, it would use the server portion of Linux as opposed to a client or desktop portion”).

A POSA would understand that as of 10/8/2009, Linux offered various types of operating systems. EX.2041 at ¶264. The fact that proxy redirector 104 operates on a Linux machine does not show that proxy redirector 104 uses a server operating system. *Id.* Petitioner fails to meet its burden.

IX. BRIGHT DATA PRACTICES THE CHALLENGED CLAIMS

Bright Data offers a data center proxy service that practices the challenged claims. EX.2041 at ¶¶265-266. As shown in Bright Data’s network diagram (EX.2045, reproduced below), the data center proxy service includes data center servers and static residential servers. EX.2041 at ¶266. Customers of Bright Data’s data center proxy service may request content stored on a web server identified by, for example, a URL. *Id.* The customer may use a client device to send a content request to the SuperProxy, which stores a group of IP addresses and selects an IP address to be used for the request. *Id.* The SuperProxy sends the request to the target web server via the data center server or static residential server hosting the selected IP address. *Id.* The target web server receives the request and sends the requested content back to the customer’s client device via the SuperProxy. *Id.*



As shown in Bright Data’s source code (EX.2040), there is nexus between Bright Data’s data center proxy service and at least claims 1, 14, 17, 20-24, and 27-32, as shown in the table below. EX.2041 at 118-145.

Claim 1 preamble	Bright Data’s data center services involve multiple network components including a first client device, such as a customer’s device, web servers that store content, such as webpages identified by URLs, and a first server, such as a Superproxy, that stores a group of IP addresses. <i>See, e.g.,</i> EX.2039.
1a	For example the SuperProxy receives a first URL from a customer’s client device. For example, the connect_req¹² function is called when content requests are received from the customer’s client device. The

¹² See lines 720-751 of EX.2040.

	connect_req function creates a Tunnel ¹³ object using the request’s data and then calls the Tunnel’s run ¹⁴ function. The run function uses the resolve ¹⁵ function to obtain the content identifier from the request.
1b	For example, in response to the receiving, the SuperProxy selects an IP address from the group. For example, a Tunnel¹⁶ object calls the function _choose_local_ip¹⁷. The _choose_local_ip function will select an IP address from a pool of IP addresses to make the request from.

¹³ See lines 425-710 of EX.2040.

¹⁴ See lines 626-709 of EX.2040.

¹⁵ See lines 614-625 of EX.2040.

¹⁶ See lines 425-710 of EX.2040.

¹⁷ See lines 550-559 of EX.2040.

	Continuing this example, the function <code>setup_ip_pool</code> ¹⁸ calls the function <code>get_local_ips</code> ¹⁹ to obtain a list of available IP addresses. The server’s fun function calls <code>setup_ip_pool</code> ²⁰ and then calls the function <code>check_source_ip</code> ²¹ to validate that each of the IP addresses in the list meets valid criteria, allowing the selection of the valid IP address.
1c	For example, in response to the selecting, the SuperProxy sends the first URL to the first web server storing the first content using the selected IP address.

¹⁸ See lines 776-811 of EX.2040.

¹⁹ See lines 755-774 of EX.2040.

²⁰ See lines 1085-1231 of EX.2040.

²¹ See lines 828-844 of EX.2040.

	Continuing the above examples, the Tunnel’s run ²² function connects ²³ to the content server and establishes ²⁴ a proxy tunnel connection between the client device and content server. In this manner proxy requests are made to the content server and content is received from the content server by the SuperProxy and delivered by the SuperProxy to the client device.
1d	For example, in response to the sending, the SuperProxy receives the first content from the first web server.
1e	See limitation 1a; the SuperProxy can perform this method step for a second content identified by a second URL.
1f	See limitation 1b; the SuperProxy can perform this method step for an additional IP address selected from the group.

²² See lines 626-709 of EX.2040.

²³ See line 645 of EX.2040.

²⁴ See line 661 of EX.2040.

1g	See limitation 1c; the SuperProxy can perform this method step with a second web server storing the second content.
1h	See limitation 1d; the SuperProxy can perform this method step with respect to the second content.
Claim 14	For example, the SuperProxy stores a criterion, wherein the selecting is based on the criterion. <i>See analysis of claim 1. See also analysis of claim 17.</i>
Claim 17	For example, the selecting may be based on a criterion that may be based on a response time when communicating. <i>See analysis of claims 1 and 14.</i>

	As an example, the check_source_ip²⁵ function uses a TCP connection to test a proxy IP address identified as source_ip. If a timeout occurs because the connection could not be established within a given time, the source_ip address is added to a list of IP addresses which failed respond in time. The check_source_ip function calls the tcp_connect²⁶ function. The tcp_connect function sets a timeout for a socket connection which will attempt to connect to the host IP address from the source_ip. As another example, the function ping_ips²⁷ also tests the set of available IP addresses by calling the tcp_connect function. The ping_ips function marks each IP address as being a success or having failed as a result.
Claim 20	For example, the SuperProxy sends the received first content to the customer’s client device.

²⁵ See lines 828-844 of EX.2040.

²⁶ See lines 813-826 of EX.2040.

²⁷ See lines 367-403 of EX.2040.

	See analysis of claim 1.
Claim 21	For example, the SuperProxy sends the received second content to the customer’s client device. See analysis of claims 1 and 20.
Claim 22	For example, the customer’s client device is addressed over the Internet using a first IP address. The SuperProxy can store the first IP address. See analysis of claim 1.
Claim 23	For example, the SuperProxy is a TCP/IP server that communicates over the Internet with client devices using TCP/IP. See analysis of claim 1.

Claim 24	For example, the SuperProxy communicates over the Internet using HTTP, HTTPS & SOCKS5 protocol that rely upon TCP or UDP. <i>See analysis of claim 1. See also EX.2042 and 2043.</i>
Claim 27	For example, the selected IP address may be associated with an intermediary between the SuperProxy and the web server. The SuperProxy may send the first URL to the intermediary which sends the first URL to the web server, including the IP address of the intermediary as the source address. <i>See analysis of claim 1.</i>
Claim 28	Continuing the above example in claim 27, when the first server sends the first URL to the selected intermediary, the IP address of that intermediary will be included in the IP packet destination address. <i>See analysis of claims 1 and 27</i>

Claim 29	For example, the customer’s client device is identified by a first IP address. See analysis of claims 1 and 22.
Claim 30	For example, the SuperProxy uses a server operating system. See analysis of claim 1.
Claim 31	For example, the SuperProxy include a software application that includes computer instructions that, when executed by a computer processor, cause the processor to perform the steps of claim 1. See analysis of claim 1.
Claim 32	For example, the first web server is an HTTP server responding to HTTP requests and addressed in the Internet using a web server IP address.

	See analysis of claims 1 and 24. See also EX.2044.
--	--

It is the novel use of a “first server” that stores a group of IP addresses and selects an IP address from the group as recited in, for example, claim 1 that provides an extremely scalable solution that solves the problems identified in the prior art in the background section of the specification. EX.2041 at ¶268. The novel use of a “first server” as recited in, for example, claim 1 also solves problems regarding blocking/spoofing by a web server. *Id.* It is the ability to support the selection of proxy IP addresses that creates the value in these services. *Id.*

As one example, the first server may select a proxy IP address based upon a response time when communicating, which will increase efficiency by avoiding an IP address that may have been slow or blocked from making a request. EX.2041 at ¶269. The first server is also able to hide the fact that multiple requests are being sent from the same customer. *Id.* For example, the first server may select an additional IP address for an additional request to reduce the risk of being blocked by a web server. *Id.* It is valuable for the first server to be able to select from different possible proxy IP addresses for different requests. *Id.*

Bright Data’s data center proxy services advertise enterprise-grade scaling, which is due to the novel use of a “first server” as recited in the claimed methods. EX.2041 at ¶270. Bright Data’s data center proxy services offer over 770,000+ Datacenter IPs in 98 countries. EX.2039 at 1-2.

Bright Data’s data center proxy services also have a 99.99% success rate and are rated as #1. EX.2039 at 5. This success rate can be attributed to the novel use of a “first server” as recited in the claimed methods. EX.2041 at ¶270.

Moreover, Bright Data’s data center proxy services generated revenue of \$22,136,000 in the year of 2021. EX.2041 at ¶271. This revenue further shows commercial success of the claimed method. *Id.* This revenue supports the non-obviousness of the claimed methods. *Id.*

X. CONCLUSION

For at least the reasons discussed herein, Petitioner fails to meet its burden in the petition.

IPR2022-00687 of Patent No. 11,190,622

Respectfully submitted,

Date: January 20, 2023

By: /s/ Thomas M. Dunham
Thomas M. Dunham
Reg. No. 39,965

Cherian LLP
1901 L Street NW, Suite 700
Washington, D.C. 20036
(202) 838-1567

ATTORNEY FOR PATENT OWNER,
BRIGHT DATA LTD.

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Response (“POR”) consists of 13,981 words, which is no more than 14,000 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The POR complies with the type-volume as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Respectfully submitted,

Date: January 20, 2023

By: /s/ Thomas M. Dunham
Thomas M. Dunham
Reg. No. 39,965

Cherian LLP
1901 L Street NW, Suite 700
Washington, D.C. 20036
(202) 838-1567

ATTORNEY FOR PATENT OWNER,
BRIGHT DATA LTD.

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned hereby certifies the PATENT OWNER RESPONSE and all exhibits thereto were served on the undersigned date via email, as authorized by Petitioner, at the following email addresses:

eagle.robinson@nortonrosefulbright.com

daniel.leventhal@nortonrosefulbright.com

Respectfully submitted,

Date: January 20, 2023

By: /s/ Thomas M. Dunham

Thomas M. Dunham

Reg. No. 39,965

Cherian LLP

1901 L Street NW, Suite 700

Washington, D.C. 20036

(202) 838-1567

ATTORNEY FOR PATENT OWNER,
BRIGHT DATA LTD.