UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD., and APPLE INC., Petitioner

v.

VIRNETX INC., Patent Owner

Case IPR2015-01046¹ Patent No. 6,502,135

PATENT OWNER VIRNETX INC.'S AMENDED NOTICE OF APPEAL

¹ Apple Inc., which filed a petition in IPR2016-00062, has been joined as a Petitioner in the instant proceeding.

Director of the United States Patent and Trademark Office c/o Office of the General Counsel Madison Building East, 10B20 600 Dulany Street Alexandria, VA 22314-5793

Patent Owner VirnetX Inc. ("VirnetX") hereby amends its prior Notice of Appeal (Paper No. 113), filed on September 14, 2020, which noticed an appeal to the United States Court of Appeals for the Federal Circuit from the Final Written Decision on Remand entered on July 14, 2020 (Paper 112) (the "Final Written Decision") by the United States Patent and Trademark Office, Patent Trial and Appeal Board (the "Board"), and from all underlying orders, decisions, rulings, and opinions, including, but not limited to, the Decision Granting In Part Patent Owner's Motion for Additional Discovery, entered on October 23, 2019 (Paper 88) and the Decision Denying Patent Owner's Request on Rehearing of Order Regarding Additional Discovery, entered on July 14, 2020 (Paper 111). With this amended notice of appeal, VirnetX further appeals to the United States Court of Appeals for the Federal Circuit from the Order entered on October 29, 2021 (Paper No. 116) by Andrew Hirshfeld, Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, which denied VirnetX's request for Director review of the Final Written Decision. Copies of the

Final Written Decision, the Decision Granting In Part Patent Owner's Motion for Additional Discovery, the Decision Denying Patent Owner's Request on Rehearing of Order Regarding Additional Discovery, and the Order denying VirnetX's request for Director review are attached.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), VirnetX indicates that the issues on appeal include, but are not limited to, whether the Board's use of joinder to consider new issues and evidence introduced by a joined party contravenes 35 U.S.C. § 315(c) and Facebook, Inc. v. Windy City Innovations, LLC, 973 F.3d. 1321 (Fed. Cir. 2020), the Board's interpretation and application of 35 U.S.C. § 315(b)-(c), the Board's denial of discovery sought by VirnetX, the Board's determination of unpatentability of claims 1, 3, 4, 7, 8, 10, and 12 of U.S. Patent No. 6,502,135 under 35 U.S.C. § 102, and any findings or determinations supporting or related to those rulings including, without limitation, the Board's construction and application of the claim language, the Board's interpretation of the references, and the Board's interpretation of expert evidence. The issues on appeal further include whether Commissioner for Patents, Andrew Hirshfeld, as the Official Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, was precluded from exercising the Director's review authority with respect to VirnetX's request by the Appointments Clause, *United States v.*

Arthrex, Inc., 141 S. Ct. 1970 (2021), or the Federal Vacancies Reform Act of 1998, 5 U.S.C. §§ 3345-3349c.

Simultaneous with this submission, a copy of this Amended Notice of Appeal is being filed with the Board. In addition, the Amended Notice of Appeal and the required fee are being filed electronically with the Clerk of Court for the United States Court of Appeals for the Federal Circuit.

Respectfully submitted this 3rd day of November, 2021.

By: /Naveen Modi/

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Counsel for VirnetX Inc.

CERTIFICATE OF SERVICE

The undersigned certifies that, in addition to being filed electronically through Patent Trial and Appeal Board End to End (PTAB E2E), the original version of this Notice of Appeal was filed by overnight express delivery on November 3, 2021 with the Director of the United States Patent and Trademark Office, at the following address:

Office of the General Counsel United States Patent and Trademark Office P.O. Box 1450 Alexandria, Virginia 22313-1450

The undersigned also certifies that a true and correct copy of this Notice of Appeal and the required fee were filed electronically via CM/ECF on November 3, 2021, with the Clerk of Court for the United States Court of Appeals for the Federal Circuit.

The undersigned also certifies that a true and correct copy of this Notice of Appeal was served on November 3, 2021 on counsel of record for Petitioners by electronic mail (by agreement of the parties) at the following addresses:

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Paper 112 Entered: July 14, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD., and APPLE INC., Petitioner,

V.

VIRNETX INC., Patent Owner.

IPR2015-01046¹ Patent 6,502,135 B1

Before MICHAEL P. TIERNEY, Vice Chief Administrative Patent Judge, KARL D. EASTHOM, JASON W. MELVIN, Administrative Patent Judges.

MELVIN, Administrative Patent Judge.

JUDGMENT

Final Written Decision on Remand
Determining All Challenged Claims Unpatentable
35 U.S.C. §§ 144, 318

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¹ Apple Inc., which filed a petition in IPR2016-00062, has been joined as a Petitioner in this proceeding.

I. INTRODUCTION

A. BACKGROUND AND SUMMARY

The Mangrove Partners Master Fund, Ltd., and Apple Inc. (collectively, "Petitioner") requested *inter partes* review of claims 1, 3, 4, 7, 8, 10, and 12 of U.S. Patent No. 6,503,135 B1 (Ex. 1001, "the '135 patent"). Paper 1, ("Pet.").² We issued a Decision instituting *inter partes* review. Paper 11 ("Inst. Dec.").

After Institution, VirnetX Inc. ("Patent Owner") filed a Patent Owner's Response (Paper 49 (redacted version), "PO Resp."; Paper 44 (non-redacted version)), to which Petitioner replied (Paper 51 (redacted version), "Pet. Reply"; Paper 50 (non-redacted version); and Paper 53, "Pet. Separate Reply"). Oral argument was conducted on June 30, 2016. Our Final Written Decision was issued September 9, 2016. Paper 71 ("Original Decision").

On appeal, the Federal Circuit vacated our Original Decision and remanded the case for further proceedings. *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, 778 F. App'x 897 (Fed. Cir. 2019). After conferring with the parties, we permitted Patent Owner to file a Motion for Additional Discovery (Paper 81), to which Petitioner filed an Opposition (Paper 82) and Patent Owner filed a Reply (Paper 87). We granted in part Patent Owner's Motion. Paper 88. Patent Owner requested rehearing of our Decision on its Motion for Additional Discovery (Paper 92), to which Petitioner opposed (Paper 93) and Patent Owner replied (Paper 94).

We permitted the parties to brief the issues for consideration on remand from the Federal Circuit. Petitioner filed a principal brief (Paper 95,

² We consider the Petition filed by The Mangrove Partners Master Fund, Ltd., not the similar petition filed by the joined party.

"Pet. Remand Br."), Patent Owner filed an Opposition (Paper 96, "PO Remand Br."), Petitioner filed a Reply (Paper 97, "Pet. Remand Reply"), and Patent Owner filed a Sur-Reply (Paper 98, "PO Remand Sur-Reply"). Oral argument was conducted on January 24, 2020, and a transcript appears in the record. Paper 105 ("Tr.").

This is a Final Written Decision on Remand as to the patentability of the challenged claims. For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable.

B. RELATED MATTERS

The '135 patent is at issue in the following civil actions: (i) Civ. Act. No. 6:13-cv-00211-LED (E.D. Tex.), filed February 26, 2013; (ii) Civ. Act. No. 6:12-cv-00855-LED (E.D. Tex.), filed November 6, 2012; and (iii) Civ. Act. No. 6:10-cv-00417-LED (E.D. Tex.), filed August 11, 2010. Pet. 1; Paper 8, 11–12.

The '135 patent is the subject of Reexamination Control Nos. 95/001,679 and 95/001,682. Pet. 2; Paper 8, 2–3.

Petitioner additionally describes a related matter as follows:

On January 21, 2020, the Federal Circuit issued its opinion in *VirnetX Inc. v. Cisco Systems, Inc.*, No. 2019-1043 (Fed. Cir. Jan. 21, 2020), affirming, under Fed. Cir. R. 36, the Board's decisions in *Cisco Systems, Inc. v. VirnetX Inc.*, Control No. 95/001,746, Appeal Nos. 2015-007843, 2017-010852, 2017-010852, each involving related U.S. Patent No. 6,839,759 and, *inter alia*, the Kiuchi reference at issue in this proceeding.

Paper 102, 1.

Additionally, Patent Owner identifies a number of PTO proceedings that involve U.S. Patent No. 7,490,151 ("the '151 patent"). Paper 8, 3–4. Of particular significance here, the '151 patent is at issue in IPR2015-01047, which has been treated as largely a companion proceeding to the present. *See, e.g., VirnetX*, 778 F. App'x at 904 (describing the '135 patent and the '151 patent collectively; noting the patents "share a substantially identical specification").

Patent Owner identifies multiple other proceedings involving "patents stemming from the same applications that led to the '135 patent." Paper 8, 3–10.

C. THE '135 PATENT

The '135 patent discloses a system and method for communicating over the Internet and the automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function. Ex. 1001, 2:66–3:2, 37:19–21. The '135 patent describes "a protocol referred to as the Tunneled Agile Routing Protocol (TARP), [which] uses a unique two-layer encryption format and special TARP routers." *Id.* at 2:66–3:2.

D. ILLUSTRATIVE CLAIMS

Claim 1 of the '135 patent is illustrative of the claimed subject matter and is reproduced below:

- 1. A method of transparently creating a virtual private network (VPN) between a client computer and a target computer, comprising the steps of:
 - (1) generating from the client computer a Domain Name Service (DNS) request that requests an IP address corresponding to a domain name associated with the target computer;

- (2) determining whether the DNS request transmitted in step (1) is requesting access to a secure web site; and
- (3) in response to determining that the DNS request in step (2) is requesting access to a secure target web site, automatically initiating the VPN between the client computer and the target computer.

Ex. 1001, 47:20–32.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts unpatentability on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)	
1, 3, 4, 7, 8, 10, 12	102	Kiuchi ³	
8	103	Kiuchi, RFC 1034 ⁴	

Pet. 4.

F. CAFC REMAND

On appeal, the Federal Circuit held that our prior decision erred by failing to construe "client computer" and reading it on Kiuchi's client-side proxy without adequate analysis. *VirnetX*, 778 F. App'x at 908–09. It further held that reading "client computer" on Kiuchi's user agent did not deprive VirnetX of adequate notice or opportunity to respond under the APA. *Id.* at 909.

Considering the construction for "VPN between the client and target computers," the Federal Circuit held that "[t]he statements VirnetX made

³ Takahiro Kiuchi and Shigekoto Kaihara, "C-HTTP – The Development of a Secure, Closed HTTP-based Network on the Internet," published by IEEE in the Proceedings of SNDSS 1996 (Ex. 1002).

⁴ Mockapetris, P., RFC 1034, "Domain Names—Concepts and Facilities," Nov. 1997 (Ex. 1005).

during reexamination constitute disclaimer." *VirnetX*, 778 F. App'x at 910. The Federal Circuit determined that "a 'VPN between the client computer and the target computer' requires direct communication between the client and target computers" because VirnetX distinguished its claims over "a system in which a client computer communicates with an intermediate server via a singular, point-to-point connection." *Id.*; *see id.* at 909–910 (describing statements made to distinguish a prior art reference called "Aventail"). In light of that new construction, the Court remanded the case for us to determine whether Kiuchi satisfies the VPN limitation. *Id.*

II. ANALYSIS

A. CLAIM CONSTRUCTION

The '135 patent expired October 29, 2019, and we therefore construe its claims according to the standard used by district courts, as expressed in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). PO Remand Br. 2–3; *see In re CSB-Sys. Int'l, Inc.*, 832 F.3d 1335, 1342 (Fed. Cir. 2016).

The Federal Circuit instructed us as to the correct construction for a "VPN between the client computer and the target computer." *VirnetX*, 778 F. App'x at 909–10. Additionally, as to the '151 patent, it held that, "[t]o the extent the Board intended to rely exclusively on Kiuchi's client-side proxy for the claimed 'client,'" it was necessary to construe the meaning of "client." *Id.* at 907–08.

1. "virtual private network (VPN)"

The Federal Circuit held that the claim language "a virtual private network (VPN) between a client computer and a target computer" "requires

direct communication between the client and target computers" because, during reexamination, VirnetX disclaimed scope that would read on "a system in which a client computer communicates with an intermediate server via a singular, point-to-point connection." 778 F. App'x at 910.

The parties continue to dispute the impact of the Federal Circuit's claim construction. Petitioner contends that, during the concurrent litigation, Patent Owner's expert "testified that direct communication refers to direct addressability of the target computer." Pet. Remand Br. 10 (emphasis omitted) (citing Ex. 1044, 50:25–51:5). Patent Owner takes the view that, regardless of how one understands "direct communication," the claims cannot encompass "a 'system in which a client computer communicates with an intermediate server via a singular, point-to-point connection,' wherein '[t]hat intermediate server then relays the data to a target computer on the same private network on which the server resides." PO Remand Br. 12 (quoting *VirnetX*, 778 F. App'x at 910).

At bottom, the parties dispute whether Kiuchi describes direct communication that would fall within the claims' scope as properly construed, and we address that issue below.

2. "client computer"

As to the proper construction of "client computer," Petitioner submits that its "first anticipation mapping does not implicate this issue—there, the 'user agent' is the 'client computer." Pet. Remand Br. 6. Patent Owner does not dispute that assertion. PO Remand Br. 15–21. The construction does, however, impact Petitioner's second anticipation mapping and we therefore address the dispute.

Petitioner submits that a "client computer" should be construed as a "computer from which a data request to a server is generated." Pet. Remand Br. 6–9. Patent Owner, on the other hand, submits that the claimed client computer must refer to a "user's computer." PO Remand Br. 3–12.

Petitioner contends that "client computer" refers to the "conventional client component of a client/server architecture." Pet. Remand Br. 7 (citing Ex. 1003 ¶ 19; Ex. 1014, 5 (defining "client" as "[a]n application program that establishes connections for the purpose of sending requests.")). According to Petitioner, that usage is consistent with the Specification's specific use of "user's computer" and description, for example, that "[a] user's computer 2601 includes a conventional client (e.g., a web browser) 2605." Pet. Remand Br. 8 (quoting Ex. 1001, 38:14–15; citing Ex. 1001, 37:30–32; 39:17–20, 39:22–29, 44:40–45). Petitioner reasons that because the '135 patent uses the term "user's computer" when desired, it does not indicate that the term is synonymous with "client computer." *Id.* at 9. Finally, Petitioner argues that the Specification describes embodiments where a VPN is initiated by client software that runs on a computer not described as a user's computer, showing that a client computer refers simply to the computer from which a data request to a server is generated. *Id.* (citing Ex. 1001, 31:57–64, 36:26–28, 40:27–30).

Patent Owner focuses initially on the claim language reciting "initiating the VPN between the client computer and the target computer." PO Remand Br. 3. In Patent Owner's view, that language reflects the Specification's description that the invention provides secure communication between a user's computer running a web browser and a secure target site. *Id.* at 4 (citing Ex. 1001, 1:15–31, 4:59–5:12, 38:13–33).

In that way, Patent Owner contrasts its proposed construction with Petitioner's, which Patent Owner contends would permit a server to act as the "client computer" and therefore contort the claim in an unnatural way. *Id.* at 8. Regarding the Specification's description of a user's computer including a conventional client application (Ex. 1001, 38:14–15), Patent Owner asserts it supports Patent Owner's construction for "client computer" because it shows that the relevant client applications are those on user-operated computers, not just any software that communicates with a server. PO Remand Br. 8–9. Finally, Patent Owner addresses Petitioner's contention that the Specification describes VPN connections involving a client computer that is not operated by a user. *Id.* at 10–11. In Patent Owner's view, each of the Specification portions identified by Petitioner either does involve a user-operated computer or relates to embodiments outside the scope of the challenged claims. *Id.*

The proper construction for "client computer" presents a close issue. Although we agree that the plain words seemingly refer to a computer that acts as a client in a client–server relationship, the Specification demonstrates that the claims are not so broad.

The preamble recites "transparently creating a virtual private network (VPN) between a client computer and a target computer." The Specification describes "automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function" under a heading that states "Use

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⁵ Although the preamble does not necessarily limit the claim, here, the term "virtual private network" in the preamble provides antecedent basis for that term later in the claim. *See Catalina Marketing Intern. v. Coolsavings.com*, 289 F. 3d 801, 808 (Fed. Cir. 2002). Moreover, the parties do not assert that the preamble here limits the claim.

of a DNS Proxy to Transparently Create Virtual Private Networks." Ex. 1001, 37:17–21. The embodiment described in that section includes determining the need for a secure connection based on a DNS request from the user's computer. *Id.* at 37:63–38:2; accord id. at 38:23–25 ("According to one embodiment, DNS proxy 2610 intercepts all DNS lookup functions from client 2605 and determines whether access to a secure site has been requested."). The Specification explains that Figure 26 depicts the same embodiment and confirms that, when created, the VPN extends from the user's computer with client software to the desired target site. *Id.* at 38:13– 65. Although we are mindful that a single embodiment in the Specification should not be used to limit the claims, the close fit between this embodiment and the claims at issue counsels close consideration. Moreover, the Specification does not appear to discuss operations using DNS requests outside of the embodiment associated with Figure 26. Cf. id. at 32:27–35 (describing improvements added through a continuation-in-part application as including "a DNS proxy server that transparently creates a virtual private network in response to a domain name inquiry").

If we were to construe the claimed "client computer" as Petitioner seeks, it would permit a claim scope that exceeds the Specification's description. The parties essentially assert two ordinary meanings exist—one related to the user, the other related to the client—server relationship—but the Specification only describes the client computer vis-à-vis the user. So if we were to construe the claimed "client computer" as Petitioner seeks, it would read a meaning into the claim that the Specification does not describe. Though Petitioner's proposed construction accurately expresses that the described client software generates a request for data from a server, the

construction is incomplete because it does not identify where the client computer fits within the overall VPN claimed. Patent Owner's construction, on the other hand, is consistent with the Specification's description that the VPN extends from a user's computer to a desired target site.⁶

Accordingly, we adopt Patent Owner's construction for "client computer" as "a user's computer."

B. ANTICIPATION

Kiuchi discloses systems and methods for facilitating "secure HTTP communication mechanisms within a closed group of institutions on the Internet, where each member is protected by its own firewall." Ex. 1002, 64 (Abstract). It terms its approach C-HTTP, indicating "a closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP)." *Id*.

C-HTTP allows a conventional user agent (such as web browser software running on a user's computer) to request a resource identified in a URL. *Id.* at 65 (§ 2.3). A client-side proxy intercepts all such resource requests made by a user agent. *Id.* ("A client-side proxy behaves as an HTTP/1.0 compatible proxy, and it should be specified as a proxy server for external (outside the firewall) access in each user agent within the

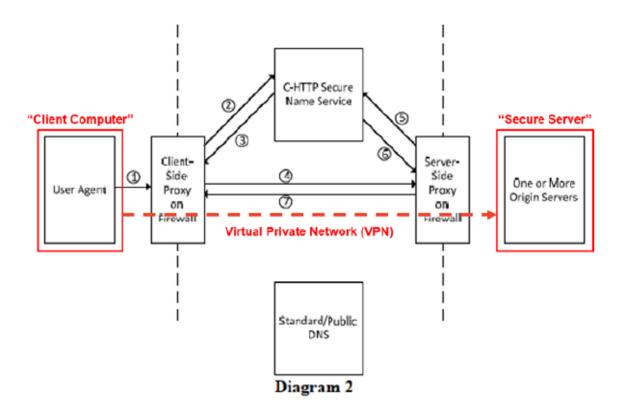
⁶

⁶ Petitioner points to a progeny of the '135 patent, US 9,386,000, reciting claims with a "client device" further restricted "wherein the client device is a user device." *See* Pet. Remand Reply 3–4. Petitioner reasons that "client" cannot restrict a device (like the computer claimed here) to a user device because then the further restriction in the '000 patent would be superfluous. *Id.* Under the circumstances here with two ordinary meanings at issue, we view the claim language of the '000 patent as only marginally relevant to the construction of the challenged claims, and potentially superfluous language does not persuade us that our construction discussed above is erroneous.

firewall."). The "client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL." *Id.* "If the connection is permitted, the C-HTTP name server sends the IP address and public key of the server-side proxy" to the client-side proxy. *Id.* Once the client-side proxy receives that information, it "sends a request for connection to the server-side proxy." *Id.* After verifying the client-side proxy's information and access permission, the server-side proxy sends connection information to the client-side proxy, which in turn checks the connection information and establishes a secure connection. *Id.* at 65–66 (§ 2.3). In that connection, the client-side proxy encrypts requests from the user agent and forwards them to the server-side proxy, which in turn forwards them to "an origin server inside the firewall." *Id.* at 66 (§ 2.3). Responses from the origin server are returned to the user agent, through the server-side proxy and client-side proxy, in turn. *Id.*

Petitioner argues the Petition proposes two fundamental mappings of the claim language to Kiuchi's disclosures. Pet. Remand Br. 11–13.

1. Kiuchi anticipates claim 1 under Petitioner's first mapping
In Petitioner's first mapping, Kiuchi's user agent running on a
computer acts as the claimed "client computer" to generate a DNS request
using a domain name associated with an origin server, causing creation of a
VPN between the user agent and the origin server that passes through the
client-side proxy and server-side proxy. *Id.* at 11–12 (citing Pet. 26–27;
Reply 8–11), 13–24. Petitioner illustrates this mapping using the following
annotated version of a diagram appearing in the declaration of Dr. Guerin:



Pet. Remand Br. 12 (annotating Ex. 1003 ¶ 24).

a. Kiuchi discloses "direct" communication

Patent Owner argues that Petitioner's first mapping does not satisfy the claim language because Kiuchi does not disclose a direct connection between the user agent and origin server. PO Remand Br. 15–21. According to Patent Owner, Kiuchi discloses three separate links, one between each pair of devices in the chain from the user agent to the origin server depicted above. *Id.* at 15. That argument, however, conflates link with connection. The two are not the same. The disclaimer recognized by the Federal Circuit relates to "a system in which a client computer communicates with an intermediate server via a singular, point-to-point connection" wherein "[t]hat intermediate server then relays the data to a target computer on the same private network on which the server resides." VirnetX, 778 F. App'x at 910.

Interpreting the disclaimed scope as Patent Owner urges would contrast with the '135 patent's disclosure of multiple links between two TARP terminals as consistent with the claimed invention. *See* Ex. 1001, Fig. 2.⁷ Thus, simply using multiple links does not push a system outside the scope of the claims. Rather, we must consider the nature of the overall connection. Before the Office, Patent Owner described the claimed VPN as one "where data can be addressed to one or more different computers across the network, regardless of the location of the computer." Ex. 2036, 5–6. Thus, the ability to address data to a particular computer is a key aspect of the claimed VPN. *Id.*; Ex. 1044, 50:25–51:5 (Patent Owner's district-court expert stating that "direct communication refers to direct addressability"). ⁸

Kiuchi's system is consistent with Patent Owner's description of the claimed VPN. Kiuchi's user agent generates a request that includes a resource address (in the form of a URL). See Ex. 1002 § 2.3 ("A client-side proxy behaves as an HTTP/1.0 compatible proxy, and it should be specified as a proxy server for external (outside the firewall) access in each user agent within the firewall."); id. ("A client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL."). Indeed, Patent Owner's expert, Dr. Monrose, testified that Kiuchi's

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⁷ Patent Owner takes the position that the claimed VPN should be consistent with the described TARP routing. *See, e.g.*, Tr. 37:24, 39:2–14, 40:5–15.

⁸ With the same claim construction but a different factual record, the Federal Circuit held that substantial evidence supported a jury's finding of no anticipation by Kiuchi. *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1323–24 (Fed. Cir. 2014). That does not compel the same finding in this proceeding, where we reach a determination based on a preponderance of the evidence. Our unique factual record—including expert testimony—justifies our finding that Kiuchi *does* anticipate the claims.

URL provided by the user agent is an address of the resource on an origin server. Ex. 1036, 240:21–241:14; *see also* Tr. 38:13–16 (stating that the URL is "the identifier to the resource that you want that sits on the origin server"). The client-side proxy intercepts the request and, using the C-HTTP name server, maps the request to the particular server-side proxy that can access the requested resource. Ex. 1002, 65 (§ 2.3) ("If the connection is permitted, the C-HTTP name server sends the IP address and public key of the server-side proxy"). The client-side proxy establishes a connection with the server-side proxy, which retrieves the resource from the appropriate origin server and returns it to the client-side proxy, which in turn returns the resource to the user agent. *Id.* at 66 ("Once the connection is established, a client-side proxy forwards HTTP/1.0 requests from the user agent in encrypted form using C-HTTP format. . . . Using HTTP/1.0, a server-side proxy communicates with an origin server inside the firewall. . . . The resulting HTTP/1.0 response is sent to the user agent.").

Thus, Kiuchi's system, unlike the disclaimed scope, allows a client (the user agent) to connect to a remote server transparently and access resources with only the single URL identifying the remote resource. Kiuchi's system operates like the '135 patent's TARP, which allows the system to route a packet as required to reach the destination address provided by the client computer. Ex. 1001, 3:5–31. Kiuchi's user agent does not communicate with the client-side proxy using a singular, point-to-point connection because the user agent addresses the desired endpoint and the VPN provides the required message routing for the user agent to receive a response from the desired endpoint.

Patent Owner asserts that Kiuchi discloses "a client computer communicating with an intermediary computer and a point-to-point . . . connection," like the disclaimed system. Tr. 36:4–7. But Patent Owner provides no explanation of why Kiuchi's connection is a point-to-point connection. Such a characterization belies Kiuchi's disclosures, which state that, "[f]rom the view of the user agent or client-side proxy, all resources appear to be located in a server side proxy on the firewall" and further that "the server-side proxy forwards requests to the origin server." Ex. 1002, 66 (§ 2.3). Further, Patent Owner contends that Kiuchi's connection stops at the proxies because "the communication is only configured to reach . . . the intermediary server." Tr. 63:18–20. Similarly, Patent Owner contends that Kiuchi's URL is "not to get the communication to the origin server." *Id.* at 63:22–26. That argument is not consistent with Patent Owner's acknowledgement that the URL is "the identifier to the resource that you want that sits on the origin server." Tr. 38:13–16; accord Ex. 1036, 240:21– 241:14. We find Kiuchi does not disclose that "a client computer communicates with an intermediate server via a singular, point-to-point connection" as was disclaimed.

Patent Owner argues that Kiuchi's URL, while identifying the desired resource on the origin server, is not an address because "it's not the ultimate, the IP address that you're actually going to use to get to the target computer." Tr. 38:13–25. But Patent Owner does not contend that the claims require such an IP address. *Id.* at 38:26–39:2. Rather, Patent Owner contends that Kiuchi does not disclose direct communication because its user agent does not provide the server-side proxy's address. Tr. 39:6–12 ("[T]he client-side proxy doesn't send that [the server-side proxy's IP address] back to the

client and then the client sets up a direct communication with the server-side proxy or anything like that"). The claims, however, do not require that the client computer must provide the address of the target computer. Rather, they require only that the client computer generates a request for "an IP address corresponding to a domain name associated with the target computer." Nor does Patent Owner's distinction explain why Kiuchi's communication is meaningfully less direct than that described in the '135 patent.

Patent Owner argues that Kiuchi discloses modifying messages between an origin server and user agent and thus does not disclose direct communication. PO Resp. 31. But, as Petitioner points out (Reply 16; Remand Br. 16), Kiuchi teaches modifying content only for HTML objects, not for image and sound objects. Ex. 1002, 66–67; Ex. 1036, 229:22–230:12 (Patent Owner's declarant agreeing). Thus, Kiuchi's disclosures of at least those types of resources maintain the requirement for direct communication. Indeed, although Kiuchi's requests and responses are wrapped and encrypted over the proxy-to-proxy link, the user agent and origin server communicate using standard HTTP requests and responses. Ex. 1002, 66 (§ 2.3); see Pet. Remand Br. 21–22; Tr. 13:7–18; see also Ex. 1001, 13:33–39 (describing that an encrypted TARP packet is wrapped with an IP header for transmission over an intermediate link). Despite repeated questioning on Patent Owner's distinction from Kiuchi, Patent Owner could not articulate a clear line between direct versus indirect communication. See Tr. 45:12– 47:17, 49:13–50:14, 52:14–54:4. Patent Owner argues that Kiuchi does not use the URL sent by the user agent to get to the desired endpoint (see id. at 42:14–43:1), but that is not consistent with Kiuchi's disclosures as described

above. Patent Owner contends also that "direct" must be whatever the '135 patent's Specification describes (*see id.* at 53:16–22), but that sidesteps the question. Patent Owner has not adequately distinguished what was disclaimed from what the Specification describes. That is particularly important where Kiuchi shares many characteristics with the disclosed TARP system. As discussed above, we find that Kiuchi's system does not use a singular, point-to-point connection as was disclaimed.

Based on the totality of evidence in the record, we have evaluated the parties' evidence and argument, and we find by a preponderance of evidence that Kiuchi discloses direct communication that satisfies the claimed VPN.

b. Kiuchi discloses the additional limitations of claim 1
Other than whether Kiuchi discloses a direct connection, on remand
Patent Owner does not dispute Petitioner's assertions for the first mapping.

See PO Remand Br. 15–21. In the Original Decision, we found that Kiuchi discloses the remaining claim elements. Original Decision 5–10. Without any reason to reach a contrary conclusion, we maintain those findings.

Kiuchi discloses all other elements of claim 1. The claimed client computer reads on Kiuchi's user agent. *See id.* at 9–10. The claimed generating and determining steps of claim 1, relating to a DNS request, read on Kiuchi's request from a user agent for a resource, which is sent by the client-side proxy to the C-HTTP name server and resolved to the IP address of a server-side proxy if directed at a resource on an origin server. *See id.* at 5–8. The claimed target computer reads on Kiuchi's origin server. *See id.* at 8–9.

2. Kiuchi does not anticipate claim 1 under Petitioner's second mapping
In Petitioner's second asserted mapping, Kiuchi's client-side proxy
acts as the claimed "client computer" to create a VPN between the clientside proxy and server-side proxy. *Id.* at 12–13 (citing Pet. 26–27; Reply 8–
11), 24–30. As part of that process, Petitioner asserts, the client-side proxy
"generates a request" to the C-HTTP name server to request the IP address
corresponding to a hostname associated with the server-side proxy. *Id.* at 25
(citing Pet. 26–27; Ex. 1002, 65).

Our construction for "client computer" forecloses that language reading on Kiuchi's client-side proxy. Quite simply, the client-side proxy is not a user's computer. Rather, it is a computer configured to manage the connection between a user's computer and nonlocal networks. Ex. 1002, 65 (§ 2.3) ("A client-side proxy behaves as an HTTP/1.0 compatible proxy, and it should be specified as a proxy server for external (outside the firewall) access in each user agent within the firewall.").

Petitioner argues that the client-side proxy is a "user's computer" and thus a "client computer" under Patent Owner's construction. Pet. Remand Br. 29–30. That argument is not persuasive. Petitioner argues that the client-side proxy has administrative users. *Id.* (citing Ex. 1002, 64–65). We agree with Patent Owner that Kiuchi does not describe that such users perform the claimed VPN method, and thus, administrative users do not show the client-side proxy is a client computer as claimed. *See* PO Remand Br. 22–23.

Petitioner suggests additionally that Kiuchi's disclosures encompass a "single-user institution, where every computer, including the client-side proxy, is that 'user's computer." *See* Pet. Remand Br. 30 (citing Ex. 1002, 64–65, 69). We do not understand the term "user's computer," however, to

mean simply a computer that is owned by or controlled by a particular individual. Rather, it refers to a computer that a user operates as part of the claimed method. Thus, a "single-user institution" does not mean that the client-side proxy is a user's computer as claimed. We agree with Patent Owner that no user is associated with Kiuchi's client-side proxy such that it would be considered a user's computer. *See* PO Remand Br. 22–24.

Accordingly, we conclude that Petitioner has not shown by a preponderance of the evidence that Kiuchi discloses the claimed VPN between Kiuchi's client-side proxy and server-side proxy.

3. Kiuchi discloses the limitations of the additional challenged claims
Petitioner contends that Kiuchi discloses the additional language of
claim 3, "(4) in response to determining that the DNS request in step (2) is
not requesting access to a secure target web site, resolving the IP address for
the domain name and returning the IP address to the client computer."
Pet. 29–30. Patent Owner does not specifically challenge that assertion. See
Paper 12, 3 ("[A]ny arguments for patentability not raised in the response
will be deemed waived."). Kiuchi discloses that when the client-side proxy
receives an error code from the C-HTTP name server, the client-side proxy
"performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy."
Ex. 1002, 65 (§ 2.3). We agree with Petitioner that Kiuchi discloses the
additional limitations of claim 3.

Petitioner contends that Kiuchi discloses the additional language of claim 4, "prior to automatically initiating the VPN between the client computer and the target computer, determining whether the client computer is authorized to establish a VPN with the target computer and, if not so authorized, returning an error from the DNS request." Pet. 30–31. Petitioner

relies on Kiuchi's disclosure that the C-HTTP name server authenticates a user agent's request to determine if the connection is permitted. *Id.* (citing Ex. 1002, 65 ("[T]he name server . . . examines whether the client-side proxy is permitted to access to the server-side proxy."). Patent Owner contends that Kiuchi's disclosures are directed only at the client-side proxy, not at the particular user agent. PO Resp. 35–36. According to Patent Owner, "whether the server-side proxy is permitted to connect says nothing as to the client computer's authorization." *Id.* at 35. Petitioner, on the other hand, contends that Kiuchi's system determines a user agent is authorized by determining whether it "is part of an institution that is part of the closed network." Reply 18. We conclude that Petitioner's position is persuasive and supported by the record. Kiuchi's disclosure of determining whether a client-side proxy may connect to the desired server-side proxy also determines whether the client computer is authorized, as the client computer (the user agent) connects through the authorized client-side proxy.

Petitioner contends that Kiuchi discloses the additional language of claim 7, "wherein step (3) comprises the step of using a gatekeeper computer that allocates VPN resources for communicating between the client computer and the target computer." Pet. 31–32. Petitioner asserts that Kiuchi's server-side proxy acts as a gatekeeper that allocates resources. *Id.* Patent Owner challenges that mapping, asserting that the server-side proxy cannot serve as both the target computer and the gatekeeper computer. PO Resp. 36. As discussed above, that is not the mapping we find persuasive—rather, Kiuchi's origin server is the claimed target computer—and thus, Patent Owner's argument is inapposite. We find that Kiuchi's server-side proxy acts as a gatekeeper by interacting with the C-HTTP name

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server and the client-side proxy as part of the process to establish the VPN. Ex. 1002, 65 (§ 2.3).

Petitioner contends that Kiuchi discloses the additional language of claim 8, "wherein step (2) is performed in a DNS proxy server that passes through the request to a DNS server if it is determined in step (3) that access is not being requested to a secure target web site." Pet. 32–33. Patent Owner does not specifically challenge that assertion. *See* Paper 12, 3. Kiuchi discloses that "the function of the DNS proxy is distributed among the client-side proxy and the C-HTTP name server" as Petitioner asserts. Pet. 32; *see* Ex. 1002, 65 (§ 2.3). We find that Kiuchi teaches the additional limitations of claim 8.

Independent claim 10 recites

a DNS proxy server that receives a request from the client computer to look up an IP address for a domain name, wherein the DNS proxy server returns the IP address for the requested domain if it is determined that the access to a non-secure website has been requested, and wherein the DNS proxy server generates a request to create the VPN between the client computer and the secure target computer if it is determined that access to a secure web site has been requested.

For that aspect, Petitioner asserts that Kiuchi's client-side proxy acts as the claimed DNS proxy server because, when the C-HTTP name server returns an error code, the client-side proxy "performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy." Ex. 1002, 65 (§ 2.3). Patent Owner agrees that Kiuchi's "client-side proxy forwards the request to a DNS server for resolution and the DNS server returns an IP address," but argues that Kiuchi's client-side proxy does not return an IP address to the user agent. PO Resp. 33–34. But behaving like an ordinary proxy includes returning the

response from the DNS server to the user agent. *See* Ex. 1005, 6–7, 16. 29. Thus, Petitioner's assertions regarding Kiuchi satisfy the claim language regarding requesting access to non-secure websites.

Regarding access to secure websites, Patent Owner argues that Kiuchi's client-side proxy does not "generate[] a request to create the VPN." PO Resp. 32–33. According to Patent Owner, Kiuchi's server-side proxy, not the client-side proxy "requests creation of a C-HTTP connection when it sends a connection ID and a symmetric data exchange key to the client-side proxy." *Id.* at 33. We agree with Petitioner, however, that the claim language is satisfied when "a client-side proxy sends a request for connection to the server-side proxy." Ex. 1002, 65 (§ 2.3). That request triggers the process of creating the VPN, which concludes with another action by the client-side proxy. *Id.* at 66 ("When the client-side proxy accepts and checks them, the connection is established.").

Claim 10 further recites a "gatekeeper computer that allocates resources for the VPN between the client computer and the secure web computer in response to the request by the DNS proxy server." Petitioner asserts, and we find, that Kiuchi discloses that language for the reasons discussed above regarding claim 7.

Petitioner asserts that Kiuchi discloses the additional language of claim 12, "wherein the gatekeeper computer determines whether the client computer has sufficient security privileges to create the VPN, and, if the client computer lacks sufficient security privileges, rejecting the request to create the VPN." Pet. 35. As with claim 7, Petitioner relies on Kiuchi's server-side proxy acting as a gatekeeper, and as with claim 4, relies on the server-side proxy determining whether a connection is permitted. For the

reasons discussed above regarding those two claims, we agree with Petitioner that Kiuchi discloses the additional limitations of claim 12.

Accordingly, having considered the full record, we find by a preponderance of the evidence that Kiuchi discloses the limitations of claims 3, 4, 7, 8, 10, and 12.

C. OBVIOUSNESS

Petitioner additionally contends that claim 8, which depends from claim 1, would have been obvious over the combination of Kiuchi and RFC 1034. Pet. 35–37. Petitioner's contentions rely on RFC 1034 for only the limitation added by claim 8. *Id.* Patent Owner notes that Petitioner did not raise the issue of claim 8's obviousness in the remand brief. PO Remand Br. 13 n.5. Patent Owner, however, only contested obviousness of claim 8 based on Kiuchi's asserted deficiencies relevant to claim 1 and the public accessibility of RFC 1034. PO Resp. 37–38, 41–45. We need not address this asserted basis for unpatentability because we conclude that Kiuchi anticipates claim 8.

D. Dr. Guerin's Declaration

Patent Owner argues that we should not afford Dr. Guerin's declaration (Exhibit 1003) any weight because "it was altered by counsel after he signed it." PO Remand Br. 25 (citing PO Resp. 37–39; Paper 82, 11–14). As we noted in an earlier Decision on Request for Rehearing, Exhibit 1003 merely confirms what is otherwise apparent from the record. Paper 74, 6.

We reach the same conclusion here. Dr. Guerin's declaration does not drive our conclusion on any disputed issue. Patent Owner has not

demonstrated that any relevant modifications were made without Dr. Guerin's agreement. Thus, Patent Owner's argument is not persuasive.

E. TERMINATION UNDER § 315(B)

Patent Owner argues that this proceeding should be terminated under 35 U.S.C. § 315(b) in light of Apple's joinder to the proceeding. PO Remand Br. 32–33. As Patent Owner recognizes, however, the Federal Circuit rejected this argument as raised in the first appeal. *VirnetX*, 778 F. App'x at 901. Because the Federal Circuit left open whether prejudice could arise later (*see id.* at 902), Patent Owner "continues to object" because "Apple's counsel continued to assume a leading role" in the proceedings. PO Remand Br. 32–33. We determine that Patent Owner has not identified any material change in the case due to Apple's participation and decline to terminate based on § 315(b).

F. CONSTITUTIONALITY

Patent Owner raises an argument relying on *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019). PO Remand Br. 31–32. That argument, however, is not sufficiently explained and attempts to incorporate by reference to Patent Owner's other papers. *See id.* Our rules prohibit such incorporation, and considering Patent Owner's arguments from the referenced papers would violate the word limit applicable to Patent Owner's remand brief. *See* 37 C.F.R. § 42.6(a)(3) (2019).

In any event, we see little merit to Patent Owner's Appointment's Clause challenge. Even apart from the fact the interlocutory discovery order issued by the panel in this case was not a final agency action, Patent Owner waived any such challenge by not raising it before the agency or the Federal

Circuit during the original appeal of this case. *See Vivint, Inc. v. Alarm.com Inc.*, Fed. Cir. Nos. 19-2438, -2439, ECF No. 29 at 2 (holding that Vivint's failure to raise an Appointments Clause challenge in its original appeal forfeited its ability to do so after remand because it did not "timely raise[]' its challenge 'before the first body capable of providing it with the relief sought'") (quoting *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320, 1339 (Fed. Cir. 2019)).

III. CONCLUSION

For the reasons discussed above, we conclude that Petitioner has proven the challenged claims are unpatentable.⁹

In	summary
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Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3, 4, 7, 8, 10, 12	102	Kiuchi	1, 3, 4, 7, 8, 10, 12	
8	10310	Kiuchi, RFC 1034		
Overall			1, 3, 4, 7, 8,	
Outcome			10, 12	

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⁹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹⁰ As explained above, we do not reach this ground of unpatentability because it would not change our Order or offer any additional analysis of disputed issues.

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that that claims 1, 3, 4, 7, 8, 10, and 12 of the '135 patent are unpatentable; and

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

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Paper 88

Entered: October 23, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD. and APPLE INC., Petitioner,

v.
VIRNETX INC.,
Patent Owner.
Case IPR2015-01046
Patent 6,502,135 B1

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., and BLACK SWAMP IP, LLC,

Petitioner,

v.

VIRNETX INC., Patent Owner. Case IPR2015-01047 Patent 7,490,151 B2

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*, KARL D. EASTHOM and STEPHEN C. SIU, *Administrative Patent Judges*.

EASTHOM, Administrative Patent Judge.

DECISION

Granting In Part Patent Owner's Motion for Additional Discovery 37 C.F.R. §§ 42.20 and 42.51(b)(2)

I. INTRODUCTION

Pursuant to the Remand Schedule and Discovery Motion Order (Paper 80, "Order"), VirnetX Inc. ("VirnetX" or "Patent Owner") filed a Motion for Additional Discovery (Paper 81, "Motion" or "Mot."). In IPR2015-01046, the Mangrove Partners Master Fund, Ltd. ("Mangrove") and Apple Inc. ("Apple") (collectively "Petitioner"), filed a "Partial Opposition to Patent Owner's Motion for Additional Discovery." Paper 82 (unredacted "Opposition" or "Opp."). Patent Owner filed a Reply to Petitioner's Opposition to Patent Owner's Discovery Motion. Paper 85 ("Disc. Reply"). As noted, regarding discovery, Mangrove, Apple, and Black Swamp, LLC (also collectively "Petitioner") filed materially similar papers and exhibits in IPR2015-01047. *Supra* notes 1, 2; IPR2015-0147, Papers 90–92 & 94.

In IPR2015-01046, in a Petition filed on April 14, 2015, Petitioner Mangrove requested *inter partes* review of claims 1, 3, 4, 7, 8, 10, and 12 of U.S. Patent No. 6,502,135 B1 ("the '135 patent"). After instituting review on October 7, 2015 (Paper 11 ("Institution Decision")), the Board joined Apple on January 25, 2016 (*supra* note 2) and thereafter conducted a trial and issued a Final Written Decision, holding claims 1, 2, 6–8, and 12–14 of the '135 patent unpatentable. *See* IPR2015-01046, Paper 71.

¹ Unless otherwise noted, citations refer to IPR2015-01046. The parties raised identical discovery issues and filed materially similar papers in both cases. This Order applies to both cases.

² Apple filed a petition on October 26, 2015 in IPR2016-00062, and the Board joined it as a party in IPR2015-01046 on January 25, 2016. Apple Inc. and Black Swamp, LLC, respectively filed a petition in IPR2016-00063 on October 26, 2015 and in IPR2016-00167 on November 6, 2015, and the Board joined them as parties in IPR2015-01047, respectively on January 25, 2016 and February 4, 2016.

Similarly, in IPR2015-01047, in a Petition filed on April 14, 2015, Petitioner Mangrove requested *inter partes* review of claims 1, 2, 6–8, and 12–14 of U.S. Patent No. 7,490,151 B2 ("the '151 patent"). After instituting review on October 7, 2015 ("Institution Decision"), the Board joined Apple on January 25, 2016 and Black Swamp, LLC on February 4, 2016 (*supra* note 2), and thereafter conducted a trial and issued a Final Written Decision, holding claims 1, 2, 6–8, and 12–14 of the '151 patent unpatentable. *See* IPR2015-01047, Paper 80.

Patent Owner appealed the Final Written Decisions. Pursuant to the appeals, the United States Court of Appeals for the Federal Circuit issued a decision vacating the Final Written Decisions and remanding to consider an issue on the merits of unpatentability and to allow Patent Owner to file a motion for additional discovery to support its real party in interest contentions. *See VirnetX Inc. v. The Mangrove Partners Master Fund, Ltd., Apple Inc.*, No 2017-1368, *VirnetX Inc. v. The Mangrove Partners Master Fund, Ltd., Apple Inc., Black Swamp*, No. 2017-1383, 2019 WL 2912776 (Fed. Cir. July 8, 2019) (the "*Remand Decision*").

The Federal Circuit's mandate after the *Remand Decision* issued on August 14, 2019. *See* Paper 78, 1. Accordingly, after reviewing the parties' proposed schedules for the remand trial (*see* Papers 78–80), the Order set a deadline of November 8, 2019 for the close of discovery, so that the decision on remand may be completed by February 14, 2020 pursuant to SOP 9.³ *See*

³ "The Board has established a goal to issue decisions on remanded cases within six months of the Board's receipt of the Federal Circuit's mandate. The mandate makes the judgment of the Federal Circuit final and releases jurisdiction of the remanded case to the Board." PTAB Standard Operating Procedure 9, Procedure for Decisions Remanded from the Federal Circuit for

Order, 3–4. As noted in the Order, Patent Owner bears the burden on the Motion.

II. THE FEDERAL CIRCUIT'S REMAND DECISION

The Order specifies that the parties "shall follow the court's guidance as set forth in the" *Remand Decision*. Paper 80, 2 & n.2. The *Remand Decision* explains that Patent Owner's theory involves its contention that Apple, who joined the Petitions (*supra* note 2), "was in some way involved in the [P]etitions" through RPX:

While the proceedings were pending, VirnetX learned that Mangrove gained equity in RPX, an entity that purports to help "companies mitigate and manage patent risk and expense by serving as an intermediary through which they can participate more efficiently in the patent market." J.A. 7070. institution, Mangrove disclosed that it owned about five percent of RPX, which made it RPX's fifth largest shareholder. J.A. 7213, 7220. In a March 2016 letter, Mangrove stated that it recently met with management from RPX. J.A. 7221. VirnetX requested authorization to move for additional discovery to explore the relationship between Mangrove and RPX, which had previously filed time-barred petitions because Apple was found to be a real party in interest. During a conference call, VirnetX conveyed this evidence to the Board and asserted that Mangrove's attorney had only previously represented RPX. J.A. 6246, 6251–52. VirnetX believed that, through RPX, Apple was in some way involved in the petitions. The Board did not let VirnetX move for additional discovery because the alleged facts "d[id] not show more than a mere possibility that something useful [would] be discovered and [was] therefore insufficient to show beyond mere speculation that discovery would be in the interests of justice." J.A. 448; J.A. 2243. The

Further Proceedings (Nov. 9, 2017) ("SOP 9"), *available at* https://usptogov.sharepoint.com/sites/bf319f98/Shared%20Documents/Form s/AllItems.aspx?FolderCTID=0x012000F14F79D244FFB74496C315D3702 0EB04.

Board then rejected VirnetX's contention that RPX was a real party in interest for lack of evidence. J.A. 45; J.A. 84.

Remand Decision at *3 (emphasis added).

Of course, as the *Remand Decision* recognizes, Apple sought joinder after the filing of the Petitions and prior to the Institution Decisions ("preinstitution" (*see supra* note 2)), so Apple necessarily became involved in the proceedings at some point as a joined party, albeit primarily after the Institution Decisions. *See* note 2; *Remand Decision* at *3 ("At this stage in the proceedings, we see no prejudice in Apple's continued involvement, but we leave open the question of whether prejudice could arise later.").

Patent Owner contends "[t]he evidence suggests . . . that Mangrove did not initiate the IPRs on its own volition, but rather to support RPX's efforts." Paper 81, 9. Referring to the *RPX Corp*. Board decisions, Patent Owner also contends "RPX was improperly acting as Apple's proxy." *See id.* at 8. Patent Owner also seeks useful information as to its "position that RPX is an unnamed RPI and/or privy." *Id.* at 6.

During the teleconference discussing the contours and authorization of the contemplated Motion, Vice Chief Judge Tierney specifically "cautioned VirnetX" at least twice that "an overly broad discovery request is more likely to get denied than a narrowly tailored one." Ex. 1047, 32:12–14 (emphasis added), 17–19 ("But I do want to make sure—again, there is a

⁴ RPX Corp. v. VirnetX Inc., IPR2014-00171, Paper 57 at 2–7 (July 14, 2014) ("RPX Corp.") (denying institution because un-named RPI Apple was served with a complaint more than 1 year before its proxy, RPX, filed its petition). RPX Corp. actually involved denial of seven petitions in Cases IPR2014-00171–77 challenging four VirnetX patents, including both patents at issue here. See RPX Corp., Paper 57 at 1–2 (listing Cases IPR2014-00171–77 and denying institution for all seven based on the same rationale and facts).

concern that if it's overly broad, it could get denied."). Vice Chief Judge Tierney explained "[t]his is something we've always talked about. It's not particular to this case." *Id.* at 37:10–12.

The discovery here will be useful only if it relates to communications or activities before the filing of the Petitions and the Institution Decisions, because as noted above, the court stated "VirnetX believed that, through RPX, Apple was in some way *involved in the [P]etitions.*" *See Remand Decision* at * 3 (emphasis added). Moreover, as Petitioner argues, "[t]he Federal Circuit has held that the 'focus of § 315(b) is on institution,' *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1314–15 (Fed. Cir. 2019), and that 'the time-bar determination may be decided fully and finally at the institution stage,' *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1373 (Fed. Cir. 2018) (en banc). Opp. 5.

Under 35 U.S.C. § 316 (a) (5), "[t]he Director shall prescribe regulations . . . setting forth standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—(A) the deposition of witnesses submitting affidavits or declarations; and (B) what is otherwise necessary in the interest of justice." (Emphasis added). In other words, Congress narrowed discovery here, relative to district court discovery, to "relevant evidence . . . necessary in the interest of justice." See id.

However, Patent Owner did not tailor its discovery to seek relevant pre-institution evidence—i.e., evidence of communications, documents, and things occurring at a time prior to the date of Institution Decisions (i.e., October 7, 2015) to show any alleged involvement in the Petitions, despite

the Board's cautionary instruction to narrowly tailor its request during the teleconference as discussed above.

For its part, as discussed further below, Mangrove voluntarily complied with Patent Owner's discovery requests to the extent they involve discovery of communications, documents, and things arising before the Institution Decisions. Under 37 C.F.R. § 42.51(b)(2)(i),

[t]he parties may agree to additional discovery between themselves. Where the parties fail to agree, a party may move for additional discovery. The moving party must show that such additional discovery is in the interests of justice, except in post-grant reviews where additional discovery is limited to evidence directly related to factual assertions advanced by either party in the proceeding (see § 42.224). The Board may specify conditions for such additional discovery.

Under the rule, Mangrove voluntarily agreed to the relevant additional discovery requested in the Motion, including by supplying written answers to interrogatories (instead of the requested depositions). With the caveat discussed below regarding the allowance of additional interrogatories in lieu of depositions, Mangrove's compliance satisfies the interests of justice standard specified in 35 U.S.C. § 316(a)(5), by producing relevant evidence arising pre-institution, for the reasons noted above and as discussed further below. *See Remand Decision* at *3 (focusing on the Petitions); *Power Integrations* (focusing on pre-institution); *Wi-Fi One* (similar); 35 U.S.C. § 316 (a) (5) ("interest of justice" standard). Any deposition or post-institution discovery does not satisfy the interests of justice standard, because considering the additional interrogatories allowed as discussed below, Mangrove's written answers suffice as to the depositions, and Patent Owner does not explain persuasively how obtaining evidence of communications, documents, and things occurring over the past three or four

years would somehow relate to showing any RPI status (or a privity relationship between Mangrove and RPX), and how Apple was involved in the Petitions filed over four years ago. Also, Patent Owner does not explain persuasively in its Motion why it should be granted redundant discovery from third party RPX except to state that the redundant discovery would provide an evidentiary crosscheck on the requested Mangrove discovery. Disc. Reply 5.

Patent Owner's broad requests are unduly burdensome as to RPX as unreasonably duplicative as the requested discovery is already sought, and can be obtained from, Mangrove. Further, Patent Owner's requests are unduly burdensome as they seek documents that are not reasonably limited in time to the date of institution and Patent Owner provides little, if any justifiable reason, for seeking any and all documents created years after the critical institution date. Additionally, Petitioner Mangrove provided voluntary production. Based on the record presented, we hold that Patent Owner's broad requests do not satisfy the interest of justice standard proscribed by 35 U.S.C. § 316(a)(5).

Nevertheless, even though the Board need only provide a binary grant or denial on the Motion, given the short time frame for completing this proceeding by February 14, 2020 pursuant to SOP 9, given the focus on preinstitution activities as specified by *Power Integrations*, 926 F.3d at 1314–15, and to ensure sufficient discovery for Patent Owner in the interests of justice, we exercise our discretion on this particular record and tailor the discovery request by 1) imposing a pre-institution cut-off date for discovery purposes as noted above, and 2) allowing 10 interrogatories of Mangrove in lieu of the sought-after depositions of Mangrove, as specified further below.

In exercising discretion, we note Patent Owner's discovery request agrees implicitly, at least in certain portions and to a certain extent, with this pre-institution cut-off date. For example, Patent Owner seeks "[c]ommunications, documents, or things, relating to Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." Motion, App'x A, 4 (RFP No. 4) (emphasis added). Any such decision necessarily would have occurred pre-institution. Similarly, Patent Owner agrees that the evidence should focus on "a relationship between the two entities at the time of institution." Mot. 11 & n.4.

Similarly, with respect to the depositions, as Petitioner notes, Patent Owner previously agreed to the appropriateness of interrogatories in the interest of justice in the *RPX Corp*. Board cases relied upon by Patent Owner to support its Motion (*see* Mot. 3, 8; *supra* note 4):

VirnetX previously recognized that interrogatory responses in lieu of a deposition are appropriate. VirnetX's Request for Deposition of Apple Inc. in IPR2014-00171 explained that "[t]o the extent Apple prefers to respond to this topic in writing instead of providing a witness, effectively treating the topic as a deposition by written question or an interrogatory, Apple may do so."

Opp. 11 (citing *RPX Corp.*, Paper 57 at 1 (Ex. 2026, 1)).

A more detailed analysis of Patent Owner's discovery requests according to guidance in *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (PTAB Mar. 5, 2013) (precedential)) follows.

III. DISCOVERY ANALYSIS USING GARMIN FACTORS

As the *Remand Decision* recognizes, "[t]he Board has listed five factors important in determining whether discovery is in the interest of justice, including that there be more than a 'mere possibility of finding something useful." *Remand Decision* at *3 (quoting *Garmin*, Paper 26 at

6). After weighing the *Garmin* factors and considering the briefing by the parties, and for the reasons listed in the Opposition, which we adopt as persuasive as summarized below, we determine that under the interest of justice, Petitioner Mangrove voluntarily complied with the Motion for the most part, other than as explained above and below with respect to allowing, out of an abundance of caution, 10 interrogatories in lieu of the request for depositions of Mangrove.

For the reasons explained above and further below, we determine that allowing time-unlimited discovery (i.e., not limited to pre-institution discovery), the depositions requested, and any discovery of RPX, does not meet the statutory interest of justice standard.

A. PATENT OWNER'S DISCOVERY OF MANGROVE

Patent Owner seeks the following discovery of Mangrove as requests for production (RFPs):

1. Requests for production from Mangrove directed to communications between Mangrove and RPX (as described in Appendix A, RFP Nos. 1–2), Mangrove's acquisition of RPX stock (as described in Appendix A, RFP No. 3), and Mangrove's decision to initiate the present IPR proceeding (as described in Appendix A, RFP No. 4).

Mot. 5–6 (footnote omitted).⁵

⁵ In the omitted footnote, VirnetX agrees that if Mangrove designates Nathaniel August as its corporate representative, it can proceed with a single four-hour deposition focused on Mr. August's testimony in his personal capacity and as the designated corporate representative for Mangrove.

In Opposition, Mangrove provides the following with respect to the RFPs:

1. <u>VirnetX's Mangrove RFPs Are Largely Moot, and Should be</u> Denied Otherwise

In response to VirnetX's Mangrove RFPs (Mot. 5, Appx. A), Petitioner Mangrove undertook a reasonable search for responsive communications, Documents, or things that existed prior to October 7, 2015, and, subject to certain objections, has either produced responsive documents or confirmed that it found none. *See* Ex. 1048. VirnetX's requests are thus largely moot, and it cannot show good cause to justify the balance of its discovery requests.

Mangrove RFP No. 1: Petitioner Mangrove "located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents" from before October 7, 2015. Ex. 1048, 1–2. This is consistent with Mangrove's prior productions, which show no involvement by RPX in preparing the petitions. Petitioner Mangrove understood this RFP to mean "RPX and (VirnetX or VirnetX patents)," not "(RPX and VirnetX) or VirnetX patents." *Id*.

Mangrove RFP No. 2: Petitioner Mangrove "located no responsive communications between Mangrove Partners and RPX, or any documents or things concerning such communications, concerning patent office proceedings" from before October 7, 2015. Ex. 1048, 3–4. VirnetX has not established good cause for the broader production of "[c]ommunications, documents, or things concerning RPX and patent office proceedings." Purely internal-to-Mangrove documents describing RPX's business model or mentioning post-grant proceedings are not probative of any relationship between Mangrove and RPX. See Garmin at 6–7. Mangrove's response to Mangrove RFP No. 3 further moots this request.

Mangrove RFP No. 3: "[W]ith respect to RPX stock that was acquired by Mangrove Partners prior to October 7, 2015, Petitioner Mangrove has . . . produced or identified communications, documents, or things sufficient to show

Mangrove Partners' reasons for acquiring that RPX stock and any underlying agreements surrounding Mangrove Partners' acquisition of that RPX stock." Ex. 1048, 4–5; *see* Ex. 1049; Ex. 1051; Ex. 1052; Ex. 1055; Ex. 1056; Ex. 2058. Prior to October

7, 2015, Mangrove Partners was a passive investor in publicly-traded RPX and there were no agreements between Mangrove Partners and RPX "surrounding Mangrove Partners' acquisition of that RPX stock." Ex. 1049, 5. Mangrove's production of information "sufficient to show" this topic is "sensible and responsibly tailored" and not so "overly burdensome to answer," and any request for *all* responsive "[c]ommunications, documents, or things" is improper as it needlessly encompasses duplicative documents not relevant to show any relationship between Mangrove and RPX. *See Garmin* at 6–7 (Factors 1 & 5).

Mangrove RFP No. 4: Petitioner Mangrove "has located no responsive communications, documents, or things, relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." Ex. 1048, 5–6. VirnetX has not established good cause for discovery of *all* "[c]ommunications, documents, or things, relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." The breadth of this RFP is unduly burdensome due to VirnetX's threat of separate litigation against Mangrove regarding the filing of these IPRs (see § III.C.2; Paper 9, 12–15) and conflicts with VirnetX's representation that its requests would "narrowly focus on the relationship between Mangrove and RPX." Mot. 6.

With respect to depositions, VirnetX seeks the following:

2. A deposition, limited to four hours, of Nathaniel August (Mangrove's Founder and President) on topics consistent with those contained in VirnetX's requests for production from Mangrove (as described in Appendix B).

3. A deposition, limited to four hours, of a corporate representative of Mangrove on topics consistent with those contained in VirnetX's requests for production from Mangrove (as described in Appendix C).

Mot. 5.

In response, Mangrove responds initially by stating "Mangrove has thus responded to VirnetX's present deposition requests as if they were interrogatories." Opp. 11. Mangrove's responses largely track its responses to the RFPs above, because Patent Owner seeks to depose Mr. August or another corporate representative on those topics, as indicated above. In other words, Mangrove provides written responses related to pre-institution discovery.

As an example, for Deposition Topics 1 and 2, Mangrove replies "Petitioner Mangrove has identified no communications with RPX before October 7, 2015, concerning "VirnetX or VirnetX patents" (Ex. 1049, 1–2) or "patent office proceedings" (*id.*, 3–4)."

For Deposition Topic 3, Mangrove provides supporting evidence and replies that Mangrove "

2. For 1040, 5 (mosting Eq. 1051, 5), One 12 (mosting Eq. 1051, 5), For 1051, 5, Fo

." Ex. 1049, 5 (quoting Ex. 1051, 5); Opp. 12 (quoting Ex. 1051, 5; Ex. 1049, 5). Mangrove adds "[b]efore October 7, 2015, Mangrove Partners was a passive investor in RPX, had acquired its RPX stock via public trades, and had entered no agreements with RPX regarding its acquisition of RPX stock." Opp. 12 (quoting Ex. 1049, 5).

For Deposition Topic 4, Mangrove provides supporting evidence and replies as follows:

Petitioner Mangrove "has identified no information relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." Ex. 1049, 6–7. Mangrove's reasons for pursuing and initiating IPR2015-01046 and IPR2015-01047 were unrelated to its RPX investment strategy—Mangrove pursued and initiated these IPRs "to increase the value of the Mangrove Partners Hedge Fund's short position in VHC stock." *Id.* (quoting Paper 9, 13); Ex. 2004, 2; Ex. 2006, 2; Ex. 1053; Ex. 1054.

Opp. 12.

Nevertheless, out of an abundance of caution, to ensure, under the interests of justice, that Mangrove's responses comply with topics Patent Owner otherwise seeks to discover in a deposition, we grant 10 interrogatories limited to a pre-institution time frame with topics no broader than the requested deposition topics in Appendices C and D.

Garmin Factor 1

Under Garmin factor 1, "[t]he mere possibility of finding something useful, and mere allegation that something useful will be found, are insufficient to demonstrate that the requested discovery is necessary in the interest of justice." *Garmin*, Paper 26 at 6. As Petitioner argues, Patent Owner's requests for discovery for anything occurring after the date of the Institution Decisions, namely October 7, 2015, amounts to less than a mere possibility of finding something useful. *See* Opp. 5 ("The Federal Circuit has held that the 'focus of § 315(b) is on institution,' *Power Integrations, Inc. v. Semiconductor Components Indus.*, LLC, 926 F.3d 1306, 1314–15 (Fed. Cir. 2019), and that 'the time-bar determination may be decided fully

and finally at the institution stage,' *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1373 (Fed. Cir. 2018) (en banc).

As indicated in the Opposition as quoted above, Petitioner voluntarily complied with Patent Owner's requests for discovery, to the extent Patent Owner sought discovery for "responsive communications, documents, or things" existing prior to the date of the Institution Decisions, October 7, 2017. *See* Mot. 5. As Petitioner argues, "[t]he only information or acts relevant to compliance with § 315(b) would be dated before October 7, 2015, the date these proceedings were instituted." *Id*.

Under RFP1, Mangrove "located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents' from before October 7, 2015." Opp. 9 (quoting Ex. 1048, 1–2). Under RFP2, Petitioner "located no responsive communications between Mangrove Partners and RPX, or any documents or things concerning such communications, concerning patent office proceedings' from before October 7, 2015." Opp. 9 (quoting Ex. 1048, 3–4). Under RFP3, "[w]ith respect to RPX stock that was acquired by Mangrove Partners prior to October 7, 2015, Petitioner Mangrove has . . . produced or identified communications, documents, or things sufficient to show Mangrove Partners' reasons for acquiring that RPX stock and any underlying agreements surrounding Mangrove Partners' acquisition of that RPX stock." Ex. 1048, 4–5; see Opp. 10 (quoting Ex. 1048, 4–5; citing Ex. 1049; Ex. 1051; Ex. 1052; Ex. 1055; Ex. 1056; Ex. 2058). Under RFP 4, "Mangrove 'has located no responsive communications, documents, or things, relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." Ex. 1048, 5–6; see Opp. 10 (quoting Ex. 1048, 5–6).

Relative to the sought-after depositions of Mr. August or another Mangrove representative, Mangrove persuasively responds that it largely produced the sought-after information, albeit in interrogatory answer form, as noted above. Any other information from a deposition would be based on speculation, as Petitioner argues:

Because VirnetX possesses "the requested information without need of [additional] discovery" ([Garmin] Factor 3), it cannot demonstrate good cause for costly depositions in the speculative belief that they might demonstrate some inconsistency with Mangrove's written responses or document productions. See Garmin at 6–7; Nuseed Americas Inc. v. BASF Plant Sci. GMBH, IPR2017-02176, Paper 20 at 3–5 (PTAB May 4, 2018) (denying a request for a deposition in light of voluntary written discovery).

Opp. 13.

Patent Owner contends Mangrove's voluntary production does not satisfy its discovery requests based on alleged "self-serving representations" by Mangrove. *See* Mot. 5. Accordingly, to ensure, under the interests of justice, that Mangrove's responses comply with topics Patent Owner otherwise seeks to discover in the requested deposition, we grant 10 interrogatories limited to the pre-institution time frame with topics no broader than the requested deposition topics in Appendices C and D of the Motion. Under *Power Integration*, which focuses on pre-institution as the relevant time frame for determining the sought-after privity or RPI relationships by Patent Owner, any pre-institution discovery amounts to "the mere possibility of finding something useful," a "mere allegation that something useful will be found," and an "insufficient . . . demonstrate[ion] that the requested discovery is necessary in the interest of justice." *Garmin*, Paper 26, at 6. Patent Owner does not explain in its Motion persuasively

how post-institution discovery would show, for example, that RPX was involved in the Petition prior to institution. Patent Owner contends emails may contain earlier dated threads and attachments and may be informative about Mangrove's motivation prior to the date of the Institution Decisions. Disc. Reply 2. However, Patent Owner does not explain why the earlier dated threads and attachments would not have been covered by a discovery request reasonably limited in time to the date of institution.

The record shows, and Patent Owner argues, that Mangrove owned stock in RPX (*see* Remand Decision at *3), so any control relevant here would be by Mangrove over RPX, not by RPX over Mangrove, and Mangrove already filed a Petition at its own behest (for business reasons as discussed further below), prior to Apple's joinder and filing of Apple's joined petition (*see supra* note 2). Nothing Patent Owner points to suggests beyond mere speculation that after the Institution Decision, RPX would have communicated with Mangrove about Apple in relation to pre-institution activities with respect to the proceedings here.

Nevertheless, Patent Owner contends "[t]he requested discovery is important because RPX has previously been found to be time-barred under section 315(b) with respect to the patent at issue in this proceeding." Motion 6. Patent Owner cites *RPX Corp.*, Paper 5[7] at 5–7 to support the contention. *See* Mot. 3; *supra* note 4. In *RPX Corp.*, as indicated above (*see supra* note 4), the Board held RPX served as a proxy to file seven petitions challenging 4 patents (including the '135 patent) on behalf of un-listed RPI Apple, who was served with a complaint more than one year before RPX filed the petitions, time-barring the petitions and denying institution of *inter partes* review. *See id.* at 2–3; 35 U.S.C. § 315(b) ("An *inter partes* review

may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent").

According to Patent Owner, other "evidence strongly suggests that Mangrove and RPX have an RPI or privity relationship with respect to these IPRs." Mot. 10. As part of its theory, Patent Owner also asserts "RPX can and does file IPRs to serve its clients' financial interests, and that a key reason clients pay RPX is to benefit from this practice in the event they are sued." Mot. 7 (quoting *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1351–52 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 1366 (2019) (citations omitted) ("*AIT*")).

Mangrove provides evidence showing it had a valid business reason for filing the Petition, which Patent Owner described in its Preliminary Response. Namely, "[a]s VirnetX itself recognized in 2015, Mangrove initiated these proceedings as part of a short-selling investment strategy: it 'pursued short positions in the publicly traded stock of . . . VirnetX Holding Corporation,' and filed the present IPRs 'to encourage such a drop in VHC's stock price." Opp. 1 (quoting Paper 9 (Preliminary Response), 5); *see also* Opp. 3 (citing Ex. 1054; Ex. 2022); Ex. 1053, 1 ("[T]he PTAB said that it did not matter that Mangrove challenged VirnetX's patents as part of a short-selling strategy, since the AIA allows anyone to file petitions."); Ex. 1052, 1–2 ("VirnetX said that before filing the petitions, Mangrove held a short position of 270,000 shares of VirnetX stock. A month after the petitions were filed, when any movement in the stock price caused by the

challenge would have subsided, Mangrove no longer held a short position, VirnetX said.").

In other words, VirnetX itself recognized that Mangrove filed the Petition as part of a short-selling strategy, as opposed to any connection with or direction by RPX. Based on this evidence and other evidence of record, Mangrove maintains

VirnetX's conspiracy theory has no basis in reality. Mangrove's acquisition of some publicly-traded shares of RPX did not make RPX a real party in interest or privy to Mangrove. The evidence already in this record coupled with Mangrove's voluntary productions and responses prove there was no connection between Mangrove and RPX that could support a RPI/privity theory. VirnetX cannot show good cause for its remaining requests and its fishing expedition should be denied.

Opp. 1. Petitioner Mangrove also provides evidence supporting its theory that Mangrove sought to acquire RPX stock starting in April 2015. *See* Opp. 4 (citing Ex. 1051, 2; Ex. 1055; Ex. 1056). Petitioner does not materially dispute Patent Owner's contention about Mangrove's activist campaign in RPX. *See* Opp. 4–5 (citing Ex. 1052, 8; Ex. 2058). According to a letter dated March 16, 2016, at some point prior ("recently"), Mangrove attempted to influence some of RPX's decisions, but "RPX told Mangrove to 'sell the stock if [Mangrove] didn't like management's decisions." Ex. 2058, 1, 2; *see* Opp. 5. Mangrove provides evidence that "[b]y May 16, 2016, Mangrove owned around 6% of RPX's stock." Opp. 4 (quoting Ex. 1052, 2).

Patent Owner fails to explain how Mangrove's stock interest in RPX, as the fifth largest, and as an active, investor in Mangrove, indicates that any post-institution evidence will be relevant or useful under the interests of

justice standard. *See* Mot. 8–9 ("Throughout this proceeding, Mangrove gradually gained equity in RPX, at one point becoming its fifth largest shareholder."). Patent Owner's argument that Mangrove hired an attorney who filed petitions previously on behalf of RPX, and Patent Owner's other evidence and arguments, add little to showing how post-institution discovery will provide anything useful beyond mere speculation. *See id.* at 9–10.

Patent Owner contends Mangrove only asserted it made "reasonable efforts to locate communications" and these assertions are "unclear and unverified." Disc. Reply 4. In addition, Patent Owner contends "[i]t also appears that Mangrove did not investigate non-written communications, or written communications that no longer exist." *Id.* We interpret Mangrove's response as seeking to include all forms of communications prior to October 7, 2015 using reasonable efforts. *See, e.g.*, Opp. 2 ("Petitioner Mangrove has undertaken a reasonable search for communications, documents, or things that existed prior to October 7, 2015, and located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents, including communications between Mangrove Partners and RPX, or any documents or things relating to such communications, concerning VirnetX or VirnetX patents.").

In summary, Petitioner Mangrove complied with Patent Owner's discovery request with respect to pre-institution discovery for the RFPs and largely complied as written responses in lieu of a deposition, and any deposition or post-institution discovery would involve mere speculation. Furthermore, Patent Owner agrees that the evidence should focus on "a relationship between the two entities *at the time of institution*." Mot. 11 & n.4. Accordingly, *Garmin* factor 1 weighs heavily against Patent Owner.

The broad discovery request, in light of the answers and evidence provided by Mangrove, and unlimited in scope as to the relevant pre-institution time, fails under the interest of justice standard. In addition, we grant 10 interrogatories of reasonable scope to ensure that Patent Owner has an opportunity to fully explore the identified topics.

Garmin Factor 2

Under Garmin factor 2, "[a]sking for the other party's litigation positions and the underlying basis for those positions is not necessary in the interest of justice." *Garmin*, Paper 26, at 6. Petitioner provides evidence that Patent Owner's Preliminary Response raised the specter of suing Mangrove related to Mangrove's filing of the Petition. *See* Opp. 13–14 (citing Paper 9, 11–12; Ex. 2021). Any discovery for information arising after the date of institution, including RFPs and a deposition, would be too broad for the reasons explained above. In addition, it may serve to involve possible litigation positions. As indicated, Mangrove voluntarily provided pre-institution discovery, including written answers in lieu of a deposition (and we grant 10 interrogatories as noted above and below).

Patent Owner argues

Petitioner[] appear[s] to acknowledge that Mangrove has 'internal-to-Mangrove documents' relating to RPX that it nevertheless has refused to produce (*id.* at 9), as well as communications, documents, or things relating to its acquisition of RPX stock that it refuses to produce (*id.* at 10) because of the purported fear of litigation (*id.* at 10–11). Mangrove's concerns are unsupported, and should not block discovery of relevant documents and related information that are now exposed to exist.

Disc. Reply 5 (citing Opposition). We interpret Mangrove's response as limiting production to communications between Mangrove and RPX. *See*

Opp. 9. This appears reasonable under the interests of justice, because Patent Owner seeks discovery about that relationship. In addition, Petitioner contends its response to RFP No. 3 partially moots the request in RFP No. 2. In the response to RFP No. 3, Mangrove explains it "was a passive investor in publicly-traded RPX and there were no agreements between Mangrove Partners and RPX 'surrounding Mangrove Partners' acquisition of that RPX stock." Opp. 10 (quoting Ex. 1049, 5). To the extent Patent Owner seeks more discovery, as noted above and below, we grant 10 interrogatories of Mangrove herein.

Patent Owner argues any alleged litigation threat by Patent Owner "is baseless" because "VirnetX has never suggested it would sue Mangrove." Disc. Reply 4–5 (citing Opp. At 13–14). Nevertheless, in the Preliminary Response, Patent Owner argues "[t]he only conclusion that can be drawn from Petitioner's attempt to hide these RPIs is that it was doing so in an attempt *to shield them from any liability arising out of the filing of the Petition.*" Paper 9, 12 (emphasis added)(footnote omitted). In the omitted footnote, Patent Owner describes the following:

Consider, for example, the complaint filed against Ferrum Ferro Capital, LLC, an investment fund that filed the petition in IPR2015-00858, apparently employing a similar strategy to that of Petitioner and its RPIs. In the Complaint, Allergan (the patent owner) alleges that Ferrum Ferro Capital, LLC's conduct "constitutes attempted civil extortion and malicious prosecution under California law in addition to violating California's Unfair Competition Law." *See* Ex. 2021.

Id. at 12 & n.2. Hence, by referring to "any liability arising out of the filing of the Petition," and describing an "example" of a complaint against a company "employing a similar strategy," Patent Owner raised the specter of possible litigation involving Mangrove. *See id*.

Accordingly, *Garmin* factor 2 weighs against Patent Owner. The broad discovery request, unlimited in scope as to the relevant pre-institution time and thereby piercing into possible litigation strategy that might occur post-institution, fails under the interest of justice standard.

Garmin Factor 3

Under *Garmin* factor 3, "[i]nformation a party can reasonably figure out or assemble without a discovery request would not be in the interest of justice to have produced by the other party." Garmin, Paper 26, at 6.

Patent Owner does not appear to have the ability to generate all post-institution discovery via other means. Nevertheless, Patent Owner did have access to some information arising post-institution. *See* Remand Decision at *3 ("While the proceedings were pending, VirnetX learned that Mangrove gained equity in RPX, an entity that purports to help 'companies mitigate and manage patent risk and expense by serving as an intermediary through which they can participate more efficiently in the patent market.""); Mot. 11 (citing Ex. 2058, 1 (Mr. August's letter of March 17, 2016)). This post-institution evidence provided Patent Owner a mechanism to infer possible pre-institution activities (according to Patent Owner's argument, Mot. 11 & n.11), but as discussed above, Patent Owner provides no reason beyond speculation as to why more post-institution evidence would be in the interest of justice as relevant evidence tending to show RPX's connection as a privy or RPI of Mangrove at the time of institution, or show Apple's involvement in the Petitions.

Mangrove complied with pre-institution discovery in connection with the RFPs, as explained above. With respect to the requested depositions, as discussed above, Petitioner shows Patent Owner possesses "the requested information without need of [additional] discovery" in the form of written responses. *See* Opp. 13. Nevertheless, we grant additional discovery via interrogatories as noted above to ensure the interests of justice. Accordingly, *Garmin* factor 3 is essentially moot regarding pre-institution evidence, because Petitioner complied with the discovery request in terms of useful pre-institution discovery and in the form of written responses in lieu of a deposition, and we grant 10 interrogatories. Setting aside the lack of relevance of any post-institution evidence, *Garmin* factor 3 weighs slightly in favor of Patent Owner with respect to that evidence.

Garmin Factor 4

Under Garmin factor 4, "[t]he questions should be easily understandable." *Garmin*, Paper 26, at 6. The questions appear to be understandable, but Garmin factor 4 is moot with regard to relevant preinstitution evidence, because Mangrove complied therewith. Setting aside the lack of relevance with respect to post-institution RFP evidence, *Garmin* factor 4 weighs slightly for Patent Owner with respect to such post-institution RFP evidence. *Garmin* factor 4 does not strictly apply to a deposition, but Patent Owner must account for this factor and all *Garmin* factors with respect to its interrogatories.

Garmin Factor 5

Under Garmin factor 5, "[t]he requests must not be overly burdensome to answer, given the expedited nature of *Inter Partes* Review." *Garmin*, Paper 26, at 7. Given the time schedule for this remand pursuant to SOP 9, producing post-institution discovery, and providing a deposition for pre-institution and post-institution discovery, represents an overly burdensome request under the statutory interests of justice standard. As

discussed above, Mangrove voluntarily complied with the RFPs with respect to pre-institution discovery, and provided written responses in lieu of a deposition. In addition, we grant 10 interrogatories to ensure that Patent Owner has an opportunity to fully explore the identified topics. As to the post-institution discovery, as discussed above, *Power Integration* indicates the focus must be on any privity or RPI relationship up until institution. Under the circumstances here, given Mangrove's voluntary compliance and the allowance of 10 interrogatories, a deposition and any post-institution discovery would not be "responsibly tailored according to a genuine need," *Garmin*, Paper 26 at 7. Accordingly, *Garmin* factor 5 weighs against Patent Owner.

Summary of Garmin Factors and Statutory Standard

Based on the foregoing *Garmin* factors and the statutory interests of justice standard, Patent Owner does not meet the burden on the Motion with respect to discovery that Mangrove did not provide already, with the caveat related to the additional interrogatories of Mangrove, which we allow to ensure sufficient discovery by Patent Owner.

In other words, as discussed above, the Board need only provide a binary grant or denial on the Motion, and the panel specifically warned Patent Owner about such a binary decision in the event of an overly-broad discovery request. Nevertheless, given the short time frame involved with respect to completing this proceeding by February 14, 2020 pursuant to SOP 9, and given the focus on pre-institution activities as specified by *Power Integrations*, 926 F.3d at 1314–15, to ensure sufficient discovery for Patent Owner in the interests of justice, we exercise our discretion on this particular record and tailor the discovery request by 1) imposing a pre-institution cut-

off date for discovery purposes as noted above, and 2) allowing 10 interrogatories (inclusive of any subparts) of Mangrove in lieu of the sought-after depositions of Mangrove.

B. PATENT OWNER'S DISCOVERY OF RPX

Patent Owner seeks the following discovery from RPX:

- 4. Requests for production from third-party RPX directed to communications between Mangrove and RPX (as described in Appendix D, RFP Nos. 1-2) and Mangrove's acquisition of RPX stock (as described in Appendix D, RFP No. 3).
- 5. A deposition, limited to four hours, of a corporate representative of RPX on topics consistent with those contained in VirnetX's requests for production from RPX (as described in Appendix E).

Motion 5–6.

Under *Garmin* factor 3, "[i]nformation a party can reasonably [acquire] without a discovery request would not be in the interest of justice to have produced by the other party." The requests must not be overly burdensome to answer, given the expedited nature of *Inter Partes* Review. concedes "that there may be some overlap in its requests" with respect to Mangrove. *See* Mot. 14. In other words, as Mangrove argues, Patent Owner "seeks to discover the same communications from both Mangrove and RPX." Opp. 14.

Patent Owner seeks this additional discovery as a "multi-pronged approach proposed . . . with requests for production and depositions from both Mangrove and RPX," characterizing it as "critical here given the interest and right to cross-check and corroborate any such communications and the significant passage of time from when *VirnetX first wanted to move for discovery nearly four years ago.*" Mot. 14 (emphasis added). This fails

to explain how a "cross-check" of recent and *current* documents and things that may or may not even exist relates to events occurring about "four years ago." Such an open-ended time frame in the discovery request does not satisfy the statutory interests of justice standard.

Under *Garmin* factor 5, Petitioner argues persuasively that "injecting RPX into this proceeding would disrupt the remand schedule and be 'overly burdensome . . . given the expedited nature of *Inter Partes* Review." Opp. 15 (citing *Garmin*, Paper 26, at 6–7.

As Mangrove provides overlapping information, for similar reasons to those discussed above, *Garmin* factor 1 weighs heavily against Patent Owner based on the similar information already provided, because nothing beyond mere speculation shows RPX would have anything other than duplicative, and hence, un-useful, information. Under Garmin factor 1, "[t]he party requesting discovery should already be in possession of evidence tending to show beyond speculation that in fact something useful will be uncovered." *Garmin*, Paper 26, at 6. *Garmin* factors 2 and 4 weigh slightly in favor of Patent Owner, because it does not appear that the discovery will involve litigation positions with respect to RPX, and the questions seem understandable for the most part.

Based on the foregoing discussion, inserting a third party under the circumstances here does not satisfy the statutory interest of justice standard. Weighing the *Garmin* factors in light of the statutory interest of justice standard, Patent Owner does not meet the burden on the Motion with respect to discovery of RPX.

IV. ORDER

We *grant-in-part* the Motion for discovery of Mangrove for preinstitution materials and *deny* the Motion for discovery of depositions
related to Mangrove as forth above, and deny the Motion for discovery of
RPX. We *grant* Patent Owner 10 interrogatories, inclusive of any subparts,
limited to a pre-institution time frame and the topics no broader than the
requested deposition topics in Appendices C and D of the Motion.
Accordingly, Patent Owner may serve upon Mangrove, up to 10
interrogatories, limited as noted, within 7 business days of this Order, and
Petitioner Mangrove shall respond within 10 business days after any such
service. The parties may agree to any type of service. Finally, the parties
shall confer and jointly file a proposed redacted public version of this Order
within 7 business days of this Order.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD. and APPLE INC., Petitioner,

v.
VIRNETX INC.,
Patent Owner.
Case IPR2015-01046
Patent 6,502,135 B1

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., and BLACK SWAMP IP, LLC,

Petitioner,

v.

VIRNETX INC.,
Patent Owner.
Case IPR2015-01047
Patent 7,490,151 B2

Before MICHAEL P. TIERNEY, KARL D. EASTHOM, and JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, Administrative Patent Judge.

DECISION

Denying Patent Owner's Request on Rehearing of Order Regarding Additional Discovery 37 C.F.R. §§ 42.71(d)

Patent Owner, VirnetX Inc., filed a Request for Rehearing (Paper 92, "Req. Reh'g") asking the Board to reconsider the Decision Granting In Part Patent Owner's Motion for Additional Discovery (Paper 88, "Disc. Dec."). In the Request, Patent Owner argues that the Discovery Decision should have granted depositions of Petitioner The Mangrove Partners Master Fund, Ltd. ("Mangrove"), and Nathaniel August (Mangrove's Founder and President), or a combined, single deposition. Req. Reh'g 1, 2–5. Patent Owner also argues that the entire Discovery Decision must be reconsidered by a new panel because the original panel was constitutionally defective according to *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. Oct. 31, 2019), *petition for cert. filed*, No. 19-1204 (U.S. April. 6, 2020). Req. Reh'g 1, 5–9. We decline to address Patent Owner's *Arthrex* argument where Patent Owner did not raise the issue in the initial appeals and the Federal Circuit did not direct repaneling for the remands here.

Regarding the deposition Patent Owner seeks, the Discovery Decision noted that Mangrove had already responded to Patent Owner's deposition requests with written interrogatories related to pre-institution discovery. Disc. Dec. 7, 12–14. The Discovery Decision nonetheless permitted an additional ten interrogatories covering the material identified by Patent Owner's deposition topics. *Id.* at 8, 14, 16. It did not grant Patent Owner a deposition because "Mangrove's written answers suffice as to the depositions." *Id.* at 7. The Discovery Decision further noted both that Patent Owner previously agreed that written responses could substitute for a

¹ Unless otherwise noted, citations refer to IPR2015-01046. The parties raised identical issues and filed materially similar papers in both cases. This Decision applies to both cases.

deposition in another proceeding (*id.* at 9) and also that the schedule on remand weighed against a deposition (*id.* at 24–25). The Discovery Decision determined that, beyond interrogatory responses, "other information from a deposition would be based on speculation." *Id.* at 16. In that determination, the Discovery Decision found persuasive Petitioner's argument that the additional cost imposed by depositions outweighed any speculative benefit associated with them. *Id.* (quoting Paper 82, 13); *accord id.* at 20 ("[A]ny deposition . . . would involve mere speculation.").

Patent Owner argues that "deposition-based discovery and written discovery serve fundamentally different roles" and therefore interrogatories cannot take the place of a deposition. Req. Reh'g 2–3. Patent Owner argues that Mangrove's asserted valid business reason for filing the Petition—a short-selling strategy—counsels for deposition-based discovery because it was initiated at the same time as Mangrove's alleged connection with nonparty RPX Corp. *Id.* at 3–4. According to Patent Owner, the Discovery Decision overlooked Patent Owner's argument regarding the timing of Mangrove's two possible justifications for filing its Petitions. *Id.* at 4. Patent Owner argues that "a deposition is a critical element" of the discovery it seeks. *Id.* at 4–5.

In this Request for Rehearing, Patent Owner bears the burden to show that the Discovery Decision should be modified. 37 C.F.R. § 42.71(d) (2015). To that end, Patent Owner must identify those matters it "believes the Board misapprehended or overlooked." *Id.* As noted above, Patent Owner points to its arguments that written discovery could not substitute for deposition-based discovery, and that the timing of Mangrove's possible

explanations for filing the petitions suggests both were actual motivations, implicating an additional real party in interest.

The Discovery Decision made the determination that written interrogatories would satisfy Patent Owner's need for additional discovery. Disc. Dec. 8, 14, 16. Thus, the Discovery Decision allows Patent Owner to explore the timing of Mangrove's two possible justifications. Because the Discovery Decision permitted interrogatories as broad as the requested deposition topics (*see id.* at 14), it did not overlook Patent Owner's argument regarding Mangrove's justification for filing the petitions in these proceedings. Rather, it addressed that argument by permitting a different discovery mechanism.

The Discovery Decision permitted written interrogatories rather than deposition-based discovery after determining that approach better fit with this proceeding's schedule (*id.* at 24–25) and better balanced the cost of discovery against Patent Owner's demonstrated need (*id.* at 16). Other than general statements regarding the value of depositions (*see* Req. Reh'g 3), Patent Owner does not demonstrate that the Discovery Decision misapprehended or overlooked anything material in making that determination. Indeed, determinations regarding additional discovery are discretionary decisions that weigh a number of factors, as identified in the Discovery Decision. *See Wi-Fi One, LLC v. Broadcom Corp.*, 887 F.3d 1329, 1339 (Fed. Cir. 2018) (noting PTAB discovery decisions are reviewed for an abuse of discretion); Disc. Dec. 9–26 (citing *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (PTAB Mar. 5, 2013) (precedential)).

Here, one discretionary factor involved Patent Owner's overly broad discovery request, in terms of the unlimited time frame for the discovery sought, and in terms of seeking duplicative discovery with respect to nonparty RPX Corp. *See* Disc. Dec. 8. Despite finding that Patent Owner's overly broad request failed to meet the interests of justice standard, the panel exercised its discretion and modified the request in order to accommodate Patent Owner, even though the panel previously had cautioned Patent Owner that an overly broad request carried a risk of outright denial (i.e., without a discretionary modification by the panel accruing to Patent Owner's benefit). *Id.* at 5–8.

Based on the foregoing, the Discovery Decision reached a correct determination under the interests of justice standard regarding the suitability of interrogatories in this proceeding when considering the cost of depositions, the impact depositions would have on the schedule, Patent Owner's demonstrated need for depositions, and the panel's discretionary modification of Patent Owner's overly broad discovery request that failed to meet the interests of justice standard.

Accordingly, it is hereby ORDERED that Patent Owner's Request for Rehearing is *denied*.

PETITIONER:

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Paper 116 Entered: October 29, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE OFFICE OF THE UNDERSECRETARY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., and BLACK SWAMP IP, LLC, Petitioner,

v.

VIRNETX, INC., Patent Owner.

IPR2015-01046 (Patent 6,502,135 B1) IPR2015-01047 (Patent 7,490,151 B2)

Before ANDREW HIRSHFELD, Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

ORDER

The Office has received a request for Director review of the Final Written Decision in each of the above captioned cases. *See, e.g.*, IPR2015-01046, Ex. 3100. The requests were referred to Mr. Hirshfeld, Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

It is ORDERED that the requests for Director review are denied; and FURTHER ORDERED that the Patent Trial and Appeal Board's Final Written Decisions are the final decisions of the agency.

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