

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

METACLUSTER LT, UAB,
Petitioner,

v.

BRIGHT DATA LTD.,
Patent Owner.

IPR2022-00687
Patent 11,190,622 B2

Before KRISTEN L. DROESCH, THOMAS L. GIANNETTI, and
RUSSELL E. CASS, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Metacluster LT, UAB (“Petitioner”) filed a Petition requesting *inter partes* review (“IPR”) of claims 1–14, 16, 17, 20–24, and 26–32 of U.S. Patent No. 11,190,622 B2 (Ex. 1001, “’622 Patent”). Paper 1 (“Pet.”). Petitioner filed a Declaration of James Olivier, Ph.D., with its Petition. Ex. 1002. Bright Data Ltd. (“Patent Owner”) timely filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply (Paper 9, “Prelim. Reply”), and Patent Owner filed a Preliminary Sur-reply (Paper 10, “Prelim. Sur-reply”) to address the Patent Owner’s assertions that Petitioner and other parties have challenged parent U.S. Patent. No. 10,484,511 (“’511 Patent”) based on the same prior art as utilized by Petitioner in this proceeding.

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may not be instituted unless it is determined that “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

For the reasons provided below, we determine, based on the record before us, there is a reasonable likelihood Petitioner would prevail in showing at least one of the challenged claims is unpatentable.

B. Related Matters

Petitioner indicates the ’622 Patent issued from an application that is a continuation of the patent application that issued as the ’511 Patent. *See*

Pet. 2. Petitioner also indicates that the '622 Patent shares a common specification with and claims entitlement to the same earlier effective filing date as the '511 Patent and U.S. Patent Nos. 10,257,319, 10,484,541, and 10,637,968 (collectively "related patents"). *See id.* at 2–3. Petitioner further indicates that there are close to 50 patents or patent applications that claim, or which may claim, entitlement to the same earlier effective filing date as the '622 Patent. *See id.* at 5–6.

There is currently no litigation involving the '622 Patent. Pet. 3. The parties indicate the '511 Patent or the related patents are or were the subject of the following district court proceedings:

Luminati Networks Ltd. v. UAB Tesonet, Case No. 2:18-CV-00299 (E.D. Tex.)

Bright Data Ltd. v. Teso LT, UAB, Case No. 2:19-CV-00395 (E.D. Tex.)

Bright Data Ltd. v. Code 2000, UAB, Case No. 2:19-CV-00396 (E.D. Tex.)

Luminati Networks Ltd. v. BI Science (2009) Ltd., Case No. 2:19-CV-00397 (E.D. Tex.)

Bright Data Ltd. v. NordVPN, Case No. 2:19-CV-00414 (E.D. Tex.)

Luminati Networks Ltd. v. NetNut, Ltd., Case No. 2:20-CV-00188 (E.D. Tex.)

Bright Data Ltd. v. NetNut, Ltd., Case No. 2:21-CV-00295 (E.D. Tex.)

Metaccluster LT, UAB v. Bright Data Ltd., Case No. 2:22-CV-00011 (E.D. Tex.)

Pet. 3; Paper 3, 2–3.

The parties identify the following *inter partes* review proceedings as involving the related patents and other patents assigned to Patent Owner:

Case No.	Status
IPR2020-01266	Institution Denied
IPR2020-01358	Institution Denied
IPR2020-01506	Institution Denied
IPR2021-00122	Institution Denied
IPR2021-00249	Institution Denied
IPR2021-01492	pending
IPR2021-01493	pending
IPR2021-01502	Institution Denied
IPR2021-01503	Institution Denied
IPR2022-00103	pending
IPR2022-00135	pending
IPR2022-00138	pending
IPR2022-00353	pending
IPR2022-00861	pending
IPR2022-00862	pending
IPR2022-00936	Petition filed
IPR2022-01109	Petition filed
IPR2022-01110	Petition filed

Pet. 4–5; Paper 3, 1–2.

The parties indicate that there are a number of Requests for Reexamination of other patents assigned to Patent Owner, including Reexamination Control Nos. 90/014,624 and 90/014,827 of the '511 Patent. Pet. 8; Paper 3, 2.

C. The '622 Patent (Ex. 1001)

The '622 Patent is directed to “increasing network communication speed for users, while lowering network congestion for content owners and

ISPs [(Internet Service Providers)].” Ex. 1001, code (57), *see id.* at code (54), 1:23–25. The system utilizes network elements including an acceleration server, clients, agents, and peers. *See id.* at code (57), Fig. 3. Communication requests generated by applications are intercepted by the client on the same machine. *See id.* at code (57), 13:4–8, Fig. 9, step 354. The IP address of the server in the communication request is transmitted to the acceleration server, which provides a list of agents to use for the IP address. *See id.* at code (57), 13:8–22, Fig. 9, step 356. The communication request is sent to the agents and one or more of the agents respond with a list of peers that have previously seen some or all of the content (after checking whether this data is still valid). *See id.* at code (57), 13:50–61, Fig. 9, step 360, Fig. 10, step 382. The client then downloads the data from these peers in parts and in parallel, thereby speeding up the Web transfer, releasing congestion from the Web by fetching the information from multiple sources, and relieving traffic from Web servers by offloading the data transfers to nearby peers. *See id.* at code (57), 15:12–16:11, Fig. 11.

D. Illustrative Claim

Claim 1 is independent, and claims 2–14, 16, 17, 20–24, and 26–32 depend directly or indirectly therefrom. *See* Ex. 1001, 19:16–22:16.

Claim 1 is illustrative and reproduced below:

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:

receiving, from the first client device, the first URL;
 selecting, in response to the receiving of the first URL from the first client device, an IP address from the group;
 sending, in response to the selecting, the first URL to the first web server using the selected IP address;
 receiving, in response to the sending of the first URL, the first content from the first web server; receiving, from the first client device, the second URL;
 selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group;
 sending, in response to the selecting, the second URL to the second web server using the selected additional IP address; and
 receiving, in response to the sending of the second URL, the second content from the second web server.

Ex. 1001, 19:16–41.

E. Asserted Challenges to Patentability and Asserted Prior Art

Petitioner asserts that claims 1–14, 16, 17, 20–24, and 26–32 would have been unpatentable based on the following grounds (Pet. 10–11):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–7, 10, 14, 16, 17, 20–24, 26–32	103(a) ¹	Kocherlakota ²
8, 9, 11–13	103(a)	Kocherlakota, RFC 1122 ³
1–14, 17, 20–24, 26–32	103(a)	Cohen ⁴

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 effective March 16, 2013. Because the '622 Patent claims an effective filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA version of § 103.

² US 6,785,705 B1, issued Aug. 31, 2004 (Ex. 1003).

³ Internet Engineering Task Force, Network Working Group, *Requirements for Internet Hosts—Communication Layers* (R. Braden ed., Request for Comments 1122, October 1989) (Ex. 1006).

⁴ US 6,389,462 B1, issued May 14, 2002 (Ex. 1004).

II. ANALYSIS

A. Claim Construction

In an *inter partes* review proceeding, the Board applies the same claim construction standard as that applied in federal courts in a civil action under 35 U.S.C. § 282(b), which is generally referred to as the *Phillips* standard. *See* 37 C.F.R. § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Under the *Phillips* standard, “words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips*, 415 F.3d at 1312.

Petitioner offers a discussion of claim constructions for the following terms and phrases: “client device,” “first server,” “selecting, in response to the receiving of the [first/second] URL,” the first server “sending . . . to the [first/second] web server using the selected IP address,” and “using the selected IP address as a source address.” *See* Pet. 18–21 (citing Ex. 1001, 16:21–22, claims 3–4; Ex. 1002 ¶¶ 54–55; Ex. 1005, 8; Ex. 1010, 3–4, 10–12; Ex. 1011, 5, 11–15; Ex. 1012, 2; Ex. 1013, 2–5, 7–12; Ex. 1014, 6). Patent Owner disagrees with Petitioner’s contentions regarding the claim constructions for “client device,” “first server,” and “source address.” *See* PO Resp. 20–21 (citing Ex. 1002 ¶ 3; Ex. 2011 ¶¶ 35–74; Pet. 20, 33, 48, 64, 76).

As demonstrated in the analysis below, at this stage of the proceeding, we need not construe these claim terms and phrases. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

B. Level of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art as of October 8, 2009¹—the '622 Patent's earliest claimed priority date—would have had at least a bachelor's degree in Computer Science or related field (or equivalent experience), and at least two years' experience working with and programming networked computer systems. The prior art and the '622 Patent also evidence this level of ordinary skill. Here, the background technology described in Section VII [of the Petition] and the prior art described in Section IX [of the Petition] demonstrate that a [person of ordinary skill in the art] would have been familiar with the underlying principles of Web, Internet, network communication, data transfer, and content sharing across networks, including the HTTP and TCP/IP protocols.

Pet. 12 (citing Ex 1002 ¶¶ 33, 34, 36).

Patent Owner asserts that a person of ordinary skill in the art would be an individual who, as of October 8, 2009, the filing date of the provisional application to which the '622 Patent claims priority, had a Master's Degree or higher in the field of Electrical Engineering, Computer Engineering, or Computer Science or as of that time had a Bachelor's Degree in the same fields and two or more years of experience in Internet Communications.

Prelim. Resp. 19–20 (citing Ex. 2011 ¶ 18). According to Patent Owner, “Petitioner's proposed qualifications of a [person of ordinary skill in the art] (Petition at 12) are not materially different at least in terms of affecting an institution decision in this IPR.” Prelim. Resp. 20.

For the purpose of institution, we adopt Petitioner's definition of a person of ordinary skill in the art because it is consistent with the level of skill reflected by the '622 Patent Specification and the asserted prior art, and does not materially differ from Patent Owner's definition.

C. Principles of Law

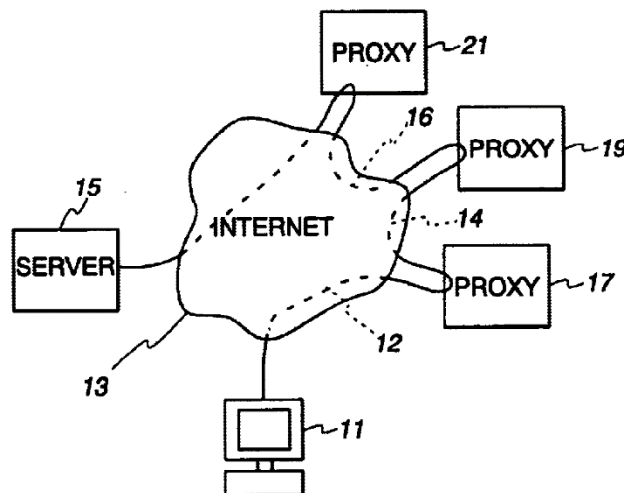
A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) if in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).⁵

D. Challenge to Claims 1–7, 10, 14, 16, 17, 20–24, 26–32 over Kocherlakota

1. Overview of Kocherlakota (Ex. 1003)

Kocherlakota is directed to the contemporaneous use of multiple web proxy servers by internet clients. See Ex. 1003, 1:6–9.

Figure 1 of Kocherlakota is reproduced below.



⁵ At this stage, the parties do not present evidence or arguments regarding secondary considerations.

Figure 1 depicts client computer 11 connected to web server 15 through chained proxies 17, 19, 21. *See* Ex. 1003, 2:39–40, 2:54–3:9. Client computer 11 sends a URL to first proxy server 17, a session is established between client computer 11 and first proxy server 17, and first proxy server 17 returns an applet to client computer 11 where it is executed. *See id.* at 3:10–26; Fig. 3, steps 101, 103. The applet presents a window on client computer 11. *See id.* at 3:26–28, Fig. 3, step 103.

Figure 2 of Kocherlakota is reproduced below.

PROXY CHAIN					
FIRST PROXY:	LPWA.COM	201	PORT:	8000	205
USER ID:	CLIENT 1	203	PASSWORD:	12345	207
					ADV. 241
SECOND PROXY:	FRENCH.COM	209	PORT:	100	211
USER ID:	CLIENT 1	213	PASSWORD:	23456	215
					ADV. 243
THIRD PROXY:	FAST.COM	217	PORT:	300	219
USER ID:	CLIENT 1	221	PASSWORD:	34567	223
					ADV. 245
OK		225	ADD PROXY		236

Figure 2 depicts an applet window that presents a number of information lines into which the client can enter identities of up to three proxy servers, port numbers, user names, etc. *See* Ex. 1003, 2:41–42, 3:28–36. Applet window includes advanced feature buttons 241, 243, 245 for each proxy. *See id.* at 4:55–63. Clicking an advanced feature button causes the applet to present an advanced feature window. *See id.* at 4:63–66.

Figure 7 of Kocherlakota is reproduced below.

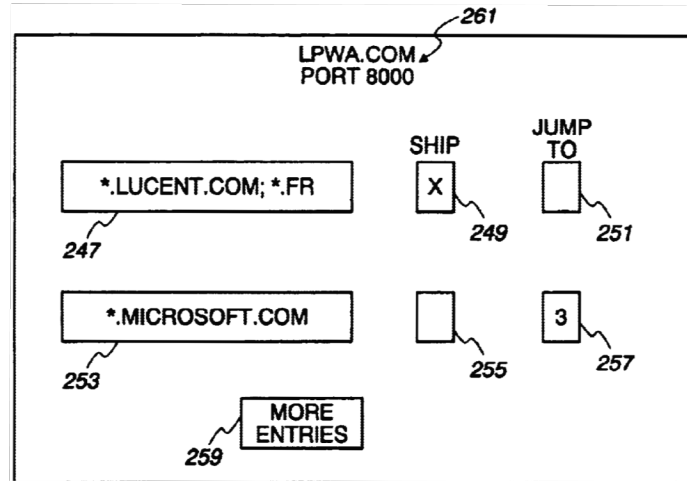


Figure 7 depicts advanced feature window for the first proxy when advanced feature button 241 is clicked. *See* Ex. 1003, 4:63–5:5. Text window 247 is used to enter URLs for which first proxy 17 is to be skipped or a “jump to” command is to be entered. *See id.* at 5:8–10. URLs are typed into text window 247 and either the skip box 249 is checked or a “jump to” number is entered in text box 251. *See id.* at 5:11–13. Text windows 253 and 257 and check box 255 provide the same set of advanced features for another URL. *See id.* at 5:13–15. The advanced features allow the user to define which proxy servers are employed for predetermined URLs. *See id.* at 5:24–26.

Figure 6 of Kocherlakota is reproduced below.

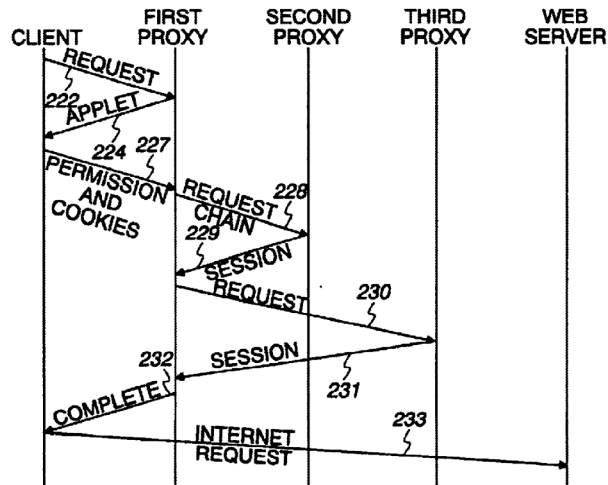


Figure 6 depicts a message sequence among clients, web proxies, and a web server to establish and use chained proxies to access the internet. *See* Ex. 1003, 2:50, 4:36–38. Request 222 for proxy use is sent from client computer 11 to first proxy 17. *See id.* at 4:39–40. First proxy 17 returns an applet 224 to client computer 11 that is used identify further proxies and permission data of those proxies. *See id.* at 4:40–43. Proxy identities and permission data are sent 227 to from client computer 11 to first proxy 17 which parses the message and begins to establish sessions with additional proxies. *See id.* at 4:43–45. Request 228 is sent to from first proxy 17 to second proxy 19 which returns a message 229 to first proxy 17 signifying session establishment. *See id.* at 4:45–48. First proxy 17 sends a message 230 to third proxy 21 requesting a session with third proxy 21 which returns a session message 231 to first proxy 17. *See id.* at 4:48–51. First proxy 17 signifies 232 to client computer 11 that the chain is complete. *See id.* at 4:51–52. Client computer 11 may access web server 15 via the chain of proxies as represented by message 233. *See id.* at 4:52–54.

2. Analysis of Claim 1

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently that, for the purpose of institution, Kocherlakota teaches or suggests all of the limitations recited in claim 1.

a. Preamble

Petitioner contends that, to the extent the preamble is limiting, Kocherlakota teaches:

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.

See Pet. 28 (emphasis omitted) (citing Ex. 1002 ¶ 91). More specifically, Petitioner asserts:

Kocherlakota discloses a method for fetching by a client computer 11 (the claimed “first client device”) a web page (the claimed “first content”) identified by a first URL through proxy 17 (the claimed “first server”) as well as a different web page (the claimed “second content”) identified by a second URL through proxy 17.

Id. (citing Ex. 1002 ¶ 92). Petitioner contends that “[t]he first URL is a URL that by applying the logic shown in FIGs. 2 and 7, proxy 17 selects proxy 19” and “[t]he second URL is a URL that, by applying the logic shown in FIGs. 2 and 7, proxy 17 selects proxy 21.” *Id.* at 28–29 (citing Ex. 1002 ¶¶ 94–95). Petitioner explains, “[f]or example, upon receiving www.uspto.gov, proxy 17 would determine that this URL does not match the criteria in text windows 247 or 253 of FIG. 7 and therefore route in accordance with the established proxy chain of FIG. 2, selecting proxy 19.”

Id. (citing Ex. 1002 ¶ 94). Petitioner also explains, “[a]s another example, upon receiving www.lucent.com, proxy 17 would select proxy 19 because the web page corresponding to this URL matches the criteria in text window 247 and the ‘skip’ command 249 was selected.” *Id.* at 29 (citing Ex. 1002 ¶¶ 94, 104). Petitioner further explains, “[f]or example, upon receiving www.microsoft.com, proxy 17 would select proxy 21 because the web page corresponding to this URL matches the criteria in text window 253 and the ‘jump to’ command 257 with ‘3’ was entered.” *Id.* (citing Ex. 1002 ¶ 95; Ex. 1003, 4:29–31, 5:18–24). Petitioner further contends that, “in order to establish sessions with proxies 19 and 21, proxy 17 must store a group of IP addresses associated with proxies 19 and 21 (the claimed ‘group of IP addresses’).” *Id.* at 30 (citing Ex. 1002 ¶ 96; Ex. 1003, 2:30–32).

Patent Owner does not address Petitioner’s showing for the preamble. *See* Prelim. Resp. 24–27. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this stage of the proceeding, we need not resolve whether the preamble is limiting because Petitioner shows sufficiently for the purpose of institution that the preamble is satisfied by Kocherlakota.

*b. the method by the first server comprising:
receiving from the first client device, the first URL*

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: receiving from the first client device, the first URL.” *See* Pet. 30 (citing Ex. 1002 ¶ 99). According to Petitioner, “[a]s shown in FIG. 6, proxy 17 (the claimed ‘first server’) receives from client computer 11 (the claimed “first client device”) a URL (e.g., www.uspto.gov or www.lucent.com) as the claimed ‘first URL.’” *Id.*

at 30–31 (reproducing Ex. 1003, Fig. 6 (with annotations); quoting Ex. 1003, 2:4–7; citing Ex. 1002 ¶ 100; Ex. 1003, 4:52–54).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

c. selecting, in response to the receiving of the first URL from the first client device, an IP address from the group

Petitioner asserts that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . selecting, in response to the receiving of the first URL from the first client device, an IP address from the group” (first selecting limitation). *See* Pet. 31 (citing Ex. 1002 ¶ 102). According to Petitioner, “upon receiving the URL, proxy 17 (the claimed ‘first server’) selects the IP address of either proxy 19 or 21 from the group of those IP addresses to route the URL through the proxy chain.” *Id.* (citing Ex. 1002 ¶ 103; Ex. 1003, 5:10–23).

Petitioner contends that the selection occurs in response to the receiving of the first URL because the selection of the URL is based on analysis of the URL. *See id.* (citing Ex. 1002 ¶ 103; Pet. 20–21). Petitioner explains that when proxy 17 receives a URL not matching the criteria in either text window 247 or 253 (e.g., www.uspto.gov), proxy 17 will not “skip” or “jump to” any server in the proxy chain because the URL does not match the criteria and will select the IP address of the next proxy in the chain so that the request passes via the chained proxies 17, 19, 21. *See id.* (citing Ex. 1002 ¶ 104; Ex. 1003, 4:29–31, 5:10–23, Figs. 6–7). According

to Petitioner, “proxy 17 will thus select the IP address of proxy 19 as the address used to forward the URL.” *Id.* Petitioner further explains that when proxy 17 receives a URL matching the criteria in text window 247 (e.g., www.lucent.com), but not matching the criteria of text window 253, proxy 17 will “skip” the function of proxy 17, but will not “jump” over any proxy server in the proxy chain because the URL does not match the jump criteria. *See id.* at 31–32 (citing Ex. 1002 ¶ 105; Ex. 1003, 4:29–31, 5:10–23, Figs. 6–7). According to Petitioner, proxy 17 “will therefore select the IP address of proxy 19 so that the request passes ‘via the chained proxies 17, 19, and 21.’” *Id.* at 32 (citing Ex. 1002 ¶ 105; Ex. 1003, 4:29–31, 5:10–23, Figs. 6–7).

Patent Owner contends that Kocherlakota does not teach the first selecting limitation because proxy server 17 does not perform any selection in response to receiving the first URL from the first client device. *See* Prelim. Resp. 25–26 (citing Ex. 1003, 3:38–48, 4:43–54, Figs. 2, 6). Patent Owner asserts that Kocherlakota’s proxy server 17 merely applies the applet received from the client 11. *See id.* at 26 (citing Ex. 1003, 3:10–20, 3:24–33, 3:66–4:4, 4:9–11, Fig. 2). Petitioner contends that the received applet defines which proxy servers are to be employed for predetermined URLs. *See id.* (citing Ex. 1003, 3:26–37, 4:63–5:26, 5:8–13, Figs. 2, 7). According to Patent Owner, “when proxy server 17 bypasses . . . proxy server 19 to contact [] proxy server 21, it is because the applet indicated for proxy server 19 to be skipped or jumped, not because proxy server 17 made any independent selection as to proxy server 19 versus proxy server 21.” *Id.* at 27.

At this stage of the proceeding, we do not agree with Patent Owner’s arguments because they are not commensurate in scope with the limitations

of claim 1. Claim 1 does not recite or otherwise require the first server to independently select an IP address from the group. Similarly, the scope of the language of claim 1 does not preclude the first server from using an applet or other software for assisting the first server in making a selection of an IP address from the group. Accordingly, at this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

d. sending, in response to the selecting, the first URL to the first web server using the selected IP address

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . sending, in response to the selecting, the first URL to the first web server using the selected IP address.” See Pet. 32 (citing Ex. 1002 ¶ 106). According to Petitioner,

proxy 17 (the claimed ‘first server’) . . . , in response to the selecting, forwards the URL to proxy 19 . . . in order for the URL to be further forwarded by proxy 19 to proxy 21 and [by] proxy 21 to the web server hosting the first URL (the claimed “first web server”) as shown in FIG. 6.

Id. at 32–33 (reproducing Ex. 1003, Fig. 6 (with annotations); citing Ex. 1002 ¶¶ 107–108; Ex. 1003, 2:30–32, 4:29–31, 4:52–54, 5:10–23, Fig. 7). Petitioner further contends that “[p]roxy 17 sending to an intermediary, proxy 19, for eventual sending to the web server meets the claim language ‘sending . . . to the first web server’ because this language includes sending to intermediaries for forwarding to the web server.” *Id.* at 33 (citing Ex. 1002 ¶ 108; Pet. 21). Petitioner asserts that a person of ordinary skill in the art would understand that when proxy 17 sends the URL to the first web server through proxy 19, proxy 17 uses the IP address

associated with proxy 19 (i.e., the selected IP address) as the destination IP address. *See id.* (citing Ex. 1002 ¶ 108; Pet. 21).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. Nevertheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

*e. receiving, in response to the sending of the first URL,
the content from the first web server*

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . receiving, in response to the sending of the first URL, the first content from the first web server.” *See* Pet. 34 (citing Ex. 1002 ¶ 109). Petitioner asserts that proxy 17 forwards the first URL along the proxy chain to be forwarded to the web server corresponding to the first URL. *See id.* According to Petitioner, a person of ordinary skill in the art “would understand that the function of a proxy in the proxy chain is both to send URLs to web servers, as well as receive responses and return them.” *Id.* (citing Ex. 1002 ¶ 110). Petitioner asserts that Kocherlakota describes client computer 11 obtaining access to web server 15 via three web proxies 17, 19 and 21, and proxy 19 providing translations of identified files from the web server. *See id.* (citing Ex. 1002 ¶ 110; Ex. 1003, 1:12–17, 1:28–31, 3:9–11, 4:29–35). Petitioner also contends that Kocherlakota describes web server 15 as a data file provider and that after the establishment of the proxy sessions, the client can surf the web through the established chain of proxy servers. *See id.* at 34–35 (quoting Ex. 1003, 2:58–61; citing Ex. 1002 ¶¶ 111–112; Ex. 1003,

2:30–32). Petitioner further asserts that proxy 17 receives the web page corresponding to the first URL in response to sending of the first URL on the basis that web server corresponding to the first URL returns the web page corresponding to the first URL to proxy 21, proxy 21 forwards the web page to proxy 19, and proxy 19 forwards the web page to proxy 17. *See id.* at 35 (citing Ex. 1002 ¶ 112; Ex. 1003, 2:30–32, 2:58–61, 4:29–35).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

f. receiving from the first client device, the second URL

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . receiving from the first client device, the second URL.” *See* Pet. 35 (citing Ex. 1002 ¶ 113). According to Petitioner, “[a]s shown in FIG. 6, proxy 17 (the claimed ‘first server’) received from client computer 11 (the claimed “first client device”) a URL (the claimed ‘first URL’).” *Id.* (reproducing Ex. 1003, Fig. 6 (with annotations); citing Ex. 1003, 2:4–7, 4:52–54). Petitioner asserts “[t]he second URL, for example www.Microsoft.com, matches the criteria of text window 253.” *Id.* at 36 (citing Ex. 1002 ¶ 114; Ex. 1003, Fig. 7).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. Nevertheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner

shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

g. selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group

Petitioner asserts that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group” (second selecting limitation). *See* Pet. 36 (citing Ex. 1002 ¶ 116). According to Petitioner, “upon receiving the second URL, proxy 17 (the claimed ‘first server’) selects the IP address of proxy 21 from the group of IP addresses.” *Id.* (citing Ex. 1002 ¶ 116; Ex. 1003, 5:10–23). Petitioner explains,

[W]hen proxy 17 receives from the client computer 11 a URL matching the criteria of text window 253 such as www.microsoft.com, proxy 17 “will skip the second proxy and jump to the third proxy because the number 3 is entered into the jump to box 257” and will therefore select the IP address of proxy 21 (the claimed “additional IP address from the group”).

Id. (quoting Ex. 1002 ¶ 115; citing Ex. 1003, 5:21–26, Figs. 6–7).

According to Petitioner, proxy 17 “will thus select the IP address of proxy 21 as the address used to forward the URL.” *Id.* Petitioner again contends that the selection is in response to the receiving of the first URL because the selection of the URL is based on analysis of the URL. *See id.* (citing Ex. 1002 ¶ 116; Pet. 20–21).

Patent Owner makes the same arguments for this second selecting limitation as it did for the first selecting limitation. *See* Prelim. Resp. 25–26 (citing Ex. 1003, 3:38–48, 4:43–54, Figs. 2, 6). For the reasons explained above with respect to the first selecting limitation, we do not agree with

Patent Owner’s arguments. Accordingly, at this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

h. sending, in response to the selecting, the second URL to the second web server using the selected additional IP address

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . sending, in response to the selecting, the second URL to the second web server using the selected additional IP address.” *See* Pet. 36 (citing Ex. 1002 ¶ 117). According to Petitioner, “proxy 17 selects the IP address of proxy 21 as the address used to forward the URL to proxy 21 . . . in order for the URL to be further forwarded to the web server hosting the second first URL (the claimed ‘second web server’).” *Id.* at 36–37 (citing Ex. 1002 ¶ 117; Ex. 1003, 2:30–32, 4:52–54). Petitioner further contends that “[p]roxy 17 sending to an intermediary, proxy 21, for sending to the web server meets the claim language . . . because this language includes sending to intermediaries for forwarding to the web server.” *Id.* (citing Ex. 1002 ¶ 117; Pet. 21).

Petitioner further asserts that a person of ordinary skill in the art would understand that when proxy 17 sends the URL to proxy 21, the IP packets sent from proxy 17 to proxy 21 include the IP address of proxy 21 (i.e., the selected additional IP address) as the destination IP address. *See id.* (citing Ex. 1002 ¶ 117; Pet. 21).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. Nevertheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner

shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

i. receiving, in response to the sending of the second URL, the second content from the second web server

Petitioner contends that Kocherlakota discloses or renders obvious “the method by the first server comprising: . . . receiving, in response to the sending of the second URL, the second content from the second web server. *See* Pet. 37 (citing Ex. 1002 ¶ 118). Petitioner asserts that a person of ordinary skill in the art “would understand that the web server will provide a web page corresponding to the received URL, which will be forwarded back through the proxy chain to proxy 17.” *Id.* (citing Ex. 1002 ¶ 118; Ex. 1003, 1:28–31, 2:30–32, 2:58–61, 3:9–11, 4:29–35).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Kocherlakota discloses or suggests this limitation of claim 1.

j. Summary

For all of the foregoing reasons, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claim 1 would have been obvious over Kocherlakota.

3. Analysis of Dependent Claims 2–7, 10, 14, 16, 17, 20–24, and 26–32

Claims 2–7, 10, 14, 16, 17, 20–24, and 26–32 directly or indirectly depend from claim 1. *See* Ex. 1001, 19:16–22:16. We have reviewed Petitioner’s contentions and cited supporting evidence addressing how

Kocherlakota discloses or suggests each of the limitations recited in claims 2–7, 10, 14, 16, 17, 20–24, and 26–32. *See* Pet. 38–51 (citations omitted).

Patent Owner does not address Petitioner’s showing addressing the limitations of claims 2–7, 10, 14, 16, 17, 20–24, and 26–32. *See* Prelim. Resp. 24–27. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Patrick teaches or suggests the limitations of claims 2–7, 10, 14, 16, 17, 20–24, and 26–32.

For the purpose of institution and based on the record before us, including the reasons explained above addressing claim 1, Petitioner establishes sufficiently that the subject matter of dependent claims 2–7, 10, 14, 16, 17, 20–24, and 26–32 would have been obvious over Kocherlakota.

4. Summary

For all of the foregoing reasons and based on the record before us, we determine there is a reasonable likelihood Petitioner would prevail in showing that claims 1–7, 10, 14, 16, 17, 20–24, and 26–32 are unpatentable under 35 U.S.C. § 103 over Kocherlakota.

E. Challenge to Claims 8, 9, and 11–13 over Kocherlakota and RFC 1122

1. Overview of RFC 1122 (Ex. 1006)

RFC 1122 is titled “Requirements for Internet Hosts – Communication Layers.” Ex. 1006, 1. RFC 1122 discusses specific issues with transmission control protocol (TCP), including TCP Keep-Alives. *See id.* at 101–102. “A ‘keep-alive’ mechanism periodically probes the other end of a connection when the connection is otherwise idle, even when there

is no data to be sent.” *Id.* at 102. RFC 1122 discloses that the TCP specification does not include the keep-alive mechanism due to some disadvantages, but some TCP implementations have included a keep-alive mechanism. *See id.* RFC 1122 further discloses that “[a] TCP keep alive mechanism should only be invoked in server applications that might otherwise hang indefinitely and consume resources unnecessarily if a client crashes or aborts a connection during a network failure.” *Id.*

2. Analysis

Claim 8 depends from dependent claim 6, and recites “receiving a ‘keep-alive message, by the first server, from each of the client devices that are identified over the Internet using by the stored IP addresses.” Ex. 1001, 19:66–20:2. Claim 9 depends from claim 2, and 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 and is currently online.” *Id.* at 20:3–6. Claim 11 depends from claim 1 and recites “by the first server: sending, a ‘keep alive’ message to each of the client devices that are identified over the Internet using by the stored IP addresses; and waiting for a response to the ‘keep alive’ message from each of the client devices.” *Id.* at 20:12–18. Claim 12 depends from claim 11 and recites “responsive to not receiving, by the first server, a response to the ‘keep alive’ message from a client device, removing the IP address of the non-responsive third client device from group of IP addresses.” *Id.* at 20:20–24. Claim 12 depends from claim 11 and recites “responsive to not receiving, by the first server, a response to the ‘keep alive’ message from a client device, removing the IP address of the non-responsive third client device from group of IP addresses.” *Id.* at 20:20–24. Claim 13 depends from claim 11 and recites

“the sending of the ‘keep alive’ message comprises periodically sending by the first server the ‘keep alive’ message to at least part of the client devices.”

Petitioner asserts that the subject matter of dependent claims 8, 9, and 11–13 would have been obvious to a person of ordinary skill in the art based on the teachings of Kocherlakota and RFC 1122. *See* Pet. 51, 54–56 (citing Ex. 1002 ¶¶ 156–160). As to claim 8, Petitioner asserts that, based on the teachings of Kocherlakota as modified by RFC 1122, “proxy 17 (the claimed ‘first server’) receives ‘keep alive’ messages from each proxy 19 and 21 (the claimed ‘client devices’).” *Id.* at 54 (citing Ex. 1002 ¶ 156). Regarding claim 9, Petitioner contends that, based on the teachings of Kocherlakota as modified by RFC 1122, a person of ordinary skill in the art “would understand that proxy 17 stores the IP addresses of proxies 19 and 21 to establish and maintain sessions with proxies 19 and 21. . . . proxy 17 determines based upon receipt of ‘an acknowledgement [from proxies 19 and 21]...confirming that the connection is still live.’” *Id.* at 55 (citing Ex. 1002 ¶¶ 154, 157; Ex. 1006, 102). As to claims 11 and 13, Petitioner asserts that, based on the combined teachings of Kocherlakota and RFC 1122, proxy 17 periodically sends “keep alive” messages to proxies 19 and 21 and waits for response from each. *See id.* at 55 (citing Ex. 1002 ¶ 158), 56 (citing Ex. 1002 ¶ 160). Regarding claim 12, Petitioner asserts that “it would have been obvious to remove the IP address of a non-responsive client device from the group of IP addresses of device under active session.” *Id.* at 56 (citing Ex. 1002 ¶ 159).

For the purpose of institution and based on Petitioner’s citations to Kocherlakota, RFC 1122, and Dr. Olivier’s testimony (Ex. 1002), we are persuaded Petitioner sets forth sufficient articulated reasoning with rational underpinning to support the conclusion that it would have been obvious to

one of ordinary skill in the art “to use the TCP keep-alive functionality of RFC 1122 when maintaining the TCP sessions [] disclosed by Kocherlakota.” Pet. 52 (citing Ex. 1002 ¶ 151); *see KSR*, 550 U.S. at 418. According to Petitioner, a person of ordinary skill in the art “would have recognized the benefits of Kocherlakota’ proxy servers exchanging TCP keep-alives with each other.” *Id.* (citing Ex. 1002 ¶¶ 151–152). Petitioner asserts that TCP keep-alives help detect when a client crashes or aborts a connection during a network failure and prevents server applications from indefinite hanging and unnecessary resource consumption. *See id.* at 52–53 (quoting Ex. 1006, 102; citing Ex. 1002 ¶ 152). Petitioner asserts that, in Kocherlakota’s system, following the establishment of sessions between proxy 17 and the client computer 11, proxy 19 and/or proxy 21, one of client computer 11, proxy 19, or proxy 21 could crash. *See id.* at 53 (citing Ex. 1002 ¶ 152; Pet. 22–28, 52). According to Petitioner, “without TCP keep-alives, client computer 11, proxy 19, or proxy 21 would unnecessarily expend resources keeping the TCP connection open.” *Id.* (citing Ex. 1002 ¶ 152).

Petitioner further contends that a person of ordinary skill in the art would have known that TCP keep-alives could also prevent periods of inactivity between client devices from causing the TCP connection between them to terminate. *See id.* (citing Ex. 1002 ¶ 152). Petitioner acknowledges that RFC 1122 identifies potential disadvantages of TCP keep-alives, but Petitioner asserts that a person of ordinary skill in the art “would have recognized these disadvantages are outweighed” by the aforementioned benefits. *Id.* (citing Ex. 1002 ¶ 153; *Winner Int’l Royalty Co. v. Wang*, 202 F.3d 1340, 1349 & 1349 n.8 (Fed. Cir. 2000)).

At this stage, Patent Owner does not specifically address Petitioner's showing addressing the limitations of dependent claims 8, 9, and 11–13. *See* Prelim. Resp. 24–27. Nonetheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Patrick teaches or suggests the limitations of claims 8, 9, and 11–13.

For all of the foregoing reasons, including the reasons explained above addressing claim 1, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claims 8, 9, and 11–13 would have been obvious over Kocherlakota and RFC 1122. Accordingly, there is a reasonable likelihood Petitioner would prevail in showing that claims 8, 9 and 11–13 are unpatentable under 35 U.S.C. § 103 over Kocherlakota and RFC 1122.

F. Challenge to Patentability over Cohen

1. Overview of Cohen (Ex. 1004)

Cohen is directed to a method and apparatus for transparently intercepting client web requests and redirecting them to proxy caches. *See* Ex. 1004, 1:6–10.

Figure 1 of Cohen is reproduced below.

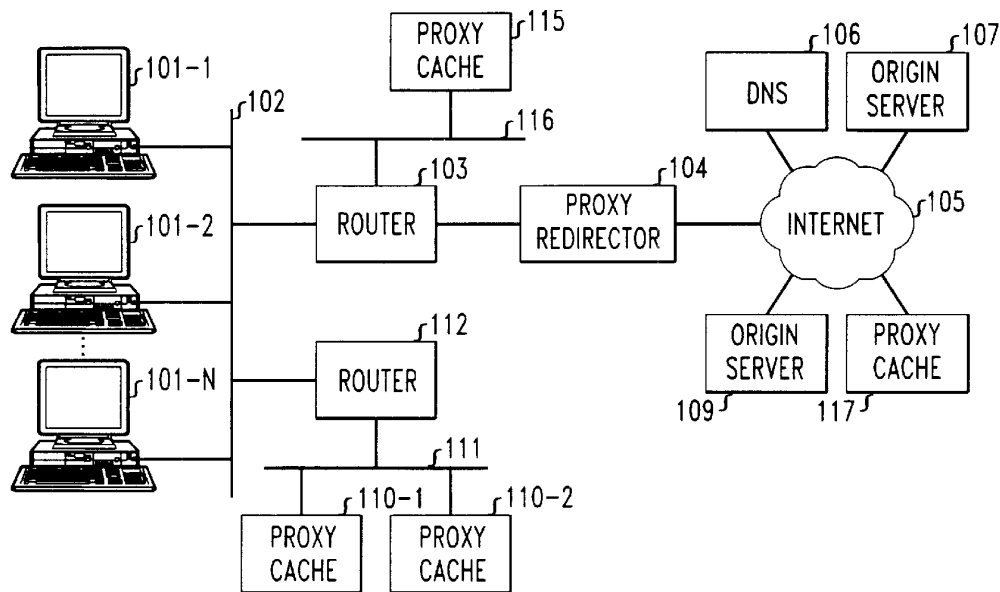


Figure 1 depicts a block diagram of a network that includes a plurality of clients 101-1, 101-2 . . . 101-N connected to local area network (LAN) 102 which is connected through router 103 to proxy redirector 104 which interfaces with Internet 105. *See* Ex. 1004, 6:7–14, 6:23–28. All requests from clients 101-1, 101-2 . . . 101-N connected to LAN 102 for objects stored on servers connected to Internet 105 traverse proxy redirector 104 onto Internet 105. *See id.* at 6:31–34. All packets directed to any of the client 101-1, 101-2 . . . 101-N from any server connected to Internet 105 pass through proxy redirector 104. *See id.* at 6:44–46. Proxy cache 110-1 is connected to LAN 111 which is connected to LAN 102 through router 112. *See id.* at 7:36–38. Proxy cache 115 is connected on LAN 116 through router 103. *See id.* at 7:38–40. Other proxy caches can be located anywhere on LANs 102, 111, or 116 or another LAN connected to Internet 105 such as proxy cache 117. *See id.* at 7:40–42.

Proxy redirector 104 transparently redirects an HTTP connection that is directed to origin server 107 to proxy cache 110-1 by translating the

destination address of packets directed to origin server 107 to the address of the proxy cache 110-1. *See* Ex. 1001, code (57). During a handshaking procedure, a TCP connection is transparently established between client 101-1 and proxy cache 110-1. *See id.* at code (57), 7:12–17, 8:59–6:18. When client 101-1 transmits a GET request to origin server 107 that specifies the complete address of an object at origin server 107 that it wants a copy of, proxy redirector 104 modifies the complete address specified in the GET request before it is sent to proxy cache 110-1. *See id.* at code (57), 9:19–23. The IP address of origin server 107 found in the destination field in the IP header of the one or more packets from client 101-1 containing the GET request is added by proxy redirector 104 as a prefix to the complete URL in the GET request to form an absolute URL. *See id.* at code (57), 9:28–10:5, 10:28–31, 11:15–19, Table 1. Proxy cache 110-1 determines from that absolute URL whether it has the requested object stored in its cache. *See id.* at code (57). If proxy cache 110-1 has the object stored, it sends the object back to proxy redirector 104, which masquerades those packets as coming from the origin server by translating their destination address to the address of client 101-1 and their source address to that of origin server 107. *See id.* at code (57), 7:18–22. If proxy cache 110-1 does not have the requested object, a separate TCP connection is established between proxy cache 110-1 and origin server 107 from where the object is retrieved and then forwarded over the TCP connection between client 101-1 and the proxy cache 110-1. *See id.* at code (57), 7:27–35.

2. Analysis of Claim 1

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently that, for the purpose of institution, Cohen teaches, suggests, or renders obvious all of the limitations recited in claim 1.

a. Preamble

Petitioner contends that, to the extent the preamble is limiting, Cohen discloses or renders obvious the preamble. *See* Pet. 59 (citing Ex. 1002 ¶ 161). More specifically, Petitioner asserts,

Cohen discloses a method for fetching by a client 101-1 (the claimed “first client device”) a web page (the claimed “first content”) identified by a first URL associated with an origin server through proxy redirector 104 as well as a different web page (the claimed “second content”) identified by a second URL associated with a different origin server through proxy redirector 104.

Id. at 59–60 (citing Ex. 1002 ¶ 161). Petitioner further contends that “[p]roxy redirector 104 receives a web request from a ‘client 101-1’ seeking content from a target web server and ‘selects one of the available proxy caches to which to forward client requests based on a metric such as least-loaded or round-robin, [or] based on IP header information such as the origin server IP address.’” *Id.* at 60 (quoting Ex. 1004, 7:36–48; citing Ex. 1002 ¶¶ 162–165). According to Petitioner, a person of ordinary skill in the art “would have understood and/or it would have been obvious for the client 101-1 to seek additional content from a second target web server with a different URL, whereby the selection of another available proxy cache is repeated by proxy redirector 104.” *Id.* (citing Ex. 1002 ¶ 166). Petitioner further assert that, in order to select one of the available proxy caches, proxy redirector 104 must store a group of IP addresses associated each proxy cache, which are used to identify proxies and enable proxy redirector 104 to

choose an available proxy cache. *See id.* at 61 (citing Ex. 1002 ¶¶ 169, 214; Ex. 1004, 7:38–48, 8:29–31, 9:3).

Patent Owner does not address Petitioner’s showing for the preamble. *See* Prelim. Resp. 22–24. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we need not resolve whether the preamble is limiting because Petitioner shows sufficiently for the purpose of institution that the preamble is satisfied by Cohen

*b. the method by the first server comprising:
receiving from the first client device, the first URL*

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: receiving from the first client device, the first URL.” *See* Pet. 61 (citing Ex. 1002 ¶ 170). According to Petitioner, “Cohen discloses that the client sends ‘one or more packets to the origin server [via the proxy redirector 104], which packets include a GET request. The GET request includes a complete URL, which identifies to that server the specific object within the origin server site that the client wants a copy of.’” *Id.* (citing Ex. 1004, 2:15–20). According to Petitioner, “proxy redirector 104 (the claimed ‘first server’) receives the GET request from client 101-1 (the claimed ‘first client device’) with the included complete URL ‘/a/ya/yahoomail/promo1.gif HTTP/1.0’ (the claimed ‘first URL’).” *Id.* at 61–62 (reproducing Ex. 1004, Table 1 (with annotations); citing Ex. 1002 ¶ 171; Ex. 1004, 2:15–20, 9:19–23).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 22–24. Nevertheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner

shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

c. selecting, in response to the receiving of the first URL from the first client device, an IP address from the group

Petitioner asserts that Cohen discloses or renders obvious “the method by the first server comprising: . . . selecting, in response to the receiving of the first URL from the first client device, an IP address from the group” (first selecting limitation). *See* Pet. 62 (citing Ex. 1002 ¶ 172). According to Petitioner, “upon receiving the URL, proxy director 104 (the claimed ‘first server’) selects the IP address ‘daddr=135.104.25.31’ of proxy cache 110-1 from the group of IP addresses associated with at least two or more proxies (i.e., proxies 110-1, 110-2, 115, and/or 117) to forward the URL to the selected proxy.” *Id.* at 62–63 (reproducing Ex. 1004, Table 1 (with annotations); citing Ex. 1002 ¶ 172; Ex. 1004, 11:12–15).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 22–24. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

d. sending, in response to the selecting, the first URL to the first web server using the selected IP address

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: . . . sending, in response to the selecting, the first URL to the first web server using the selected IP address.” *See* Pet. 64 (citing Ex. 1002 ¶ 174). According to Petitioner, “proxy redirector 104 selects the IP address of proxy cache 110-1 and, in response

to the selecting, forwards the URL to proxy cache 110-1.” *Id.* (quoting Ex. 1004, 11:12–15; citing Ex. 1002 ¶ 174; Ex. 1004, 7:36–48). Petitioner asserts that a person of ordinary skill in the art “would understand that when proxy redirector sends the URL to the first web server through to proxy cache 110-1, as an intermediary, proxy redirector uses the IP address associated with proxy cache 110-1 (the claimed “selected IP address”) as the destination IP address.” *Id.* (citing Ex. 1002 ¶ 175).

Patent Owner points to the Reexamination Request filed in Control No. 90/014,827 of the ’511 Patent and the Examiner’s withdrawal of rejections based on Cohen. *See* Prelim. Resp. 10 (citing Ex. 2009, 84), 22–23 (citing Ex. 2009, 82–83). Patent Owner asserts that the Examiner’s review of the ’511 Patent claims is relevant because the claim language is similar to the claim language of the ’622 Patent. *See id.* at 22. Patent Owner asserts that the Examiner found that Cohen teaches sending a logical URL to the proxy redirector to determine an IP address, sending a GET request comprising a complete URL which is intercepted by the proxy redirector, and the proxy redirector sends an absolute URL to the selected proxy cache. *See id.* at 23 (quoting Ex. 2009, 84). Patent Owner contends the Examiner found that the ’511 Patent claims requires the same content identifier in the selecting step and the subsequent sending step. *See id.* at 24 (quoting Ex. 2009, 84). Patent Owner asserts that the Examiner found that Cohen teaches a different content identifier being sent from the client to the proxy redirector than is sent by the proxy redirector to the web server. *See id.* (quoting Ex. 2009, 84). Patent Owner contends that for the same reasons, Cohen also fails to teach the limitations of claim 1 of the ’622 Patent. *See id.*; *see also* PO Prelim. Sur-reply 4–5 (similar arguments; quoting Ex. 1004, 9:24–28; citing Ex. 1004, 10:8–9, 11:19–24). Patent Owner also asserts that

“Petitioner does not address the different URLs, i.e., the different content identifiers disclosed in Cohen in its obviousness analysis.” Prelim. Resp. 24 (citing Pet. 62–64)

At this stage of the proceeding, we do not agree with Patent Owner’s arguments. More specifically, based on the current record before us, we do not discern a difference between the complete URL “/a/ya/yahoomail/promo1.gif HTTP/1.0” received by proxy redirector 104, as asserted by Petitioner to teach the claimed first URL, and the absolute URL “http://204.71.200.244/a/ya/yahoomail/promo1.gif HTTP/1.0” subsequently sent by proxy redirector 104 to the proxy cache, as disclosed by Cohen. This is because Cohen discloses the absolute URL is transformed by prefixing the complete URL “with the IP address of the origin server obtained from the destination IP address of the packets containing the GET request.” Ex. 1004, 9:23–10:3, 10:32–11:19, Table 1; Pet. 59; *see also* Pet. Prelim. Reply 4–5 (explaining the absolute URL contains all elements of the complete URL). In other words, it appears, based on the current record, that Cohen discloses the absolute URL includes the complete URL “/a/ya/yahoomail/promo1.gif HTTP/1.0.”

We recognize that our preliminary finding may contradict the Examiner’s withdrawal of the rejection based on Cohen during reexamination of the ’511 Patent, which involves, admittedly, a different limitation—“a first content identifier.” We invite the parties to fully address in future briefing the issue of whether Cohen’s disclosure of a complete URL that is transformed to an absolute URL is the same URL or a different URL than the complete URL. Therefore, at this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen, discloses or suggests this limitation of claim 1.

*e. receiving, in response to the sending of the first URL,
the content from the first web server*

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: . . . receiving, in response to the sending of the first URL, the content from the first web server. *See* Pet. 65 (citing Ex. 1002 ¶ 176). Petitioner asserts that packets from client 101-1 are transparently redirected by proxy redirector 104 to a proxy cache and responsive packets from the proxy cache are set to proxy redirector 104 where they are redirected to client 101-1. *See id.* (quoting Ex. 1004, 8:55–58; citing Ex. 1002 ¶ 177; Ex. 1004, 6:39–46, 10:23–26, 12:18–20, 16:28–41).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 22–24. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

f. receiving from the first client device, the second URL

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: . . . receiving from the first client device, the second URL.” *See* Pet. 65 (citing Ex. 1002 ¶ 178). Petitioner asserts that “Cohen discloses that the ‘invention relates to... a network for transparently intercepting client **web requests** and redirecting them to proxy caches.” *Id.* (citing Ex. 1004, 1:6–10). According to Petitioner, “it would have been obvious to a [person of ordinary skill in the art] based on the disclosures and teachings of Cohen, . . . for client 101-1 (the claimed “first client”) to send a second GET request that includes a second complete URL

(the claimed “second URL”) to the proxy redirector 104.” *Id.* (citing Ex. 1002 ¶ 178; Ex. 1004, 2:15–20, 9:19–23; Table 1).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 22–24. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

g. selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group

Petitioner asserts that Cohen discloses or renders obvious “the method by the first server comprising: . . . selecting, in response to the receiving of the second URL from the first client device, an additional IP address from the group” (second selecting limitation). *See* Pet. 65–66 (citing Ex. 1002 ¶ 179). According to Petitioner, “upon receiving the second URL, proxy redirector 104 (the claimed ‘first server’) selects an IP address corresponding to a proxy cache from the group of IP addresses associated with two or more proxies (i.e. proxies 110-1, 110-2, 115, and/or 117) to forward the URL to the selected proxy.” *Id.* at 65–66 (citing Ex. 1002 ¶ 179; Ex. 1004, 7:43–48, 11:12–15).

Patent Owner applies the same arguments for this second selecting limitation as those arguments addressing the first selecting limitation. *See* Prelim. Resp. 25–26 (citing Ex. 1003, 3:38–48, 4:43–54, Figs. 2, 6). For the same reasons as those explained above with respect to the first selecting limitation, we do not agree with Patent Owner’s arguments. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

h. sending, in response to the selecting, the second URL to the second web server using the selected additional IP address

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: . . . sending, in response to the selecting, the second URL to the second web server using the selected additional IP address.” *See* Pet. 66 (citing Ex. 1002 ¶ 180). According to Petitioner, “proxy redirector 104 forwards the second URL to proxy cache 110-2 using the selected IP address of proxy cache 110-2 as the destination IP address for forwarding to the origin server corresponding to the second URL (the claimed ‘second web server’).” *Id.* (citing Ex. 1002 ¶ 180; Ex. 1004, 7:43–48, 11:12–15).

Patent Owner does not address Petitioner’s showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. Nevertheless, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

i. receiving, in response to the sending of the second URL, the second content from the second web server

Petitioner contends that Cohen discloses or renders obvious “the method by the first server comprising: . . . receiving, in response to the sending of the second URL, the second content from the second web server. *See* Pet. 66 (citing Ex. 1002 ¶ 181). Petitioner asserts that a person of ordinary skill in the art “would understand that a second web server will provide a web page corresponding to the second URL, which will be forwarded back to the proxy redirector 104.” *Id.* (citing Ex. 1004, 6:39–46, 8:55–58, 10:23–25, 12:18–20; Ex. 1002 ¶ 181).

Patent Owner does not address Petitioner's showing for this limitation of claim 1. *See* Prelim. Resp. 24–27. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. At this stage of the proceeding, we determine Petitioner shows sufficiently that Cohen discloses or suggests this limitation of claim 1.

k. Summary

For all of the foregoing reasons, for the purpose of institution and based on the record before us, Petitioner establishes sufficiently that the subject matter of claim 1 would have been obvious over Cohen.

3. Analysis of Dependent Claims 2–14, 17, 20–24, and 26–32

Claims 2–14, 17, 20–24, and 26–32 directly or indirectly depend from claim 1. *See* Ex. 1001, 19:16–22:16. We have reviewed Petitioner's contentions and cited supporting evidence addressing how Cohen teaches or renders obvious the limitations recited in claims 2–14, 17, 20–24, and 26–32. *See* Pet. 67–80 (citations omitted). Patent Owner does not address Petitioner's showing addressing the limitations of claims 2–14, 17, 20–24, and 26–32. *See* Prelim. Resp. 22–24. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378.

For the purpose of institution and based on the record before us, including the reasons explained above addressing claim 1, Petitioner establishes sufficiently that the subject matter of dependent claims 2–14, 17, 20–24, and 26–32 would have been obvious over Cohen.

4. Summary

For all of the foregoing reasons and based on the record before us, we determine there is a reasonable likelihood Petitioner would prevail in showing that claims 1–14, 17, 20–24, and 26–32 are unpatentable under 35 U.S.C. § 103 over Cohen.

G. Arguments Urging Discretionary Denial of Institution

Patent Owner urges the Board to exercise its discretion to deny institution based on Patent Owners contentions that the real parties in interest (RPIs) “seem to be using [*inter partes* review] to harass Patent Owner,” and “are abusing the IPR process.” Prelim. Resp. 1, 12; *see id.* at 5; Prelim. Sur-reply 1. Patent Owner presents the following assertions:

(1) Petitioner “appears to be using its intimate knowledge of Patent Owner’s portfolio to recycle prior art references and arguments to file new IPRs and gain settlement leverage in the stayed litigations” “by forcing Patent Owner to expend resources to defend its patent portfolio” (Prelim. Resp. 5, 12–13; *see id.* at 1, 3; Prelim. Sur-reply 1); (2) “despite the RPI’s intimate knowledge of the proceedings involving the ’511 Patent, and despite the acknowledgement of similar claim language in the ’511 and ’622 Patents, the instant petition was not filed until . . . nearly four months” after the ’622 Patent issued (Prelim. Resp. 11–12); (3) Petitioner could have submitted its prior art arguments to the USPTO much earlier because the RPIs were aware of the prior art arguments at least as early as August 31, 2020 and the prior art and arguments were also presented in the reexamination of the ’511 Patent (*see id.* at 11–12); (4) conducting an *inter partes* review of an unasserted patent is not a cost-effective alternative to litigation because there is no litigation (*see id.* at 4); and (5) “one of the RPIs could have filed an [*ex*

parte reexamination] of the '622 Patent after issuance,” which “uses substantially less USPTO resources than [an] IPR” (*id.* at 13; *see id.* at 4; Prelim. Sur-reply 1–2).

In reply, Petitioner disputes that challenging an unasserted patent is harassment. *See* Prelim. Reply 1. Petitioner contends that Patent Owner does not cite to any Board decisions in which challenging a non-asserted patent was deemed harassment or served as a basis for discretionary denial. *See id.* Petitioner contends that the Board has previously concluded that a petition challenging an unasserted patent was not contrary to the purposes of the AIA. *See id.* (quoting *Palo Alto Networks, Inc. v. Centripetal Networks, Inc.*, IPR2022–00182, Paper 11 at 18–20 (PTAB May 25, 2022)). Petitioner also contends that the Board refused to exercise its discretion under similar facts in *Halliburton Energy Services, Inc. v. U.S. Well Services, LLC*, IPR2021-01316, Paper 9 at 9 (PTAB Feb. 22, 2022). *See id.* at 2. Petitioner further asserts that its patentability challenges to the '622 Patent “not only improve patent quality as the AIA is designed to encourage, Petitioner’s personalized interest in removing this [] patent is self-evident.” *Id.* (citing *Coalition for Affordable Drugs VI, LLC v. Celgene Corp.*, IPR2015-01092, Paper 19 at 4 (PTAB Sept. 25, 2015)). Finally, Petitioner asserts that it is neither improper nor unusual to apply the same art to multiple related patents. *See id.*

In response, Patent Owner asserts that the cases cited by Petitioner are distinguishable. *See* Prelim. Sur-reply 3–4. Patent Owner contends that unlike the patent owner in *Palo Alto*, Patent Owner has not sued any party for infringement of the '622 Patent. *See id.* at 4. Patent Owner also notes that Precedential Opinion Panel review has been requested in *Palo Alto*, and further notes that five amicus briefs acknowledge harassment of patent

owners who prevail in district court. *See id.* (citing *Palo Alto*, Exs. 3006–3010). Patent Owner contends that in *Halliburton*, the petitioner only filed a single petition against each patent assigned to the patent owner, which, according to Patent Owner, “is not the case here.” *Id.* (citing *Halliburton*, Paper 9 at 9). Patent Owner asserts that, in *Coalition for Affordable Drugs*, “the Board denied a motion for sanctions and found that the patent owner did not allege a lack of merit in the petition,” which “is not the case here.” *Id.*

Based on current Board precedent and the record before us, we are not persuaded the circumstances before us warrant discretionary denial of institution. In certain circumstances, the Board has exercised its discretion to deny institution pursuant to § 314(a) based on the advanced state of a district court proceeding in which the challenged patent is asserted. *See, e.g., Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 (PTAB May 13, 2020) (informative). In certain situations, the Board also has exercised its discretion to deny institution of a later-filed petition after having considered a previously-filed petition challenging the same patent (*see, e.g., Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 (PTAB Apr. 2, 2019) (precedential)) and when a petition demonstrates a reasonable likelihood of prevailing as to some, but not all, challenged claims (*see, e.g., Chevron Oronite Co. LLC v. Infineum USA L.P.*, IPR2018-00923, Paper 9 (PTAB Nov. 7, 2018) (informative)). Unlike these situations in which the Board has exercised its discretion to deny institution, the ’622 Patent is not asserted in a district court proceeding, this Petition is the first one challenging the ’622 Patent, and Petitioner demonstrates a reasonable likelihood of prevailing as to all of the challenged claims. We also do not view Petitioner’s challenge to the ’622 Patent as contrary to the AIA’s

purposes. *See, e.g., Halliburton*, Paper 9 at 9 (“The AIA was designed to encourage the filing of meritorious patentability challenges, by any person who is not the patent owner, in an effort to further improve patent quality.”). Similar to the underlying circumstances of *Halliburton*, Petitioner notes that Patent Owner may initiate additional litigation regarding this unasserted patent. *See* Prelim. Reply 2 (quoting *Halliburton*, Paper 9 at 9).

III. CONCLUSION

For the foregoing reasons, we determine there is a reasonable likelihood that Petitioner would prevail in showing at least one of the challenged claims of the ’622 Patent is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–14, 16, 17, 20–24, and 26–32 of the ’622 Patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the ’622 Patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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