

No.

IN THE
Supreme Court of the United States

VIRNETX INC. AND LEIDOS, INC.,

Petitioners,

v.

MANGROVE PARTNERS MASTER FUND, LTD.;
APPLE INC.; BLACK SWAMP IP, LLC; AND
KATHERINE K. VIDAL, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND
TRADEMARK OFFICE,

Respondents.

**On Petition for a Writ of Certiorari
to the United States Court of Appeals
for the Federal Circuit**

PETITION FOR A WRIT OF CERTIORARI

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(Petitioner with respect to
Fed. Cir. Case No. 21-1672)*

QUESTIONS PRESENTED

This petition concerns the Federal Circuit’s construction of two important statutes: the America Invents Act (“AIA”) and the Federal Vacancies Reform Act (“FVRA”).

1. The AIA created “inter partes review,” an agency procedure that allows issued patents to be challenged before the Patent Trial and Appeal Board (“PTAB”). To prevent undue interference with Article III litigation, the statute bars parties from seeking inter partes review “if *the petition* requesting the proceeding is filed more than 1 year after” the petitioner was “served with a complaint alleging infringement of the patent.” 35 U.S.C. § 315(b) (emphasis added). The statute also provides that, where a party “*properly files a petition*” for inter partes review, it may be “join[ed] as a party” to an already-instituted inter partes review proceeding. § 315(c) (emphasis added). The statute provides that joinder—as opposed to the filing of the petition itself—is not subject to the one-year time limit: Section § 315(b)’s one-year time limit does “not apply to a *request for joinder*.” § 315(b) (emphasis added). The first question presented is:

Whether the Federal Circuit erred in upholding joinder of a party under 35 U.S.C. § 315(c), where the joined party did not “properly file[] a petition” for inter partes review within the statutory time limit.

2. The Federal Vacancies Reform Act establishes “the exclusive means for temporarily authorizing an acting official to perform the functions and duties” of a vacant presidentially appointed, Senate-confirmed office. 5 U.S.C. § 3347(a); *see* § 3345(a). In *United States v. Arthrex*, 141 S. Ct. 1970 (2021), this Court held that Article II requires that PTAB decisions be subject to review by a presidentially appointed, Senate-confirmed officer—specifically, the Director of the U.S. Patent and Trademark

Office. When petitioner VirnetX sought that review here, the position of Director was vacant. Nor was there a temporary officer who had been authorized to perform the Director's functions and duties in conformity with the FVRA's exclusive mechanisms. Instead, the PTO had adopted its own succession plan that purported to authorize the Commissioner for Patents—who is neither appointed by the President nor confirmed by the Senate—to perform the Director's functions and duties, including review of PTAB decisions under *Arthrex*. VirnetX's request for Director review was thus denied by the Commissioner for Patents. The second question presented is:

Whether the Commissioner's exercise of the Director's review authority pursuant to an internal agency delegation violated the Federal Vacancies Reform Act.

PARTIES TO THE PROCEEDINGS BELOW

Petitioner VirnetX Inc. was the patent owner in the proceedings before the Patent Trial and Appeal Board and the appellant in the court of appeals in Fed. Cir. Nos. 20-2271 and 20-2272; it was a plaintiff in the district court and an appellee in the court of appeals in Fed. Cir. No. 21-1672.

Petitioner Leidos, Inc. was a plaintiff in the district court and an appellee in the court of appeals in Fed. Cir. No. 21-1672.

Respondent Mangrove Partners Master Fund, Ltd., was a petitioner in the proceedings before the Patent Trial and Appeal Board and an appellee in the court of appeals in Fed. Cir. Nos. 20-2271 and 20-2272.

Respondent Apple Inc. was a petitioner in proceedings before the Patent Trial and Appeal Board and an appellee in the court of appeals in Fed. Cir. Nos. 20-2271 and 20-2272; it was the defendant in the district court and the appellant in the court of appeals in Fed. Cir. No. 21-1672.

Respondent Black Swamp IP, LLC was a petitioner in proceedings before the Patent Trial and Appeal Board and an appellee in the court of appeals in Fed. Cir. No. 20-2272.

Respondent Katherine K. Vidal, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, was an intervenor in the court of appeals in Fed. Cir. Nos. 20-2271 and 20-2272. Director Vidal succeeded Commissioner for Patents Andrew Hirshfeld, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, as intervenor in those appeals.

CORPORATE DISCLOSURE STATEMENT

Petitioner VirnetX Inc. is a wholly owned subsidiary of VirnetX Holding Corporation.

Petitioner Leidos, Inc. is a wholly owned subsidiary of Leidos Holdings, Inc.

RELATED PROCEEDINGS

The following proceedings are directly related to this case within the meaning of Rule 14.1(b)(iii):

- *Mangrove Partners Master Fund, Ltd. v. VirnetX*, IPR2015-01046 (P.T.A.B.), final written decisions entered on July 14, 2020 (on remand) and September 9, 2016. The following appellate proceedings arose out of this proceeding: *In re VirnetX Inc.*, No. 16-119 (Fed. Cir.), judgment entered March 18, 2016; *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, No. 17-1368 (Fed. Cir.), judgment entered July 8, 2019; and *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, No. 20-2271 (Fed. Cir.), judgment entered March 30, 2023. Apple, Inc. was joined to IPR2015-01046 on January 25, 2016 after filing a petition for inter partes review in *Apple, Inc. v. VirnetX Inc.*, IPR2016-00062 (P.T.A.B.).
- *Mangrove Partners Master Fund, Ltd. v. VirnetX*, IPR2015-01047 (P.T.A.B.), final written decisions entered on July 14, 2020 (on remand) and September 9, 2016. The following appellate proceedings arose out of this proceeding: *In re VirnetX Inc.*, No. 16-119 (Fed. Cir.), judgment entered March 18, 2016; *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, No. 17-1383 (Fed. Cir.), judgment entered July 8, 2019; and *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, No. 20-2272 (Fed. Cir.), judgment entered March 30, 2023. Apple, Inc. was joined to IPR2015-01047 on January 25, 2016 after filing a petition for inter partes review in *Apple, Inc. v. VirnetX Inc.*, IPR2016-00063 (P.T.A.B.). Black Swamp IP, LLC was joined to IPR2015-01047 on February 4, 2016 after filing a petition for inter partes review

in *Black Swamp IP, LLC v. VirnetX Inc.*, IPR2016-00167 (P.T.A.B.).

- *VirnetX Inc. v. Apple Inc.*, No. 6:12-cv-00855-RWS (E.D. Tex.), judgments entered January 6, 2021 (on remand), and August 30, 2018. The following appellate proceedings arose out of the district-court action: *In re Apple Inc.*, No. 18-123 (Fed. Cir.), judgment entered February 22, 2018; *VirnetX Inc. v. Apple Inc.*, No. 19-1050 (Fed. Cir.), judgment entered November 22, 2019; and *VirnetX Inc. v. Apple Inc.*, No. 21-1672 (Fed. Cir.), judgment entered March 31, 2023. The district-court action was consolidated for a trial with *VirnetX Inc. v. Apple Inc.*, No. 6:10-cv-417 (E.D. Tex.), on March 30, 2015; the order consolidating the two cases was vacated on July 29, 2016.

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Federal Vacancies Reform Act of 1998, Pub. L. No. 105-277, § 151, 112 Stat. 2681, 2681-611 (codified as amended at 5 U.S.C. §§ 3345-3349d):	
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157 Cong. Rec. S1041-1042 (daily ed. Mar. 1, 2011)	17
157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011)	19
168 Cong. Rec. S1987 (Apr. 5, 2022).....	30
H. Comm. on Oversight & Reform, 116th Cong., <i>Policy and Supporting Positions</i> (Dec. 2020).....	27
House Judiciary Transcript for Mark-Up of H.R. 1249, <i>The America Invents Act</i> (Apr. 14, 2011).....	17
Brannon, Cong. Rsch. Serv., <i>The Vacancies Act: A Legal Overview</i> (rev. Aug. 1, 2022)	33
Rosenberg, Cong. Rsch. Serv., <i>The New Vacancies Act: Congress Acts To Protect the Senate’s Confirmation Prerogative</i> (Nov. 2, 1998)	25

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Letter from Thomas H. Armstrong, U.S. Gov't Accountability Off., to President Trump (Mar. 6, 2018).....	28
OTHER AUTHORITIES	
B. Bauer & J. Goldsmith, <i>After Trump: Reconstructing the Presidency</i> (2020).....	27
Kass, <i>VLSI Can't Dodge Intel-Led IPR After OpenSky Sanctions</i> , Law360 (Feb. 16, 2023), https://www.law360.com/articles/1577206/vlsi-can-t-dodge-intel-led-ipr-after-opensky-sanctions	17
Kinane, <i>Control Without Confirmation: The Politics of Vacancies in Presidential Appointments</i> , 115 Am. Pol. Sci. R. 599 (2021)	29
Konnath, <i>USPTO Deputy Director Laura Peter Resigns, Following Iancu</i> , Law360 (Jan. 20, 2021), https://www.law360.com/articles/1347011/uspto-deputy-director-laura-peter-resigns-following-iancu	30
Matal, <i>A Guide to the Legislative History of the America Invents Act: Part II of II</i> , 21 Fed. Cir. B.J. 539 (2012)	19
Mendelson, L.M.-M. v. Cuccinelli <i>and the Illegality of Delegating Around Vacant Senate-Confirmed Offices</i> , Yale J. on Reg. Notice & Comment (Mar. 5, 2020).....	25

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Mendelson, <i>Arthrex on Remand: Commissioner of Patents Drew Hirshfeld and the Problem of Shadow Acting Officials</i> , Patently-O (Mar. 24, 2022), https://patentlyo.com/patent/2022/03/commissioner-hirshfeld-officials.html	33
O’Connell, <i>Actings</i> , 120 Colum. L. Rev. 613 (2020)	27
Quinn, <i>Vidal’s Solution to OpenSky Abuse Encourages PTAB Extortion</i> , IP Watchdog (Oct. 5, 2022), https://ipwatchdog.com/2022/10/05/vidals-solution-opensky-abuse-encourages-ptab-extortion/id=151882/	17
Rainey, <i>Loophole Lets DOL Install Wage Chief While Nomination Is Pending</i> , Bloomberg Law, Aug. 2, 2022	28
Resh et al., <i>Who Isn’t Running Ameircan Government: Appointee Vacancies in U.S. Executive Branch Agencies</i> , 41 J. Pub. Pol’y 19 (2020), https://doi.org/10.1017/S0143814X20000215	27
Wright & Miller, <i>Federal Practice & Procedure</i> (3d ed. 2017).....	21

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v.

MANGROVE PARTNERS MASTER FUND, LTD.,
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KATHERINE K. VIDAL, UNDER SECRETARY OF COM-
MERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF
THE UNITED STATES PATENT AND TRADEMARK OFFICE,
Respondents.

**On Petition for a Writ of Certiorari
to the United States Court of Appeals
for the Federal Circuit**

PETITION FOR A WRIT OF CERTIORARI

VirnetX Inc. respectfully petitions for a writ of certiorari to review the U.S. Court of Appeals for the Federal Circuit's judgments in three related cases, Fed. Cir. Nos. 20-2271, 20-2272, and 21-1672. See this Court's Rule 12.4. Leidos, Inc. petitions as to Fed. Cir. No. 21-1672.

OPINIONS BELOW

The court of appeals' opinions in Fed. Cir. Nos. 20-2271 and 20-2272 are unpublished but available at 2023 WL 2708975 and 778 F. App'x 897 (prior appeals), and in the

Petition Appendix (“App.”) at 1a-26a and 30a-54a, respectively. The order denying rehearing (App.280a-282a) is unreported. The Patent Trial and Appeal Board’s final written decisions (App.58a-85a, 143a-173a), and Commissioner for Patents’ order denying review (App.55a-57a), are unreported.

The court of appeals’ opinions relating to Fed. Cir. No. 21-1672 are unpublished but available at 2023 WL 2770074 and 792 F. App’x 796 (prior appeal), and reproduced at App.27a-29a and App.243a-275a, respectively. The order denying rehearing (App.285a-286a) is unreported. The district court’s judgment (App.278a-279a) is unreported.

STATEMENT OF JURISDICTION

In Fed. Cir. Nos. 20-2271 and 20-2272, the Federal Circuit entered judgment on March 30, 2023. App.1a-26a. Rehearing was denied June 22, 2023. App.280a-282a. In Fed. Cir. No. 21-1672, the Federal Circuit entered judgment on March 31, 2023. App.27a-29a. Rehearing was denied June 27, 2023. App.285a-286a. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL, STATUTORY, AND REGULATORY PROVISIONS INVOLVED

Relevant provisions of the Appointments Clause, U.S. Const. art. II, § 2; Federal Vacancies Reform Act of 1998, 5 U.S.C. §§ 3345-3349d; Patent Act (as amended by the America Invents Act), 35 U.S.C. §§ 3, 6, 311, 314-315; the U.S. Patent and Trademark Office’s Agency Organization Order 45-1 (Nov. 7, 2016); and 37 C.F.R. § 42.122 are reproduced at App.287a-313a.

INTRODUCTION

This petition presents important issues under two seminal statutes: the America Invents Act (“AIA”), which governs administrative review of previously issued patents,

and the Federal Vacancies Reform Act (“FVRA”), which governs who may temporarily perform the functions and duties of vacant offices requiring presidential appointment and Senate confirmation.

The Federal Circuit’s interpretation of the AIA destroys an important limit on inter partes review (“IPR”). To limit the impact of IPR proceedings on Article III litigation, Congress required patent-infringement defendants to seek IPR within a year of being sued. But the Patent and Trademark Office (“PTO”) and the Federal Circuit have gutted that time limit. In their view, infringement defendants can pursue IPR *at any time* if they request to join already-instituted IPR proceedings. That construction defies statutory text, which allows joinder only of parties with “properly file[d]”—*e.g.*, timely—IPR petitions. And it encourages stalking-horse IPRs that conveniently give time-barred patent defendants, whose invalidity defenses failed in court, a belated chance to re-litigate invalidity in another forum. The result is precisely the protracted litigation over patent validity the AIA was designed to avoid.

The Federal Circuit also rendered the FVRA a dead letter. The FVRA safeguards the Senate’s role in appointments, and the President’s accountability, by specifying the “exclusive” mechanisms for designating acting officers. 5 U.S.C. §§ 3345, 3347. But the Federal Circuit held that agencies may disregard those exclusive mechanisms—and substitute their own succession plans—so long as the functions and duties at issue are “delegable.” As the court conceded, that construction gives the FVRA “vanishingly small” scope. And it rests on an elementary error: The court read a definition expressly limited to *one section* of the FVRA as conscribing the *entire statute*.

STATEMENT

I. STATUTORY BACKGROUND

A. The AIA's Inter Partes Review Regime

The America Invents Act created inter partes review, an adversarial process in which the PTO can reexamine issued patents. *See* 35 U.S.C. §§311-319; *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 267-268 (2016). Designed as a “quick and cost effective alternative[] to litigation,” H.R. Rep. No. 112-98, pt. 1, at 45, 48 (2011), IPR proceedings are conducted before the Patent Trial and Appeal Board (“PTAB”), “an executive adjudicatory body within the PTO,” *United States v. Arthrex*, 141 S. Ct. 1970, 1977 (2021); *see* § 6(b)(4).

IPR Time Limits. Any person (other than the patent owner) generally can challenge patent claims by filing a petition for IPR. § 311(a). To limit the effect on Article III cases, the statute limits defendants in patent-infringement cases to filing IPR petitions within one year of being sued:

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.

§ 315(b).

Joinder. The statute also allows challengers to “join” IPR proceedings instituted at someone else’s request. § 315(b)-(c); 37 C.F.R. § 42.122(b). Joinder is available if the party seeking joinder “properly files a petition” for IPR. 35 U.S.C. § 315(c). Thus, a prerequisite for joinder is a “properly file[d] . . . petition” consistent with the AIA’s requirements. If the party seeking joinder properly files such a *petition*, it does not need to *request joinder* within

§ 315(b)'s one-year time limit: That “time limitation” does “not apply to a request for joinder.” § 315(b).

Joinder does not itself entail institution of the joined party's petition. It allows that party to be joined to another party's “already-instituted IPR.” *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1332-1334 (Fed. Cir. 2020).

Decision. If an IPR is instituted, the PTAB conducts a “trial” and “issue[s] a final written decision” on patentability. §§ 314, 316, 318(a). Final written decisions, and decisions rehearing them, generally must be issued by panels of at least three PTAB members. §§ 6(c), 318(a). The Secretary of Commerce appoints all PTAB members except the PTO Director. §§ 3(a)(1), (b)(1)-(2), 6(a).

In *United States v. Arthrex, Inc.*, 141 S. Ct. 1970 (2021), this Court held that the Director—the only PTAB member appointed by the President and confirmed by the Senate—must have authority to review final PTAB decisions. Under the Appointments Clause, “[o]nly an officer properly appointed to a principal office may issue a final decision binding the Executive Branch.” *Id.* at 1985. The Court held that § 6(c), which otherwise requires decisions to be made by panels of three PTAB members, “cannot constitutionally be enforced to the extent that its requirements prevent the Director from reviewing final decisions rendered by [the PTAB].” *Id.* at 1987. Consequently, the Director may review PTAB decisions by herself. *Ibid.*

Final decisions by the PTAB or Director are subject to review in the Federal Circuit. § 319.

B. The Federal Vacancies Reform Act

Offices requiring presidential appointment and Senate confirmation are known as “PAS” offices. *NLRB v. SW General, Inc.*, 580 U.S. 288, 292 (2017); *see* U.S. Const. art.

II, §2. “Since President Washington’s first term, Congress has given the President limited authority to appoint acting officials to temporarily perform the functions of a vacant PAS office without first obtaining Senate approval.” *SW General*, 580 U.S. at 294.

The Federal Vacancies Reform Act of 1998 (“FVRA”), Pub. L. No. 105-277, § 151, 112 Stat. 2681, 2681-611 (codified as amended at 5 U.S.C. §§ 3345-3349d), controls who may perform the functions and duties of a PAS office during a vacancy. Section 3345 sets forth three options. First, by default, “the first assistant to the office” “shall perform the functions and duties of the office temporarily.” 5 U.S.C. § 3345(a)(1). Second, “the President (and only the President) may direct a person who serves in” another PAS office “to perform the functions and duties of the vacant office temporarily.” § 3345(a)(2). Third, “the President (and only the President) may direct an officer or employee of [the same] Executive agency to perform the functions and duties of the vacant office temporarily,” subject to certain seniority requirements. § 3345(a)(3).

Section 3347 declares those three options “the *exclusive* means for temporarily authorizing an acting official to perform the functions and duties” of a PAS office. § 3347(a) (emphasis added). And § 3346 strictly time-limits acting service. §§ 3346, 3349a(b).

Section 3348 specifies potential consequences of non-compliance. If an official not appointed in compliance with the FVRA performs a “function or duty” covered by § 3348, the action “shall have no force or effect” and “may not be ratified.” § 3348(d)(1)-(2). “In th[at] section” alone—*i.e.*, in § 3348 alone—the term “function or duty” is defined as a “function or duty of the applicable office” that “is established by statute [or regulation]” and “is required

by statute [or regulation] to be performed by the applicable officer (and only that officer).” § 3348(a)(2).

Section 3348 does not purport to define “functions and duties” for purposes of other FVRA provisions. *E.g.*, §§ 3345(a), 3347(a). Nor does it purport to provide the exclusive remedy for FVRA violations. For example, § 3348 exempts certain offices, such as the NLRB General Counsel, from operation of “[t]h[at] section.” § 3348(e). But the rest of the FVRA applies to those offices. *See SW General*, 580 U.S. at 309 (holding Acting NLRB General Counsel’s “service violated [§ 3345(b)(1) of] the FVRA”).

II. PROCEEDINGS BELOW

This dispute concerns Apple’s infringement of VirnetX’s patents for secure-communication technologies, which spawned proceedings in Article III courts and before the PTO.

A. VirnetX’s Patented Technology

Before VirnetX’s inventions, secure Internet communications were achieved primarily through “virtual private networks” that were difficult to use. That created security risks, as improperly used VPNs left communications vulnerable to interception. VirnetX’s inventions—claimed in U.S. Patent Nos. 6,502,135 and 7,490,151—overcame those problems by *automatically* establishing secure links when users seek secure communications. VirnetX C.A. Br. 6-10 (No. 21-1672).

The ’135 and ’151 patents disclose a “DNS proxy server” that “creates a virtual private network in response to a domain name inquiry.” VirnetX C.A. Br. 8 (No. 21-1672). When a user types a domain name into a web browser, the user’s computer typically sends a request to a “DNS” to translate the domain name into an IP address usable for direct data transmission. In VirnetX’s inventions, a “DNS

proxy server” “intercept[s]” that request and determines whether the user seeks access to a secure Internet resource. *Ibid.* If so, it automatically creates a VPN between the user’s computer and that secure resource.

B. District-Court Proceedings

1. The First Infringement Action

In 2010, VirnetX sued Apple, alleging that Apple’s VPN on Demand feature infringed the ’135 and ’151 patents. *See VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1314-1315 (Fed. Cir. 2014). VirnetX also alleged that Apple’s FaceTime, which enables secure video calls, infringed two other patents. *Ibid.* In 2012, a jury rejected Apple’s challenges to patent validity and found that both accused features infringed. *Id.* at 1316.

The Federal Circuit upheld the jury’s findings regarding validity and infringement by VPN on Demand. *VirnetX*, 767 F.3d at 1313-1314. It remanded for a new trial on FaceTime’s infringement and damages. *Id.* at 1314.

On retrial, the jury again found that FaceTime infringed and awarded VirnetX damages for both VPN on Demand and FaceTime. *VirnetX Inc. v. Apple Inc.*, 324 F. Supp. 3d 836, 844 (E.D. Tex. 2017). The district court enhanced damages and awarded VirnetX attorney’s fees based on Apple’s willful infringement, “gamesmanship,” and “litigation misconduct.” *Id.* at 869-872.

The Federal Circuit affirmed. 748 F. App’x 332 (Fed. Cir. 2019). This Court denied review. 140 S. Ct. 1122 (2020).

2. The Current Infringement Action

In 2012, Apple released redesigned versions of VPN on Demand and FaceTime. VirnetX filed another infringement action asserting the same patents. App.250a-252a.

Apple again sought to challenge the patents' validity. The district court held Apple was precluded from challenging validity, as it had lost on that issue in the prior action. App.252a. The jury found both redesigned features infringed and awarded damages. *Ibid.*

The Federal Circuit agreed that Apple's unsuccessful validity challenge in the first lawsuit barred it from relitigating validity. App.253a-260a. The court affirmed the jury's finding that redesigned VPN on Demand infringed the '135 and '151 patents. App.260a-266a. The court reversed the infringement finding as to redesigned FaceTime, App.266a-273a, and remanded for reconsideration of damages, App.273a-275a.

After a new trial, the jury again awarded VirnetX damages for VPN on Demand's infringement. App.276a-277a. Apple appealed. *See* p. 14, *infra*.

C. IPR Proceedings

1. Initial PTAB Proceedings

In 2013—almost three years after VirnetX's original infringement complaint—Apple filed three petitions seeking IPR of the '135 and '151 patents. The PTAB denied institution as time-barred under 35 U.S.C. §315(b), which requires infringement defendants to file IPR petitions within a year of being served with a complaint. *E.g., Apple Inc. v. VirnetX Inc.*, IPR2013-00354, Paper No. 20 at 5 (P.T.A.B. Dec. 13, 2013).

Shortly before Apple's petitions were denied, an entity named RPX Corporation—which neither innovates nor manufactures anything—also filed IPR petitions challenging the '135 and '151 patents. Despite Apple's false representation that it had no pre-filing communications with RPX, the PTAB concluded that “RPX [was] acting as a proxy” for Apple and denied RPX's petitions as time-

barred under §315(b). *E.g.*, *RPX Corp. v. VirnetX Inc.*, IPR2014-00171, Paper No. 57 at 3, 10 (P.T.A.B. July 14, 2014).

In April 2015, respondent Mangrove Partners Master Fund, Ltd. filed IPR petitions challenging the '135 and '151 patents. App.32a-33a. Like RPX, Mangrove is not engaged in technological invention or manufacturing, and VirnetX never asserted its patents against it. The PTAB instituted IPR on Mangrove's petitions. App.32a-33a.

It turned out that Mangrove was tied to RPX: Mangrove had acquired substantial equity in RPX, becoming one of its largest shareholders and obtaining seats on RPX's board. App.38a. VirnetX sought discovery into the Mangrove-RPX connection, but the PTAB refused to allow VirnetX to file a motion for discovery. App.38a.

In October 2015—over five years after VirnetX sued Apple for infringement—Apple filed new IPR petitions and sought to join the Mangrove proceedings. App.130a, 223a-224a. VirnetX argued that Apple could not be joined because its petitions were untimely under §315(b). App.132a, 226a. The PTAB ruled that §315(b) did not apply to petitions accompanied by a joinder request and joined Apple to both of Mangrove's IPRs. App.132a, 226a.¹ VirnetX sought mandamus, which the Federal Circuit denied “without prejudice to VirnetX raising its arguments on appeal” following the PTAB's final written decision. App.237a-238a.

Apple assumed a leading role in the IPRs. Apple's counsel took over the IPR petitioners' communications;

¹ The PTAB later joined respondent Black Swamp to the '151 patent IPR. App.33a n.1. Black Swamp was formed six days before Mangrove filed its petitions. C.A.App.6259 (No. 17-1368). VirnetX has never asserted patents against Black Swamp.

defended the deposition of Mangrove’s expert; and presented oral argument before the PTAB. C.A.App.6719-6721, 6730-6732 (No. 17-1368); IPR2015-01046, Paper 70 at 3, Paper 105 at 3. Apple’s counsel—not Mangrove’s—later argued the case before the Federal Circuit. App.31a.

In September 2016, the PTAB issued final written decisions finding the patent claims unpatentable. App.86a-120a, 175a-211a. It again rejected VirnetX’s challenge to Apple’s joinder, App.114a, 206a-207a, and denied rehearing, App.121a-128a, 214a-221a.

2. *The First IPR Appeals*

The Federal Circuit vacated the PTAB’s decisions. The court rejected the PTAB’s claim construction and ruled its findings unsupported by substantial evidence. App.42a-53a. The court also held the PTAB erred in denying VirnetX leave to request discovery into the Mangrove-RPX connection. App.38a-39a.

VirnetX maintained that Apple was improperly joined because its petition was untimely and thus not “properly filed” under §315(c). The court “decline[d] to decide whether Apple’s joinder was permitted under §315(b)-(c)” because, in the court’s view, “VirnetX ha[d] not demonstrated that it was prejudiced by Apple’s involvement.” App.35a. The court did not explain why supposed lack of prejudice could justify allowing an improperly joined party to *continue* participating on remand.

After deciding VirnetX’s appeal, the Federal Circuit addressed §315’s joinder provisions in *Facebook, Inc. v. Windy City Innovations*, 973 F.3d 1321 (Fed. Cir. 2020). Resolving the question reserved in VirnetX’s appeal, the court ruled that §315 does not foreclose a party’s joinder even though that party’s petition “would otherwise have been time-barred under . . . §315(b).” *Id.* at 1335-1336; *see*

also *Network-1 Techs., Inc. v. Hewlett-Packard Co.*, 981 F.3d 1015, 1027 (Fed. Cir. 2020).

3. *IPR Remand Proceedings and Remand for Director Review*

On remand, the PTAB largely denied VirnetX’s request for discovery into the Mangrove-RPX connection. *See* IPR2015-01046, Paper 90. The PTAB issued its final written decisions in July 2020, again finding all challenged claims unpatentable and refusing to terminate Apple’s joinder. App.58a-84a, 143a-173a. VirnetX appealed.

While those appeals were pending, this Court decided *Arthrex*. The Court held that PTAB decisions must be subject to review by the Director, to ensure final decisionmaking authority for the Executive Branch rests with a presidentially appointed, Senate-confirmed officer. 141 S. Ct. at 1985-1987; *see* p. 5, *supra*. The Federal Circuit remanded to allow VirnetX to request Director review. App.241a.

4. *Commissioner Hirshfeld Denies VirnetX’s Request for Director Review*

When VirnetX sought Director review, the Director position was vacant. Although the Deputy Director may “act in the capacity of the Director” in the Director’s absence, § 3(b)(1), that office was also vacant. The Patent Act does not provide for an alternative to run the agency if the Director and Deputy Director positions are both vacant. That left the FVRA—the “exclusive” mechanism for temporary appointments—to supply the governing rules. 5 U.S.C. §§ 3345(a), 3347(a).

The PTO, however, had purported to impose its own succession plan, invoking the Director’s authority to delegate. 35 U.S.C. § 3(b)(3)(B); Pub. L. No. 106-113, § 4745, 113 Stat. 1501, 1501A-587 (1999). In November 2016, the

PTO issued Agency Organization Order 45-1, which provides that “[i]f both the [Director] and the Deputy [Director] positions are vacant, the Commissioner for Patents . . . will perform the non-exclusive functions and duties of the [Director].” U.S. Patent & Trademark Off., Agency Organization Order 45-1, § II.D (Nov. 7, 2016) (App.297a-300a).² Under that succession plan, Commissioner for Patents Drew Hirshfeld “perform[ed] the functions and duties” of the Director. App.55a-56a. VirnetX argued that the FVRA precluded Commissioner Hirshfeld from exercising the Director’s review authority, but Commissioner Hirshfeld rejected that argument and denied VirnetX’s request for review. *Ibid.*

D. The Decisions Below

1. The IPR Appeals (Nos. 20-2271, 20-2272)

The Federal Circuit affirmed. It upheld the agency’s unpatentability findings. App.3a. It also rejected VirnetX’s FVRA challenge to Commissioner Hirshfeld’s review authority, citing its decision in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 35 F.4th 1328 (Fed. Cir. 2022), *cert. denied*, 143 S. Ct. 2493 (2023). App.12a n.3. There, the Federal Circuit held that the FVRA did not bar the Commissioner for Patents from exercising the Director’s review authority. In the court’s view, 5 U.S.C. § 3348(a)(2) limits the “function[s] or dut[ies]” that must be exercised consistent with the FVRA to “nondelegable” duties. 35 F.4th at 1335-1336. The Director’s review authority, the court held, is delegable. *Ibid.*

The Federal Circuit admitted its construction “renders the FVRA’s scope ‘vanishingly small.’” *Arthrex*, 35 F.4th at 1337. It nowhere disputed the government’s assertion

² A similar plan issued in 2002. U.S. Patent & Trademark Off., Agency Org. Order 45-1, § II.D (June 24, 2002).

that the “FVRA imposes no constraints whatsoever on the PTO because all the Director’s duties are delegable.” *Ibid.* The court found that “disquieting.” *Ibid.* It nonetheless declared that § 3348’s “plain text” mandated that result. *Ibid.* The court did not explain why § 3348’s definition of “function or duty”—which applies only “in th[at] section,” § 3348(a)—should apply to the entire FVRA.

2. *The District-Court Appeal (No. 21-1672)*

In the meantime, Apple’s appeal in the district-court case was pending. Based on its decision in the IPR appeals, which upheld the PTAB’s ruling that the patent claims asserted against Apple were invalid, the Federal Circuit vacated the district-court judgment and remanded with instructions to dismiss the case. App.28a-29a. The Federal Circuit denied rehearing following its denial of rehearing in the IPR cases. App.285a-286a; App.280a-282a.³

REASONS FOR GRANTING THE PETITION

The Federal Circuit allowed the PTO to circumvent limits on its authority by exploiting perceived loopholes in two major statutes: the America Invents Act and the Federal Vacancies Reform Act. Those decisions threaten patent owners with serial, abusive litigation; allow agencies to devise their own succession plans for 1000+ federal offices; and read important statutory provisions out of the U.S. Code. Review is warranted.

I. THE IPR JOINDER QUESTION MERITS REVIEW

A. The Federal Circuit’s Construction Thwarts the AIA’s Time Limitation and Invites Abuse

The AIA allows patent-infringement defendants to seek IPR of patents asserted against them. But it also

³ Because the Federal Circuit’s judgment in the district-court case rests on its decision in the IPR cases, reversal in the IPR cases would necessitate reversal in the district-court case too.

protects patent owners and the judicial system by strictly limiting when such IPR proceedings can be sought: Petitions must be filed within one year after the defendant is served with an infringement complaint. 35 U.S.C. § 315(b). When a defendant has “properly file[d] a petition” for IPR, it may file a “request for joinder” to another challenger’s IPR. § 315(c). The one-year time limit for filing a petition does not extend to the “request for joinder”; the joinder request can be filed later. § 315(b). But that does not free defendants from their obligation to file a “proper[]” IPR “petition” as a condition of seeking joinder. And an untimely “petition,” filed outside the one-year statutory window, is not “properly file[d].” This Court has repeatedly held that untimely filings are the epitome of improper filings—as Congress well understood. *See* pp. 18-19, *infra*.

Notwithstanding the statute’s clarity, the Federal Circuit and PTO hold the opposite. In their view, parties with untimely and thus “[im]properly file[d]” petitions can join another party’s IPR. That construction reads the AIA’s joinder provision to eviscerate the AIA’s time limits. Under it, infringement defendants can evade § 315(b)’s strict time limit simply by filing a late petition and asking to join someone else’s IPR. Importantly, virtually anyone can file that IPR—even someone with no “concrete stake in the outcome.” *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 279 (2016) (citing § 311(a)). Entities that have never been sued for infringement thus have filed petitions as placeholders for time-barred challengers. *See, e.g., Ventex Co. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 152 at 5-15 (P.T.A.B. Feb. 19, 2019) (IPR petitioner acted as proxy for undisclosed time-barred party, with time-barred party effectively funding the IPR). The Federal Circuit’s construction of § 315(b) opens another

avenue for abuse by permitting time-barred defendants to join—and take over—the IPR itself.

This case illustrates the problem. After Apple’s initial IPR petitions were denied as time-barred, it used RPX as a proxy to file IPRs on its behalf. *See* pp. 9-10, *supra*. Entities like RPX make it a “business model” to file IPR petitions for the benefit of infringement defendants whose own petitions would be time-barred. *See Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1353-1356 (Fed. Cir. 2018). When Apple’s proxy use of RPX was exposed, Mangrove filed IPRs challenging the same patents. *See* p. 10, *supra*. Mangrove’s interest in challenging VirnetX’s patents has never been clear. Mangrove—a hedge fund—is not engaged in technological invention or manufacturing, and VirnetX has never asserted patents against Mangrove. Mangrove faced no potential exposure from VirnetX’s patents. It nonetheless purported to be willing to undertake a multi-year specialized litigation to challenge the patents’ validity.

Unsurprisingly, Mangrove did not have to shoulder that expense: The PTAB allowed Apple to join Mangrove’s IPRs despite Apple’s time bar. Apple then took control, taking over the challengers’ communications, briefing, and oral argument before the PTAB and Federal Circuit. All with a view toward using the IPRs to escape liability for its infringement of VirnetX’s patents—patents a jury and courts had previously upheld and whose validity Apple was precluded from relitigating. *See* pp. 8-11, *supra*.

A veritable cottage industry has sprung up: Entities with no discernable stake file IPR petitions challenging patents successfully asserted in litigation—only for well-heeled but time-barred infringement defendants to conveniently join the proceedings and shoulder the cost. In one recent case, an entity called OpenSky sought IPR of a

patent underlying an infringement judgment against Intel. The PTO Director found OpenSky sought to *extort* the patent owner. The Director nonetheless allowed the IPR to proceed, allowed Intel to join despite being time-barred, and handed control of the IPR over to Intel.⁴

That frustrates Congress’s intent. In the AIA, Congress sought to “prevent[] the serial harassment of patent holders.” House Judiciary Transcript for Mark-Up of H.R. 1249, The America Invents Act, at 72 (Apr. 14, 2011) (Rep. Smith); *see* 157 Cong. Rec. S1041-1042 (daily ed. Mar. 1, 2011) (Sen. Kyl). Congress admonished that IPRs “are not to be used as tools for harassment . . . through repeated litigation and administrative attacks on the validity of a patent. Doing so would frustrate the purpose of the section as providing quick and cost effective alternatives to litigation.” H.R. Rep. No. 112-98, pt. 1, at 48 (2011). Section 315(b)’s one-year time limit is supposed to prevent belated challenges to patents asserted in federal court—such as the IPR challenges Apple brought *over five years* after being sued for infringement. The Federal Circuit’s interpretation licenses precisely such harassment.

B. The Federal Circuit’s Construction Defies Statutory Text, Structure, History, and Purpose

Section 315(b) exempts from its one-year “time limitation” *only* “a request for joinder under subsection (c).” 35 U.S.C. §315(b). It does *not* exempt the “petition under section 311” that is a prerequisite to joinder. §315(c). To the contrary, the statute demands that the “petition”

⁴ *See* Quinn, *Vidal’s Solution to OpenSky Abuse Encourages PTAB Extortion*, IP Watchdog (Oct. 5, 2022), <https://ipwatchdog.com/2022/10/05/vidals-solution-opensky-abuse-encourages-ptab-extortion/id=151882>; Kass, *VLSI Can’t Dodge Intel-Led IPR After OpenSky Sanctions*, Law360 (Feb. 16, 2023), <https://www.law360.com/articles/1577206/vlsi-can-t-dodge-intel-led-ipr-after-opensky-sanctions>.

underlying a joinder request be “properly file[d],” *ibid.*—a requirement that includes compliance with the “time limitation” for filing an IPR “petition,” § 315(b).

1. This Court has repeatedly held that, under “the ‘common usage’ and ‘commo[n] underst[anding]’ of the phrase ‘properly filed,’” “time limits, no matter their form, are ‘filing’ conditions.” *Pace v. DiGuglielmo*, 544 U.S. 408, 413, 417 (2005). A “‘properly filed’” document thus is one whose “delivery and acceptance are in compliance with the applicable laws and rules governing filings”—including “time limits.” *Artuz v. Bennett*, 531 U.S. 4, 8 (2000). Accordingly, the Court has explained, “an untimely petition would not be deemed ‘properly filed.’” *Pace*, 544 U.S. at 413; *see also Allen v. Siebert*, 552 U.S. 3, 6-7 (2007). Other courts and agencies likewise define “properly filed” to encompass timing requirements.⁵

Congress adopted that “‘common usage,’” *Pace*, 544 U.S. at 413, when it made a “properly file[d]” petition a prerequisite to joinder under § 315(c). Invoking this Court’s cases, Senator Kyl explained that the requirement of a “properly filed” petition means that “time deadlines for filing petitions must be complied with in all cases”:

The words “properly filed” are a term of art that is also employed in section 2244 of title 28 and that has been given content no less than three times during this decade by the U.S. Supreme Court, *see Artuz v. Bennett*, 531 U.S. 4 (2000), *Pace v. DiGuglielmo*, 544 U.S. 408, and *Allen v. Siebert*, 128 S. Ct. 2 (2007).

⁵ *See Drug Plastics & Glass Co. v. NLRB*, 44 F.3d 1017, 1019-1020 (D.C. Cir. 1995) (complaint not “properly filed charge” when made outside statutory time limit); *United States v. Mendoza*, 581 F.2d 89, 90 (5th Cir. 1978) (en banc) (referring to motion “properly filed within” statutory time limit); 8 C.F.R. § 245.10(a) (defining “properly filed” “petition” by timing of receipt or mailing).

The gist of these decisions is that *a petition is properly filed* when it is delivered and accepted in compliance with applicable rules governing filings . . . and that *time deadlines for filing petitions must be complied with in all cases*.

154 Cong. Rec. S9988 (daily ed. Sept. 27, 2008) (emphasis added). Those requirements, he explained, apply to “the meaning of ‘properly filed’ when used in the joinder provisions in sections 315(c) and 325(c).” 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011); see Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 Fed. Cir. B.J. 539, 613-614 (2012). When “Congress employs a term of art, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken.” *FAA v. Cooper*, 566 U.S. 284, 292 (2012) (quotation marks omitted). Congress expressly adopted such a settled meaning when it made a “properly file[d]”—and thus timely—“petition” a precondition to joinder under § 315(c).

Section 315(c), moreover, requires that joinder applicants “properly file[] a petition *under section 311*.” § 315(c) (emphasis added). Section 311 requires compliance with “the provisions of this chapter,” § 311(a), including § 315(b)’s one-year time limit. Further, joinder is permissible only if the Director finds the requestor’s “petition” would “warrant[] institution” of an IPR, § 315(c)—and “inter partes review may *not* be instituted if the petition . . . is filed more than 1 year after” the petitioner was sued for infringement, § 315(b) (emphasis added).⁶

⁶ As noted, joinder does not itself involve institution of a new IPR; it joins the requestor to another person’s already-instituted IPR. See *Facebook*, 973 F.3d at 1332; p. 5, *supra*. Nonetheless, a determination

2. The PTO and Federal Circuit assumed that, because a “request for joinder” need not be filed within one year, the joined party’s IPR “petition” need not be either. §315(b), (c). But the statute distinguishes the two. Section 315(b) imposes a one-year time limit on an infringement defendant’s “petition” seeking IPR. §315(b). It then exempts a “request for joinder” under §315(c)—and *only* that request—from the one-year limit. *Ibid.* Section 315(b) does not extend the exemption to the party’s “petition,” even though the AIA elsewhere excepts certain “petition[s]” from timing requirements. §311(c). “[W]here Congress includes particular language in one section of a statute but omits it in another . . . , it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.” *Russello v. United States*, 464 U.S. 16, 23 (1983).

Properly read, §315(b)’s time-bar exception serves a modest but practical role: It allows an infringement defendant’s “request for joinder” to be made *after* the one-year limit, provided the defendant properly files an IPR “petition” *within* the one-year window. That makes sense. A party can be “join[ed]” to another person’s IPR only if the PTO “institutes” that other person’s IPR. §315(c). Because institution of the other person’s IPR may not occur until six months after that person seeks review, §§313, 314(b); 37 C.F.R. §42.107(b), it may not be feasible for the infringement defendant to request joinder until after the one-year period has expired. Section 315(b)’s exception makes clear that the statute’s one-year window does not bar joinder for otherwise timely petitions.

that the requestor’s petition would otherwise warrant institution is a prerequisite to joinder.

The PTO and Federal Circuit’s construction, by contrast, places two provisions of §315(b) in conflict. Under their reading, §315(b)’s first sentence prescribes a mandatory deadline to protect patentees from excessive challenges, while its second sentence creates an exception capable of swallowing the rule. This Court warns against constructions that “put the statute ‘at war with itself.’” *United States ex rel. Polansky v. Executive Health Res., Inc.*, 599 U.S. 419, 434 (2023).

The Federal Circuit’s construction also contravenes the ordinary meaning of “joinder.” Joinder is a mechanism for combining *proper* parties in a single proceeding. *E.g.*, Fed. R. Civ. P. 20(a)(1)(A)-(B). A joined party must independently establish jurisdiction over its claims and their timeliness. *See* 7 Wright & Miller, *Federal Practice & Procedure* §1656 (3d ed. 2017). Consistent with that understanding, §315 requires the party seeking joinder to file a proper—*i.e.*, timely—petition.

C. The PTO’s Defiance of the Statute Cannot Be Sustained

In allowing Apple’s joinder, the PTAB invoked 37 C.F.R. §42.122(b), which provides that the one-year time bar “shall not apply when the petition is accompanied by a request for joinder.” App.132a, 226a; *see* App.33a-35a. But a court “owe[s] an agency’s interpretation of the law no deference unless, after ‘employing traditional tools of statutory construction,’” it is “unable to discern Congress’s meaning.” *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1358 (2018). Here, statutory text, structure, history, and purpose leave no ambiguity that could warrant deference. And the Court will decide this Term whether courts should *ever* defer to agency interpretations of statutes. *See Lopez Bright Enters. v. Raimondo*, No. 22-451.

The Federal Circuit’s interpretation of § 315(b) appears to stem from a misapprehension of this Court’s opinion in *Thryv, Inc. v. Click-To-Call Techs., LP*, 140 S. Ct. 1367 (2020). See *Facebook*, 973 F.3d at 1334. *Thryv* held only that institution of an IPR, including the timeliness of the instituted petition, is not reviewable under § 314(d). 140 S. Ct. at 1373. As the Federal Circuit recognized, that holding is inapplicable here because *joinder* does not involve instituting an IPR; “the joinder decision is a separate and subsequent decision” concerning “the manner in which an [already-instituted] IPR will proceed.” *Facebook*, 973 F.3d at 1332.

The Federal Circuit seized on a sentence in *Thryv* “observing that ‘the § 315(b)-barred party can join a proceeding initiated by another petitioner.’” *Facebook*, 973 F.3d at 1334 (quoting *Thryv*, 140 S. Ct. at 1374). But that issue was not before the Court; nor was that statement necessary to the Court’s decision. *Thryv* did not consider the textual arguments above and cannot fairly be read as resolving the issue. This Court is “not bound to follow . . . dicta in a prior case in which the point now at issue was not fully debated.” *Central Va. Cmty. Coll. v. Katz*, 546 U.S. 356, 363 (2006). If anything, that the Federal Circuit believes itself bound by *Thryv*’s dictum is further reason to grant review.

The Federal Circuit has committed itself to its and the PTO’s extratextual reading of § 315. See *Facebook*, 973 F.3d at 1334; *Network-1 Techs., Inc. v Hewlett-Packard Co.*, 981 F.3d 1015, 1027 (Fed. Cir. 2020); pp. 11-12, *supra*. And while the Federal Circuit denied VirnetX’s challenge to Apple’s joinder based on a putative lack of prejudice, App.35a, that ruling is itself infirm.

The AIA does not contemplate a harmlessness analysis for statutory violations, as this Court’s *SAS* decision dem-

onstrates. In *SAS*, this Court reversed the PTAB’s decision to institute IPR on only some challenged patent claims, rather than all challenged claims as the statute requires. 138 S. Ct. at 1357-1358. The failure to review all claims was likely harmless; the PTAB had already concluded that the challenges to non-instituted claims had no “reasonable likelihood” of success. *Ibid.* The Court nonetheless demanded compliance with all statutory requirements for conducting IPRs and issuing final decisions. *Id.* at 1359-1360.

Likewise here, the PTAB’s joinder of Apple and consequent conduct of the IPRs, in violation of a clear statutory mandate, cannot be excused as “harmless.” Section 315(b)’s time limitation entitled VirnetX to litigate patent validity against Apple exclusively in Article III courts—*unless* Apple timely filed an IPR petition within one year of being sued. The burden of having to belatedly litigate against Apple in an improper administrative forum, on top of many years of court litigation, is itself harm. Requiring further prejudice would often require discovery into communications and financial arrangements between joined parties—discovery the PTAB has proved unwilling to authorize, *see* pp. 10-12, *supra*. And requiring probing discovery before a party can enforce statutory limits on joinder would run counter to the AIA’s objective of *streamlined* proceedings.

In any event, Apple’s joinder was prejudicial. Apple—with virtually bottomless financial and litigation resources—assumed a leading role in the IPRs, taking over oral argument, communications, and expert depositions. *See* pp. 10-11, *supra*. Apple submitted evidence of unpatentability for which Mangrove missed the deadline. C.A.App.1881-1884, 3754-3759 (No. 17-1368); 37 C.F.R. §42.123(a)(1). And even if the Federal Circuit thought

Apple’s misjoinder did not warrant vacatur of the PTAB’s *original* findings—which the court vacated on other grounds anyway—there was no excuse for allowing Apple to *continue* its unlawful participation after the cases were remanded to the PTAB.

II. THE FVRA QUESTION MERITS REVIEW

The Federal Circuit limited the FVRA’s requirements for temporary appointments to “non-delegable” functions and duties. By the court’s admission, that construction deprives the statute of any practical effect. And it rests on two fundamental errors. First, the court took a definition of “function or duty” expressly limited to *one section* of the FVRA and applied it to the *entire statute*. Second, the court failed to appreciate that *only* the Director can singlehandedly review PTAB decisions; that authority is non-delegable and thus subject to the FVRA regardless.

A. The Federal Circuit’s Construction Eviscerates the FVRA and the Appointments Clause

1. The FVRA provides three mechanisms for temporarily filling vacant offices. 5 U.S.C. § 3345(a). Under § 3347(a), those are the “*exclusive* means for temporarily authorizing an acting official to perform the functions and duties” of PAS offices. § 3347(a) (emphasis added).

The Federal Circuit nonetheless held that agencies may depart from the FVRA’s requirements and devise their own succession plans for PAS vacancies. Invoking § 3348(a)(2)’s restrictive definition of “‘function or duty’”—a definition that expressly applies only “in th[at] section,” § 3348(a)—the court reasoned that the *entire* FVRA, including §§ 3345(a) and 3347(a), “applies only to non-delegable functions and duties.” *Arthrex, Inc. v. Smith & Nephew, Inc.*, 35 F.4th 1328, 1337 (Fed. Cir. 2022).

That construction guts the FVRA. Congress routinely authorizes agency heads to delegate duties. *E.g.*, 35 U.S.C. § 3(b)(3)(B); 28 U.S.C. § 510; 22 U.S.C. § 2651a(a)(4); 10 U.S.C. § 113(d). Such provisions are “extraordinarily widespread.” Mendelson, L.M.-M. *v. Cuccinelli and the Illegality of Delegating Around Vacant Senate-Confirmed Offices*, Yale J. on Reg. Notice & Comment (Mar. 5, 2020); see Rosenberg, Cong. Rsch. Serv., *The New Vacancies Act: Congress Acts To Protect the Senate’s Confirmation Prerogative* 1 (Nov. 2, 1998). Even absent express authority, courts hold that officers presumptively may delegate duties. See *Fleming v. Mohawk Wrecking & Lumber Co.*, 331 U.S. 111, 122-123 (1947); *Kobach v. U.S. Election Assistance Comm’n*, 772 F.3d 1183, 1190 (10th Cir. 2014).

The Federal Circuit’s construction thus renders the FVRA a nullity, except in the extraordinarily rare situation where Congress expressly requires an agency head to personally perform a specific duty. As the court conceded, its reading “renders the FVRA’s scope ‘vanishingly small.’” 35 F.4th at 1337. The government has managed to identify only *four* “non-delegable” functions in the entire U.S. Code—each more obscure than the last. Gov’t Br. 14 n.5 in No. 22-639 (U.S.) (citing 5 U.S.C. § 9807(c)(1); 7 U.S.C. § 7996(e)(2); 31 U.S.C. § 1344(d)(3); 41 U.S.C. § 3304(a)). In the government’s view, agencies must heed the FVRA only when dealing with such weighty issues as setting pay for a handful of NASA employees, 5 U.S.C. § 9807(c)(1)-(2), and deciding who commutes in government vehicles, 31 U.S.C. § 1344(d)(3).⁷

⁷ The government also invoked 22 U.S.C. § 4865(a)(2), but Congress deleted the language on which it relied. Compare Pub. L. No. 117-263, § 9301(e)(2)(B)(ii)(II), 136 Stat. 2395, 3881-3882 (2022), with 22 U.S.C. § 4865(a)(2)(B)(ii)(I) (2018).

The Federal Circuit found that result “disquieting,” but embraced it anyway. 35 F.4th at 1337. That “disquiet” favors review. A decision that reads an important federal statute out of the U.S. Code should not go unreviewed.

2. The Federal Circuit’s construction undermines the Appointments Clause and the Senate’s role in overseeing appointments. “Congress has given the President *limited* authority to appoint acting officials to *temporarily* perform the functions of a vacant PAS office without first obtaining Senate approval.” *NLRB v. SW General, Inc.*, 580 U.S. 288, 294 (2017) (emphasis added). The FVRA is a carefully circumscribed exception to the Appointments Clause’s “significant structural safeguard[s].” *United States v. Arthrex, Inc.*, 141 S. Ct. 1970, 1982 (2021). By interpreting the FVRA to apply virtually never, the Federal Circuit ripped a gaping hole in that constitutional guardrail—one freed from constraints Congress imposed in the FVRA. *E.g.*, 5 U.S.C. § 3345 (limits on eligibility and appointment methods); § 3346 (time limits); § 3349 (reporting requirements).

The Federal Circuit’s construction weakens presidential accountability. Under the FVRA, someone other than the first assistant to an office may assume that office’s functions and duties in an acting capacity only if “the President (and only the President)” *personally* designates a different acting official. § 3345(a)(2)-(3). It thus makes the President accountable for the designation. Under the Federal Circuit’s construction, agency succession plans can cause principal offices to fill themselves with no presidential role. That happened here: Although the President *could* have personally directed Commissioner Hirshfeld to perform the Director’s duties, Hirshfeld instead assumed that role under a PTO succession plan promulgated under a previous administration. That allows the President to

“escape responsibility for his choices by pretending that they are not his own” and obscures the “clear and effective chain of command” to the President the Appointments Clause is meant to ensure. *Free Enter. Fund v. Pub. Co. Account. Oversight Bd.*, 561 U.S. 477, 497-499 (2010).

B. The Issue Is Important and Recurring

1. There are more than 1000 Senate-confirmed federal offices. See H. Comm. on Oversight & Reform, 116th Cong., *Policy and Supporting Positions* 212 (Dec. 2020). Vacancies arise frequently, with PAS offices lacking Senate-confirmed appointees over 20% of the time. See Resh et al., *Who Isn’t Running American Government: Appointee Vacancies in U.S. Executive Branch Agencies*, 41 J. Pub. Pol’y 19, 26 (2020), <https://doi.org/10.1017/S0143814X20000215> (vacancies averaged 151 days per congressional term).

Even before the Federal Circuit’s decision, agencies found “delegations” to be “an easy workaround” to evade the FVRA’s and Appointments Clause’s requirements. O’Connell, *Actings*, 120 Colum. L. Rev. 613, 633 (2020). A survey of 301 PAS offices found that, as of April 2019, nearly one quarter were “filled” through delegations. *Id.* at 654-655. That practice spans political parties. The Bush Administration used delegation to maintain, as head of the Office of Legal Counsel, someone the Senate had repeatedly refused to confirm. B. Bauer & J. Goldsmith, *After Trump: Reconstructing the Presidency* 319 (2020). The Obama Administration used delegation to allow a career official to run the Bureau of Alcohol, Tobacco, and Firearms rather than face a contentious confirmation hearing. *Ibid.*

That practice has accelerated. By 2019, “almost twice as many vacant offices were being carried out by officials exercising delegated authority as by acting officials under

the FVRA.” Bauer & Goldsmith, *supra*, at 324. When the Acting Social Security Commissioner exceeded the FVRA’s time limits, *see* § 3346, the Trump Administration had her continue performing the office’s duties by delegation. Letter from Thomas H. Armstrong, U.S. Gov’t Accountability Off., to President Trump (Mar. 6, 2018); 83 Fed. Reg. 13,862, 13,863 (Apr. 2, 2018). When the Biden Administration wanted to nominate an Acting Administrator of the Labor Department’s Wage and Hour Division to run the division permanently, it simply “dropped th[e] ‘acting’ name and ‘delegated’ the duties of the position to her under a new title, allowing her to lead the agency while her nomination [was] pending in the Senate.” Rainey, *Loophole Lets DOL Install Wage Chief While Nomination Is Pending*, Bloomberg Law, Aug. 2, 2022. That stratagem allowed the government to evade the precise FVRA constraint this Court addressed in *SW General*. *See* 580 U.S. at 299-301, 309; 5 U.S.C. § 3345(b)(1).

2. Multiple courts have rejected the government’s use of delegations to evade the FVRA—only for those decisions to escape appellate review.

One court held that an Acting Secretary of Homeland Security served in violation of the FVRA, rejecting the argument that his actions should stand because the FVRA applies only to “non-delegable duties.” *L.M.-M. v. Cuccinelli*, 442 F. Supp. 3d 1, 10-11, 26, 31 (D.D.C. 2020). The court found that restrictive reading made little sense: It was the government’s “pervasive use of . . . vesting-and-delegation statutes” that “convinced Congress of the need to enact the FVRA” in the first place. *Id.* at 34. The government appealed, but promptly dismissed its appeal. No. 20-5141, 2020 WL 5358686 (D.C. Cir. Aug. 25, 2020).

Another court reached the same conclusion. *See Behring Reg’l Ctr. LLC v. Wolf*, 544 F. Supp. 3d 937, 944-947

(N.D. Cal. 2021). The government appealed, then dismissed its appeal. No. 21-16421, 2022 WL 602883 (9th Cir. Jan. 7, 2022). And when another court reached the same result, see *Asylumworks v. Mayorkas*, 590 F. Supp. 3d 11, 13, 23 (D.D.C. 2022), the government chose not to appeal.

Yet another court invalidated an attempt to have a career official run the National Park Service via delegation. *Public Emps. for Env't Resp. v. Nat'l Park Serv.*, No. 19-cv-3629, 2022 WL 1657013, at *9-11 (D.D.C. May 24, 2022). The government appealed, then dismissed its appeal. No. 22-5205, 2022 WL 4086993 (D.C. Cir. Sept. 2, 2022).

Other government losses have similarly escaped review. See *Bullock v. U.S. Bureau of Land Mgmt.*, 489 F. Supp. 3d 1112, 1127 (D. Mont. 2020) (overturning unlawful attempt[] to avoid . . . the statutory requirements of the FVRA”); No. 20-36129, Dkt. 22 (9th Cir. Aug. 10, 2021) (government appeal dismissed as moot).

Even absent lower-court conflict, this Court will review decisions “invalidat[ing] a federal statute,” *Iancu v. Brunetti*, 139 S. Ct. 2294, 2298 (2019), or raising important structural concerns, e.g., *SW General*, 580 U.S. at 298; *Free Enter. Fund*, 561 U.S. 477; *Edmond v. United States*, 520 U.S. 651 (1997); *Freytag v. Comm’r*, 501 U.S. 868 (1991). Here, the Federal Circuit’s construction eviscerates the FVRA and erodes the structural safeguards it and the Appointments Clause provide. The many decisions rejecting that construction, yet escaping appellate review, underscore the need for this Court’s intervention.

3. The start of a new presidential term—whether for a new President or an incumbent—inevitably brings a host of vacancies. See Kinane, *Control Without Confirmation: The Politics of Vacancies in Presidential Appointments*, 115 Am. Pol. Sci. R. 599, 602 fig.1 (2021). The PTO, for

example, had no Senate-confirmed Director for over a year into the current presidential term.⁸ The Federal Circuit’s decision encourages agencies to plug those vacancies through bespoke succession plans, instead of the specific mechanisms Congress prescribed in the FVRA. Vast swathes of the federal government could be run by functionaries with dubious legitimacy and a legal cloud over their actions.

This petition offers an especially timely opportunity to clarify the FVRA’s scope. The government intervened below and is a respondent here. The case can be granted, briefed, and argued this Term. That would allow the Court to resolve a critically important FVRA issue well before Inauguration Day and its accompanying flood of vacancies.⁹

C. The Federal Circuit Misconstrued the FVRA and This Court’s *Arthrex* Decision

1. The Federal Circuit held the FVRA inapplicable to delegable duties. *Arthrex*, 35 F.4th at 1336. It based that holding on 5 U.S.C. § 3348(a)(2), which defines “function or duty” as a function or duty required by statute or regulation “to be performed by the applicable officer (and only that officer).” *See* 35 F.4th at 1335-1338. In the court’s view, “the plain text of § 3348(a)(2)” required limiting the entire FVRA to “non-delegable” duties. *Id.* at 1338.

⁸ *See* Konnath, *USPTO Deputy Director Laura Peter Resigns, Following Iancu*, Law360 (Jan. 20, 2021), <https://www.law360.com/articles/1347011/uspto-deputy-director-laura-peter-resigns-following-iancu> (Director Iancu resigned); 168 Cong. Rec. S1987 (Apr. 5, 2022) (Director Vidal confirmed).

⁹ Certiorari is thus more urgent than in *Arthrex*, No. 22-639 (U.S.). Unlike in *Arthrex*, the Court is unlikely to have another opportunity to resolve the FVRA issue before Inauguration Day.

The court overlooked that § 3348’s definition of “function or duty” applies *only* “[i]n this section.” § 3348(a) (emphasis added). It thus does *not* apply to provisions *outside* § 3348, including § 3347(a)’s command that the FVRA’s mechanisms “are the *exclusive* means for temporarily authorizing an acting official to perform the functions and duties” of PAS offices. § 3347(a) (emphasis added).

Congress could have extended § 3348(a)(2)’s definition of “function or duty” to the rest of the FVRA. *Cf.* § 3345(c)(2) (“For purposes of this section and sections 3346, 3347, 3348, 3349, 3349a, and 3349d . . .”). But Congress instead cabined § 3348’s definitions to “th[at] section” alone. § 3348(a). This Court has emphasized the FVRA’s deliberate use of “hierarchical” terms like “section” and “paragraph” “to make precise cross-references.” *SW General*, 580 U.S. at 300. That legislative judgment commands respect.

Accordingly, in § 3347 (and elsewhere outside § 3348), “functions and duties” carry their ordinary meaning. The FVRA’s appointment mechanisms thus provide the “exclusive means” for authorizing someone other than the Director to temporarily exercise the Director’s “functions and duties.” § 3347(a). Yet, under the PTO’s internal succession plan, Commissioner Hirshfeld “perform[ed] the functions and duties” of the Director—including the Director’s authority to review PTAB decisions—without regard to the FVRA’s requirements. App.55a-56a.

2. Section 3348’s “exceedingly narrow” definition, 35 F.4th at 1338, reflects the potency of the particular remedy § 3348 prescribes. If a “function or duty” within the meaning of § 3348 is performed by an officer appointed contrary to the FVRA, § 3348 categorically declares that the action “shall have no force or effect” and “may not be ratified.” § 3348(d)(1)-(2); *cf.* *SW General, Inc. v. NLRB*,

796 F.3d 67, 81-82 (D.C. Cir. 2015) (discussing “de facto officer” doctrine). Section 3348 thus eliminated agencies’ ability to rely on ratification for non-delegable duties performed by improperly designated officials, making such actions irreparably void.

Nothing in § 3348, however, limits the FVRA’s *substantive scope*. The rest of § 3348 makes that clear. Section 3348(e) provides that “[t]his section shall not apply to” various offices, including the NLRB General Counsel. If § 3348 defined the FVRA’s substantive scope, that would mean the FVRA does not apply to the NLRB General Counsel *at all*. But this Court applied the FVRA to that very office in *SW General*, holding an Acting NLRB General Counsel’s service violated § 3345. 580 U.S. at 296-301.

As *SW General* makes clear, the exclusion of certain offices from § 3348 merely exempts those offices from § 3348’s “rule that actions taken in violation of the FVRA are void *ab initio*.” 580 U.S. at 298 n.2. It does not exempt those offices from the FVRA entirely. Likewise, the exclusion of certain (*i.e.*, delegable) functions and duties from § 3348 merely exempts those functions and duties from § 3348’s void-*ab-initio* rule; it does not exempt them from the FRVA altogether.

While delegable duties are not subject to § 3348’s void-*ab-initio* rule, other remedies remain. The Administrative Procedure Act authorizes courts to “hold unlawful and set aside agency action” found to be “in excess of statutory . . . authority” or “otherwise not in accordance with law.” 5 U.S.C. § 706(2). The acts of officials improperly performing the duties of a vacant office thus are *voidable*, even if § 3348 does not render those acts *void*. See *L.M.-M.*, 442 F. Supp. at 35-36 (remedying FVRA violation by setting aside action under APA); *NLRB v. Newark Elec. Corp.*, 14 F.4th 152, 161-163 (2d Cir. 2021) (acts performed in

violation of FVRA but not covered by § 3348 are voidable); Brannon, Cong. Rsch. Serv., *The Vacancies Act: A Legal Overview* 16-20 (rev. Aug. 1, 2022); Mendelson, *Arthrex on Remand: Commissioner of Patents Drew Hirshfeld and the Problem of Shadow Acting Officials*, Patently-O, <https://patentlyo.com/patent/2022/03/commissioner-hirshfeld-officials.html> (Mar. 24, 2022); Cato Inst. Br. 15-21 in No. 22-639 (U.S.).¹⁰

3. The Federal Circuit’s construction licenses the very practice Congress sought to stamp out. Before the FVRA, the “Department of Justice took the position that, in many instances, the head of an executive agency had independent authority apart from the Vacancies Act to temporarily fill vacant offices.” *SW General*, 580 U.S. at 294. DOJ maintained that agency-head authority “to delegate [her] powers and functions to subordinate officials or employees as she sees fit” “supersede[d] the Vacancies Act’s restrictions.” S. Rep. No. 105-250, at 3. With the FVRA, Congress sought to “foreclose[] the argument raised by the Justice Department” that delegation authority can bypass the Vacancies Act. S. Rep. No. 105-250, at 17.

Congress thus made the FVRA’s appointment mechanisms “exclusive” unless “a statutory provision expressly” allows a different mechanism. § 3347(a). No statute “expressly” authorizes the Commissioner for Patents to perform the Director’s duties “temporarily in an acting

¹⁰ In *SW General*, the D.C. Circuit “assume[d]” the exclusion of the NLRB General Counsel from § 3348’s void-*ab-initio* rule “renders the actions of an improperly serving Acting General Counsel *voidable*, not void,” 796 F.3d at 79; the government did not challenge that ruling, *see* 580 U.S. at 298 n.2.

capacity.” *Ibid.*¹¹ Nor was Commissioner Hirshfeld performing the Director’s duties under the FVRA’s appointment mechanisms. His performance of the Director’s duties violated the FVRA.

4. The Federal Circuit’s decision is wrong even on its own terms: The Director’s authority to unilaterally review PTAB decisions is *non*-delegable.

Before this Court’s decision in *Arthrex*, 35 U.S.C. § 6(c) generally forbade singlehanded review of PTAB decisions, mandating that rehearings be “heard by at least 3 members.” § 6(c). In *Arthrex*, this Court lifted § 6(c)’s bar on unilateral review for “the Director”—and the Director alone—to ensure final decisionmaking authority rests with “an officer nominated by the President and confirmed by the Senate.” 141 S. Ct. at 1987-1988. “Section 6(c) otherwise remains operative as to the other members of the PTAB,” *id.* at 1987, including the Commissioner for Patents, *see* § 6(a).

Consequently, singlehanded review of PTAB decisions is a “function or duty” “required by statute to be performed by the [Director] (and only [the Director]),” § 3348(a)(2)(A). Unilateral review by anyone else contravenes § 6(c). Thus, even if § 3348’s definition of “function or duty” applied to the rest of the FVRA—and it does not—Director review of IPR decisions is *not* delegable because § 6(c) proscribes it.

The Federal Circuit’s view that both the PTAB and the Director may “rule on rehearing requests,” 35 F.4th at 1339 n.4, changes nothing. Commissioner Hirshfeld pur-

¹¹ Other statutes expressly authorize internally designated temporary appointments. *E.g.*, 28 U.S.C. § 508(b) (Attorney General “may designate the Solicitor General and the Assistant Attorneys General, in further order of succession, to act as Attorney General” during vacancy).

ported to rule on a rehearing request *unilaterally*. Under § 6(c) and this Court's decision in *Arthrex*, only the Director may perform *that* function. The whole point of *Arthrex*'s "tailored" remedy was to ensure review by "an officer properly appointed to a principal office" (*i.e.*, the Director). 141 S. Ct. at 1985, 1987. The Federal Circuit allowed singlehanded review by the Commissioner, a person *not* "properly appointed to a principal office." Section 6(c) forbids such review. And, unlike with the presidentially appointed, Senate-confirmed Director, nothing in the Constitution justifies disregarding that prohibition.

CONCLUSION

The petition should be granted.

Respectfully submitted.

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APPENDIX A
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2020-2271

VIRNETX INC.,
Appellant,

v.

MANGROVE PARTNERS MASTER FUND, LTD.,
APPLE INC.,
Appellees,

KATHERINE K. VIDAL, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,
Intervenor.

Appeal from the United States Patent and
Trademark Office, Patent Trial and Appeal
Board in Nos. IPR2015-01046, IPR2016-00062.

No. 2020-2272

VIRNETX INC.,
Appellant,

v.

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

(1a)

2a

KATHERINE K. VIDAL, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,

Intervenor.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in Nos. IPR2015-
01047, IPR2016-00063, IPR2016-00167.

OPINION

March 30, 2023

STEPHEN BLAKE KINNAIRD, Paul Hastings LLP, Washington, DC, argued for appellant. Also represented by NAVEEN MODI, JOSEPH PALYS, IGOR VICTOR TIMOFEYEV, DANIEL ZEILBERGER; JEFFREY A. LAMKEN, MoloLamken LLP, Washington, DC.

JAMES T. BAILEY, Law Office of James T. Bailey, New York, NY, for appellee Mangrove Partners Master Fund, Ltd.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for Apple Inc. Also represented by MARK CHRISTOPHER FLEMING, LAUREN B. FLETCHER; BRITTANY BLUEITT AMADI, STEVEN JARED HORN, Washington, DC; THOMAS GREGORY SPRANKLING, Palo Alto, CA; SCOTT BORDER, JEFFREY PAUL KUSHAN, Sidley Austin LLP, Washington, DC.

THOMAS H. MARTIN, Martin & Ferraro, LLP, Hartville, OH, for appellee Black Swamp IP, LLC. Also represented by WESLEY MEINERDING.

MAUREEN DONOVAN QUELER, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA for intervenor. Also represented by KAKOLI CAPRIHAN, DANIEL KAZHDAN, THOMAS W. KRAUSE, FARHEENA YASMEEN RASHEED; MICHAEL GRANSTON, SCOTT R. MCINTOSH, JOSHUA MARC SALZMAN Appellate Staff, Civil Division, United States Department of Justice, Washington, DC.

Before MOORE, *Chief Judge*, HUGHES and STARK,
Circuit Judges.

STARK, *Circuit Judge*.

In this consolidated appeal, VirnetX Inc. (“VirnetX”) appeals from two final written decisions of the Patent Trial and Appeal Board (“Board”) holding the challenged claims of U.S. Patent Nos. 6,502,135 (“’135 patent”) and 7,490,151 (“’151 patent”) unpatentable. J.A. 1-28 (regarding ’135 patent); J.A. 29-60 (regarding ’151 patent). VirnetX also challenges Black Swamp IP, LLC’s (“Black Swamp”) joinder. We affirm.

I.

VirnetX owns the ’135 and ’151 patents. Both are generally directed to a “secure mechanism for communicating over the internet.” ’135 patent cols. 2-3 ll. 66-67, 1-2; *see* also ’151 patent col. 3 ll. 8-11. These patents have been before us previously, *see, e.g., VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, 778 F. App’x 897 (Fed. Cir. 2019) (“*Mangrove Appeal*”); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308 (Fed. Cir. 2014) (“*Cisco Appeal*”), so we have had occasion to describe them, doing so as follows:

The ’135 and ’151 patents share a common specification disclosing a system in which, instead of a conventional DNS [(“Domain Name Service”)] receiving

the request, a DNS proxy intercepts it and determines whether the request is for a secure site. If the proxy determines that a request is for a secure site, the system automatically initiates a virtual private network (“VPN”) between the proxy and the secure site. If the browser determines that the request was for a non-secure website, then the DNS proxy forwards the request to a conventional DNS for resolution.

Cisco Appeal, 767 F.3d at 1315 (internal citations omitted).

A.

The ’135 patent is entitled “Agile Network Protocol for Secure Communications with Assured System Availability.” Independent claim 1 is representative, with emphasis added to the term principally in dispute:

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.

’135 patent col. 47 ll. 20-32.

Mangrove Partners Master Fund, Ltd. (“Mangrove”) petitioned for inter partes review (“IPR”) of claims 1, 3-4,

7-8, 10, and 12 of the '135 patent, alleging that these claims were anticipated by a 1996 article authored by Kiuchi and Kaihara, entitled "C-HTTP – The Development of a Secure, Closed HTTP-based Network on the Internet" ("Kiuchi"), and that claim 8 was obvious based on Kiuchi in view of Mockapetris, Request for Comment 1034, "Domain Names – Concepts and Facilities," Nov. 1997 ("RFC 1034"). J.A. 5. Once the Board instituted review, Apple Inc. ("Apple") filed additional IPR petitions and was joined to Mangrove's IPR proceeding. *See Mangrove Appeal*, 778 F. App'x at 900-01.

B.

The '151 patent is entitled "Establishment of a Secure Communication Link Based on a Domain Name Service (DNS) Request." Independent claim 13 is representative, again with emphasis added to the terms in dispute:

13. A computer readable medium storing a *domain name server (DNS) module* comprised of computer readable instructions that, when executed, cause a data processing device to perform the steps of:

(i) *determining* whether a DNS request sent by a client corresponds to a secure server;

(ii) when the DNS request does not correspond to a secure server, *forwarding* the DNS request to a DNS function that returns an IP address of a nonsecure computer; and

(iii) when the intercepted DNS request corresponds to a secure server, automatically *creating* a secure channel between the client and the secure server.

'151 patent col. 48 ll. 18-29.

Mangrove petitioned for IPR of claims 1-2, 6-8, and 12-14 of the '151 patent, alleging they were anticipated by Kiuchi and obvious based on (a) Kiuchi in view of RFC

1034, (b) Kiuchi in view of a 1996 reference by Rescorla and Schiffman, entitled “The Secure Hypertext Transfer Protocol” (“Rescorla”), and (c) Kiuchi in view of RFC 1034 and in further view of Rescorla. J.A. 33. Apple was also joined to the proceeding. *See Mangrove* Appeal, 778 F. App’x at 900-01. Black Swamp then petitioned for IPR of claims 1-2, 6-8, and 12-14 and moved for joinder, which the Board granted. *See id.* at 901 n.1.

In the remainder of this opinion, we will refer to Mangrove, Apple, and Black Swamp collectively as “Petitioners.”

C.

Kiuchi is the only reference at issue in this appeal. This is because Kiuchi provided some or all of the bases on which the Board predicated its unpatentability decisions with respect to the challenged claims in the ’135 and ’151 patents. *See* J.A. 26; J.A. 58.¹

Kiuchi’s secure network was developed to ensure the “[s]ecure transfer of patient information for clinical use” in a hospital setting. J.A. 5266. A depiction of an embodiment of Kiuchi – prepared by Petitioners’ expert,

¹ The Board determined that the challenged claims of the ’135 patent were all anticipated by Kiuchi and did not reach Mangrove’s additional unpatentability ground. J.A. 26. With respect to the ’151 patent, the Board found that Kiuchi anticipated claims 13 and 14 and the combination of Kiuchi and Rescorla rendered claims 1-2, 6-8, and 12-14 obvious. J.A. 58. This appeal presents no issues relating to Rescorla or RFC 1034. Given that the only issues on appeal relate to Kiuchi, our affirmance of the Board’s judgment of anticipation by Kiuchi of claims 13 and 14 of the ’151 patent leads us also to affirm the Board’s determination that claims 1-2, 6-8, and 12-14 of the same patent are unpatentable due to obviousness.

annotated by Petitioners' counsel, and then relied on by the Board –

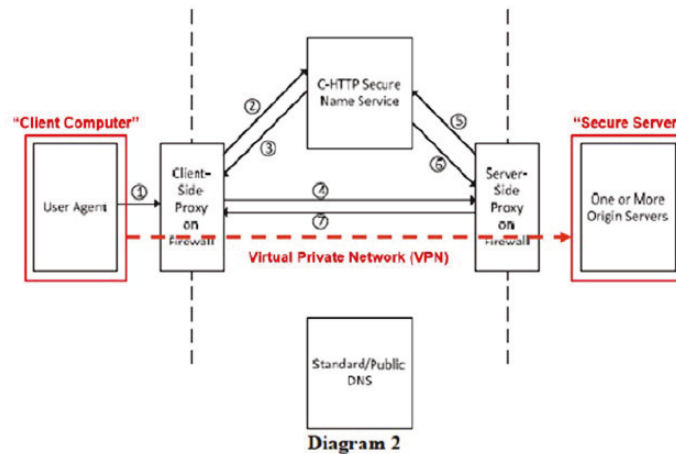


Diagram 2

is reproduced and explained below. J.A. 12-13; *see also* J.A. 7066.

As shown, in Kiuchi a client or “user agent” first sends a uniform resource locator (“URL”) to the client-side proxy (step 1 in Diagram 2). J.A. 5267; *see also* J.A. 5454. Next, the client-side proxy sends the URL to the C-HTTP secure name service, which checks if the client-side proxy is permitted to connect with the host (also known as an “origin server”) to which the URL corresponds (step 2). *See* J.A. 5267. If the client-side proxy is authorized to communicate with that host, “the C-HTTP name server sends the IP address and public key of the server-side proxy and both request and response Nonce values” or returns an error code (step 3). *Id.* Then, the client-side proxy sends a connection request to the server-side proxy (step 4). *Id.* The server-side proxy checks with the C-HTTP name server to verify that the client-side proxy is “an appropriate member of the closed network” (steps 5 and 6). J.A.

5267-68. If so, “the C-HTTP name server sends the IP address and public key of the client-side proxy [to the server-side proxy] and both request and response Nonce values, which are the same as those sent to the client-side proxy” (step 7). J.A. 5268. Both the client-side proxy and server-side proxy then authenticate each other, and a secure connection – the dashed line “Virtual Private Network (VPN)” in Diagram 2 – is established. *Id.*

As the Board stated, Kiuchi teaches that after the steps outlined above, “a VPN between the user agent and the origin server that passes through the client-side proxy and server-side proxy” is established. J.A. 12. At that point, the “client-side proxy forwards HTTP/1.0 requests from the user agent in encrypted form using C-HTTP format” to the server-side proxy, and the “server-side proxy forwards requests to the origin server.” J.A. 5268. Thereafter, the origin server’s response is “encrypted in C-HTTP format by the server-side proxy and is forwarded to the client-side proxy” which decrypts it, and the response is ultimately sent to the user agent. *Id.*

D.

In September 2016, the Board issued a final written decision finding all challenged claims of the ’135 patent unpatentable. J.A. 1723-58. VirnetX had argued that the preamble of claim 1, which recites a *virtual private network (VPN) between a client computer and a target computer*, was limiting and must be construed in light of a disclaimer VirnetX had made during reexamination of its ’135 patent. *See, e.g.*, J.A. 1737-38. VirnetX argued that it had “disclaimed any virtual private networks and virtual private network communication links that are not direct,” J.A. 1192, and had done so to distinguish Aventail, a prior-art reference teaching “a system and architecture for transmitting data between two computers using the

SOCKS protocol,” J.A. 7763-64. The Board disagreed, finding no disclaimer. *See* J.A. 1738.

VirnetX then appealed to this Court. *See Mangrove Appeal*, 778 F. App’x at 909-10. Contrary to the Board, we determined that “[t]he statements VirnetX made during reexamination constitute disclaimer.” *Id.* at 910. The source of this disclaimer is VirnetX’s 2010 response to an Office Action rejection based on Aventail. *See* J.A. 7760, 7763-66. In that response, VirnetX stated:

Aventail discloses a system where a client on a public network transmits data to a SOCKS server *via a singular, point-to-point SOCKS connection at the socket layer of the network architecture*. The SOCKS server then *relays* that data to a target computer on a private network on which the SOCKS server also resides. All communications between the client and target stop and start at the intermediate SOCKS server. The client cannot open a connection with the target itself.

J.A. 7766 (internal citations omitted and emphasis added).
In the *Mangrove Appeal*, we held:

VirnetX described a system in which a client computer communicates with an intermediate server via a singular, *point-to-point connection*. That intermediate server then *relays* the data to a target computer on the same private network on which the server resides. VirnetX stated that because the computers “do not communicate directly with each other” and “[t]he client cannot open a connection with the target itself,” the computers are not on the same VPN. This clearly and unmistakably states that a “VPN between the client computer and the target computer” requires direct communication

between the client and target computers.

Id. at 910 (quoting J.A. 7766) (internal citations omitted and emphasis added).

We vacated the Board’s judgment of unpatentability and remanded for the Board to consider whether, as a factual matter, Kiuchi taught a direct-communication VPN – in which case it would anticipate the challenged claims of the ’135 patent – or whether, instead, Kiuchi taught an indirect-communication VPN – which would bring Kiuchi within the scope of VirnetX’s disclaimer and, consequently, render it non-anticipating. *See id.*

On remand, the Board issued a second final written decision in July 2020. J.A. 1-28 (“2020 ’135 FWD”). There, the Board again found all the challenged claims in the ’135 patent unpatentable. J.A. 26. In particular, the Board found that Kiuchi disclosed a *virtual private network (VPN) between a client computer and a target computer* with direct communication and, thus, Kiuchi anticipated the challenged claims. J.A. 18. After considering VirnetX’s description of its 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,” and VirnetX’s expert’s testimony that “direct communication refers to direct addressability,” the Board concluded that “the ability to address data to a particular computer is a key aspect of the claimed VPN.” J.A. 14. The Board reasoned that “Kiuchi’s system, unlike the disclaimed scope, allows a client (the user agent) to connect to a remote [origin] server transparently and access resources with only the single URL identifying the remote resource.” J.A. 15. Therefore, according to the Board, Kiuchi discloses a direct-communication VPN between the client and target and anticipates the challenged claims of the ’135 patent. J.A. 18.

E.

Meanwhile, also in September 2016, the Board issued its first final written decision concerning the challenged claims of the '151 patent. *See* J.A. 4233-70. In it, the Board found that all challenged claims (1-2, 6-8, and 12-14) were unpatentable as anticipated by Kiuchi or obvious in view of Kiuchi and other references. *Id.* We addressed VirnetX's subsequent appeal as part of our opinion in the *Mangrove* Appeal, 778 F. App'x at 906. As with the '135 patent, we disagreed with the Board, holding that "[s]ubstantial evidence does not support the Board's finding that the CHTTP name server [of Kiuchi] performs the functions of the claimed DNS proxy module" in the '151 patent. *Id.* Accordingly, we vacated the Board's judgment and remanded for further proceedings. *See id.* at 911.

On remand, in July 2020, the Board issued a second final written decision regarding the '151 patent. J.A. 29-60 ("2020 '151 FWD"). The Board explained that Petitioners were asserting that Kiuchi's "client-side proxy – working in concert with the C-HTTP name server – is a domain name server (DNS) proxy module that intercepts DNS requests sent by a user agent acting as a client." J.A. 38-39. The Board agreed with Petitioners' analysis, finding that Kiuchi's client-side proxy and C-HTTP name server together perform all the DNS module's pertinent claim limitations and, therefore, that Kiuchi anticipates claims 13 and 14, *see* J.A. 39-47, and Kiuchi in combination with Rescorla renders all of the challenged claims obvious, J.A. 58.²

² On appeal, VirnetX challenges only the Board's assessment of Kiuchi; it presents no non-Kiuchi-based criticism of the Board's obviousness analysis. VirnetX does not dispute that if we affirm the Board's determination that claims 13 and 14 of the '151 patent are anticipated

F.

VirnetX timely appealed the Board’s determinations that Kiuchi anticipates the challenged claims of the ’135 patent, as the Board explained in the 2020 ’135 FWD, and anticipates claims 13 and 14 of the ’151 patent, as explained in the 2020 ’151 FWD. On appeal, VirnetX’s main contention with respect to the ’135 patent is that Kiuchi does not teach direct communication but, instead, only indirect communication, which brings Kiuchi within the scope of VirnetX’s disclaimer and outside the scope of its claims. Its principal argument with respect to the ’151 patent is that Kiuchi does not teach a DNS proxy module capable of performing the determining, forwarding, and creating steps of the challenged claims. Finally, VirnetX argues that the Board improperly joined Black Swamp to the IPR concerning the ’151 patent (i.e., IPR2015-01047).³

We have jurisdiction to review final written decisions of the Board under 28 U.S.C. § 1295(a)(4)(A).

II.

We review the Board’s legal determinations de novo and its factual findings for substantial evidence. *See Almirall, LLC v. Amneal Pharms. LLC*, 28 F.4th 265, 271 (Fed. Cir. 2022). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate

by Kiuchi then we must also affirm the Board’s conclusion that all of the challenged claims of the ’151 patent are unpatentable as obvious. We will do so.

³ VirnetX initially challenged the authority of Acting Director Commissioner Hirshfeld to issue final decisions in light of *United States v. Arthrex, Inc.*, 141 S. Ct. 1970 (2021). The government intervened to address this challenge. VirnetX later acknowledged that this argument is foreclosed by our decision in *Arthrex, Inc. v. Smith & Nephew, Inc.*, 35 F.4th 1328 (Fed. Cir. 2022). *See* No. 20-2271 ECF No. 107. Therefore, we do not address it.

to support a conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). “[T]he possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency’s finding from being supported by substantial evidence.” *Consolo v. Fed. Maritime Comm’n*, 383 U.S. 607, 620 (1966).

Anticipation presents a question of fact we review for substantial evidence. See *Husky Injection Molding Sys. Ltd. v. Athena Automation Ltd.*, 838 F.3d 1236, 1248 (Fed. Cir. 2016). The Board’s conclusions about what a prior-art reference discloses are also reviewed for substantial evidence. See *Elbit Sys. of Am. v. Thales Visionix, Inc.*, 881 F.3d 1354, 1357 (Fed. Cir. 2018).

To anticipate under 35 U.S.C. § 102, a single prior-art reference “must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). “The requirement that the prior art elements themselves be arranged as in the claim means that claims cannot be treated . . . as mere catalogs of separate parts, in disregard of the part-to-part relationships set forth in the claims and that give the claims their meaning.” *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010) (internal quotation marks omitted).

III.

Substantial evidence supports the Board’s conclusion that Kiuchi teaches a direct-communication VPN and is therefore within the scope of the claims of VirnetX’s ’135 patent, and not an indirect-communication VPN, which would have brought Kiuchi within the scope of VirnetX’s disclaimer. It follows that Kiuchi, which is undisputedly

prior art to the '135 patent, anticipates the challenged claims of the '135 patent.

A.

As we explained in the *Mangrove* Appeal, when VirnetX distinguished Aventail during reexamination of the '135 patent, VirnetX disclaimed “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. To be within the scope of VirnetX's claims, therefore, “requires direct communication between the client and target computers.” *Id.* We remanded for the Board to make a factual determination as to whether Kiuchi involves “singular, point-to-point connection[s]” with intermediate components sitting between a client and a target computer, or whether, instead, Kiuchi involves “direct communication” between a client and target computer, even if intermediate components sit between the client and target. *Id.*

On remand, the Board found “by a preponderance of evidence that Kiuchi discloses direct communication that satisfies the claimed VPN.” J.A. 18. In doing so, the Board expressly found “that Kiuchi's system does not use a singular, point-to-point connection as was disclaimed,” and as had been used in Aventail. *Id.* The Board rejected VirnetX's contrary arguments as “conflat[ing] link with connection,” J.A. 13, and focused instead on the “nature of the overall connection,” J.A. 14. In particular, the Board found that “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.” J.A. 15.

The Board’s conclusions are grounded in its reading of Kiuchi and the ’135 patent. Its conclusions are supported by substantial evidence.⁴

We agree with the Board the VirnetX “provides no explanation of why Kiuchi’s connection is a point-to-point connection.” J.A. 16. To the contrary, as the Board explained:

Kiuchi’s system . . . 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,⁵ which allows the system to route a packet as required to reach the destination address provided by the client computer. 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.

J.A. 15 (internal citations omitted).

As the Board further found, Kiuchi’s proxy servers *forward* data packets and do not, instead, *relay* data packets from point to point. *See, e.g.*, J.A. 12; *see also* J.A. 5268 (Kiuchi using language such as “client-side proxy forwards,” “[f]orwarding requests to an origin server,” “server-side proxy forwards,” “[a]n HTTP/1.0 response sent

⁴ The Board stated that a declaration filed by Petitioners’ expert, Dr. Guerin, “d[id] not drive [its] conclusion on any disputed issue.” J.A. 24; J.A. 56.

⁵ TARP is the ’135 patent’s “Tunneled Agile Routing Protocol.” *See, e.g.*, J.A. 4. TARP routing, which is expressly within the scope of the claims, uses “multiple links between two TARP terminals.” J.A. 14.

from the origin server to the server-side proxy is encrypted in CHHTTP format by the server-side proxy, and is forwarded to the client-side proxy”). Forwarding is within the scope of the claims, while relaying – which involves point-to-point communication, as data packets are accumulated at an intermediate point before being relayed to their next destination – is within the scope of VirnetX’s disclaimer. We know this from Aventail, which is the basis for VirnetX’s disclaimer, and in which the SOCKS server “relays . . . data to a target computer on a private network on which the SOCKS server also resides.” J.A. 7766 (emphasis added); see also *Mangrove Appeal*, 778 F. App’x at 910 (describing VirnetX’s disclaimer as encompassing systems where “intermediate server then relays the data to a target computer”). In this way, communications between the client and target “stop and start at the intermediate SOCKS server,” preventing “[t]he client [from] open[ing] a connection with the target itself.” *Id.* at 909. Kiuchi, by using forwarding, instead involves direct communication within the scope of VirnetX’s claims.⁶

Additionally, the Board found that Kiuchi discloses “direct addressability,” which is “the ability to address data

⁶ VirnetX argues that Kiuchi’s proxies “modif[y] HTML documents” and that this prevents direct communication. See, e.g., Opening Br. 42 (citing J.A. 5267-68). As Petitioners point out, however, there is substantial evidence that Kiuchi transmits at least some data, like image or sound data, without modification. See, e.g., Answering Br. 31 (citing J.A. 5893 (VirnetX’s expert agreeing that Kiuchi “can transfer files of various kinds”); J.A. 5910 (VirnetX’s expert unable to “recall” anything in Kiuchi “that said that sound or image data files are modified when they are transferred from an origin server to a user agent”). This is sufficient to satisfy the requirement for direct communication. See J.A. 17 (“Kiuchi’s disclosures of at least those types of resources [e.g., image and sound objects] maintain the requirement for direct communication.”).

to a particular computer,” a “key aspect of the claimed VPN.” J.A. 14. The Board found that Kiuchi teaches direct addressability because “Kiuchi’s user agent generates a request that includes a resource address (in the form of a URL).” *Id.* (citing portions of Kiuchi).⁷ As support, the Board observed that a VirnetX expert, Dr. Monrose, “testified that Kiuchi’s URL provided by the user agent is an address of the resource on an origin server.” J.A. 14-15. To the extent “direct communication refers to direct addressability,” as another VirnetX expert, Dr. Jones, testified (J.A. 6206), substantial evidence supports the Board’s finding that Kiuchi discloses direct addressability and, therefore, direct communication.

The Board’s factual finding that Kiuchi discloses direct communication within the scope of VirnetX’s claims, and not indirect communication within the scope of VirnetX’s disclaimer, is also consistent with the infringement claims VirnetX has litigated. In the *Cisco* Appeal, we affirmed a judgment that Apple’s VPN On Demand service infringed the ’135 patent, finding substantial evidence existed to support the conclusion that VPN On Demand involved direct communication even though it used “security measures including VPN servers, VPN authentication servers, proxy servers, and firewalls,” all placed between a client and target computer. 767 F.3d at 1321.

In the same opinion, we affirmed a finding that certain embodiments of Apple’s FaceTime service infringed claims of related patents. *See id.* at 1319-20. Part of the

⁷ VirnetX argues that Kiuchi’s use of a URL cannot alone distinguish direct communication from indirect communication. *See, e.g.*, Reply Br. 7. We agree, but we do not read the Board’s decision as stating otherwise. *See, e.g.*, J.A. 14-15 (explaining that once connection is established, IP addresses of proxies are used, and proxies forward packets to user agent or origin server as needed).

Cisco Appeal involved VirnetX’s assertion of U.S. Patent Nos. 7,418,504 and 7,921,211 against Apple’s FaceTime servers. *Id.* at 1313. The asserted claims included a “secure communication link” limitation that required direct communication, just like the claims of the ’135 patent. *Id.* at 1314. We rejected Apple’s contention that it was entitled to judgment of non-infringement as a matter of law, a request Apple based on its argument that the accused FaceTime servers addressed communication to intermediate network address translators (“NATs”) rather than directly to the receiving device, preventing – according to Apple – direct communication. *See id.* at 1319-20.

To the contrary, we determined that the district court did not err in concluding that there was “substantial evidence to support the jury’s finding that NAT routers used by FaceTime do not impede direct communication” “because they merely translate addresses from the public address space to the private address space, but do not terminate the connection” between the FaceTime server and the receiving device. *Id.*; *see also id.* at 1314 (“Apple’s FaceTime server . . . forwards the invitation to a network address translator (‘NAT’) which, in turn, readdresses the invitation and sends it on to the receiving device.”). We found support for this conclusion in the district court’s claim construction, which provided that “routers, firewalls, and similar servers . . . do not impede ‘direct’ communication.” *Id.* at 1320 (quoting *VirnetX Inc. v. Apple Inc.*, 925 F. Supp. 2d 816, 831 (E.D. Tex. 2013)).

Further confirmation for our holding today is found in the fact that, in the litigation leading to the *Cisco* Appeal, VirnetX agreed that another FaceTime embodiment – the relay embodiment – did *not* have an infringing direct-communication VPN. Specifically, VirnetX “concede[d] that the [FaceTime] feature does not infringe if calls are routed

through a relay server, because there is *no direct communication through a relay server.*” *VirnetX Inc.*, 925 F. Supp. 2d at 830 (emphasis added). In this respect, the relay server embodiment of FaceTime was like the Aventail embodiment VirnetX has clearly and unmistakably disclaimed.

Thus, again, substantial evidence supports the Board’s finding that Kiuchi anticipates the challenged claims of the ’135 patent.⁸

B.

In its reply brief, VirnetX refined its argument as to what constitutes “direct communication,” now asserting that its claims specifically require “a *transport-layer* [or TCP] connection directly between the user agent and the origin server.” Reply Br. 3 (emphasis added).⁹ At oral argument, VirnetX placed significant emphasis on this new argument, suggesting that the ’135 patent’s claims only encompass direct connections between a user and target computer at the transport layer, so direct connections at

⁸ We recognize that in the *Cisco* Appeal, 767 F.3d at 1324, we affirmed the district court’s entry of judgment of no invalidity, based on the jury having “heard expert testimony that Kiuchi’s client-side and server-side proxies terminate the connection, process information, and create a new connection – actions that are not ‘direct’ within the meaning of the asserted claims.” That we upheld this verdict, which was based on a finding that Apple failed to prove anticipation by clear and convincing evidence, did not preclude the Board from finding, on a different record, anticipation by its own standard of a preponderance of the evidence.

⁹ VirnetX was referring to the seven-layer Open Systems Interconnection (“OSI”) model, which consists of the following layers: physical, data link, network, transport, session, presentation, and application. See Reply Br. 2; see also ’135 patent col. 4 ll. 3-6 (referencing network layer, data link layer, and application layer); ’151 patent col. 4 ll. 11-14 (same).

any of the other six layers would be outside the scope of its claims (and therefore do not anticipate). *See* Oral Arg. at 6:20-6:36 (VirnetX counsel distinguishing TARP embodiments, which are within scope of '135 patent's claims, from Kiuchi, based on TARP routers' operation at network layer).¹⁰

VirnetX's argument that direct connections at layers other than the transport layer are irrelevant was not made in its opening brief and is forfeited. *See Quanergy Sys., Inc. v. Velodyne Lidar USA, Inc.*, 24 F.4th 1406, 1415 n.6 (Fed. Cir. 2022) (party's failure to challenge Board's findings in opening brief constituted forfeiture). "[F]orfeiture is the failure to make the timely assertion of a right." *United States v. Olano*, 507 U.S. 725, 733 (1993). At oral argument, VirnetX's counsel conceded that VirnetX had not, as the Court put it, made "this much more fine-tuned distinction between saying . . . connection means one thing in the network layer and a different thing in the transport layer" in its opening brief. Oral Arg. at 30:25-41. Even considering the parties' uninvited post-argument letters (No. 20-2271 ECF Nos. 111, 112), we have been pointed to nowhere in our record where VirnetX made this distinction prior to its reply brief in this appeal.¹¹ Accordingly,

¹⁰ Oral Argument ("Oral Arg."), available at https://oralarguments.cafc.uscourts.gov/default.aspx?fl=20-2271_09082022.mp3.

¹¹ Perplexingly, VirnetX attached to its letter excerpts from a brief and oral presentation *Petitioners* made to the Board. *See* No. 20-2271 ECF No. 111 Exs. A & B. VirnetX also now insists it raised the issue in its opening brief. *See* No. 20-2271 ECF No. 111 at 1. But all it said there was the following:

TARP is a packet-routing protocol that, like the IP protocol, operates at or below the network layer of Internet communications. End-to-end "connections" between computers are formed at a higher layer, the transport layer, typically using the TCP protocol. . . . TARP routing does not affect how

this issue is forfeited and we need not, and will not, address it. *See generally Quanergy Sys., Inc.*, 24 F.4th at 1415 n.6 (“Quanergy failed to challenge these findings in its opening brief, and its attempt to do so in its reply brief is untimely.”); *see also SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1319 (Fed. Cir. 2006) (“Our law is well established that arguments not raised in the opening brief are waived.”).

Accordingly, we affirm the Board’s finding that Kiuchi anticipates the challenged claims of the ’135 patent.

IV.

Substantial evidence also supports the Board’s conclusion that Kiuchi teaches a domain name server (“DNS”) module and, therefore, anticipates claims 13 and 14 of the ’151 patent.

Claim 13 of the ’151 patent requires a DNS module to “perform the steps” of “*determining* whether a DNS request sent by a client corresponds to a secure server;” “when the DNS request does not correspond to a secure server, *forwarding* the DNS request to a DNS function that returns an IP address of a nonsecure computer;” and “when the intercepted DNS request corresponds to a secure server, automatically *creating* a secure channel between the client and the secure server.” ’151 patent col. 48 ll. 18-29 (emphasis added). In the *Mangrove* Appeal, we held that substantial evidence did not support the Board’s finding that Kiuchi’s C-HTTP name server alone taught

computers form connections or engage in direct or indirect communication.

Opening Br. 36 (internal citations omitted). As is evident, VirnetX did *not* argue in its opening brief that only connections at the transport layer matter for assessing infringement, anticipation, or the scope of VirnetX’s claims or disclaimer.

the *determining, forwarding, and creating* limitations of claim 13. *See* 778 F. App’x at 906-07. In particular, we determined that Kiuchi’s C-HTTP name server “does not forward a DNS request to a DNS function.” *Id.* at 906.

On remand, Petitioners argued that Kiuchi’s “client-side proxy, working with the C-HTTP name server, acts as the claimed DNS proxy module.” J.A. 38.¹² The Board adopted this mapping of Kiuchi onto claim 13 and found anticipation. *See, e.g.*, J.A. 43-44. We find substantial evidence, primarily Kiuchi itself, supports the Board’s finding.

As an initial matter, we agree with the Board that the ’151 patent explicitly teaches that its “claims are not limited to a particular arrangement of hardware,” as even VirnetX acknowledges. J.A. 42-43; *see also* Opening Br. 49 (“[T]he claims [of the ’151 patent] are not limited to a particular arrangement of hardware.”) (emphasis omitted). The ’151 patent’s specification contemplates combining the functions of DNS proxy 2610 and DNS server 2609 for convenience. *See* ’151 patent col. 38 ll. 30-32; *see also, e.g., id.* col. 38 ll. 22-24 (“Gatekeeper 2603 can be implemented on a separate computer (as shown in FIG. 26) or as a function within modified DNS server 2602.”).

Nonetheless, VirnetX asserts that Kiuchi’s client-side proxy and C-HTTP name server are “two distinct modules/ sets of instructions” that do not “disclose the single

¹² Notwithstanding VirnetX’s argument to the contrary, *see, e.g.*, Opening Br. 13, Petitioners have, from the outset of the IPR, mapped two of Kiuchi’s parts – the clientside proxy and the C-HTTP server – to the DNS proxy module. *See, e.g.*, J.A. 2652 (Mangrove, in its petition for institution of IPR, arguing, “[f]or example, Kiuchi’s client-side proxy – working in concert with the C-HTTP name server – is a domain name server (DNS) proxy module . . .”).

DNS module of the claims.” *See, e.g.*, Opening Br. 49. We disagree. Nothing in the record warrants limiting the module of claim 13 in the way VirnetX insists we must. Nor does VirnetX persuasively explain why a “module” cannot be composed of components in a client-server relationship. *See, e.g.*, Opening Br. 47-51; Reply Br. 13-18. As we have already noted, the specification contemplates different arrangements of hardware, and VirnetX cites no meritorious reason why two components of Kiuchi could not comprise one module.

Kiuchi’s client-side proxy and C-HTTP name server work cooperatively to “determin[e] whether a DNS request sent by a client corresponds to a secure server,” as required by the *determining* limitation of claim 13. *See* J.A. 42-44. Kiuchi teaches that its “client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL.” J.A. 5267. The C-HTTP name server then “examines whether the requested server-side proxy is registered in the closed network and is permitted to accept the connection from the client-side proxy.” *Id.* In this way, again, Kiuchi discloses the ’151 patent’s *determining* limitation.

Kiuchi’s client-side proxy and C-HTTP name server also, together, teach the *forwarding* limitation. In Kiuchi, when the client-side proxy’s request to communicate with a host is not permitted, the C-HTTP name server sends an error status code to the client-side proxy, which then “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” J.A. 39; *see also* J.A. 5267. The Board found that “[b]ehaving like an ordinary proxy to perform the DNS lookup means that the client-side proxy will send the DNS request to a public DNS server,” citing numerous disclosures in Kiuchi as support. J.A. 41; *see also* J.A. 39-42 (citing J.A. 5266-67). Therefore, Kiuchi’s client-side proxy

and C-HTTP name server work together, as a DNS module, to “forward[] the DNS request to a DNS function that returns an IP address of a nonsecure computer” “when the DNS request does not correspond to a secure server,” as required by claim 13.¹³

Kiuchi also teaches the *creating* limitation. Kiuchi’s client-side proxy “initiates an encrypted channel on public communication paths between the user agent and the origin server.” J.A. 44. The Board reasoned that claim 13 only requires a secure connection between the user and the secure server, *see id.*, and looked to the ’151 patent’s background-of-the-invention section to define “secure” as “immune to eavesdropping,” J.A. 46 (citing ’151 patent col. 1 ll. 34-35 (“It is desired for the communications to be secure, that is, immune to eavesdropping.”)). The Board was free to credit Petitioners’ evidence that Kiuchi taught the necessary secure channel “because data in Kiuchi’s C-HTTP network is encrypted when sent over public segments of the network path and protected using firewalls when sent over private segments.” J.A. 46 & n.9; *see also* J.A. 5266-67 (Kiuchi discussing communications between client-side and server-side proxies and user agents/origin

¹³ Even if, as VirnetX argues (*see* Opening Br. 50-51), only the client-side proxy is involved in Kiuchi’s forwarding step, while the combination of the C-HTTP name server and client-side proxy disclose the *determining* limitation, our anticipation cases do not require that every component of the DNS module must be involved in performing every limitation of the challenged claims. VirnetX relies on *NetMoneyIN, Inc.*, 545 F.3d at 1371, and *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1343 (Fed. Cir. 2016), for its counter to Petitioners’ anticipation theory, but each of those cases involved different embodiments in a single prior-art reference. Here, by contrast, both the client-side server and C-HTTP name server of Kiuchi are part of the same embodiment and work together as the DNS module. Our cases do not preclude such a theory of anticipation.

servers, which are “within the firewalls”); J.A. 5268 (explaining that proxies encrypt information passing between them). Therefore, Kiuchi’s client-side proxy and C-HTTP name server work together to “automatically creat[e] a secure channel between the client and the secure server” “when the intercepted DNS request corresponds to a secure server,” as required by the *creating* limitation of claim 13 of the ’151 patent.

For all of these reasons, we affirm the Board’s conclusion that Kiuchi anticipates claims 13 and 14 of the ’151 patent.¹⁴ Therefore, we also affirm the Board’s conclusion that Kiuchi in view of Rescorla renders all challenged claims of the ’151 patent obvious.

V.

Finally, VirnetX contends that Black Swamp was improperly joined in IPR2015-01047, regarding the ’151 patent, and asks us to vacate and remand the Board’s decision based on *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321 (Fed. Cir. 2020). Opening Br. 63-65. The Board granted Black Swamp’s motion for joinder, over VirnetX’s opposition, in early 2016. J.A. 5249-55; *see also* J.A. 5213-22. VirnetX then appealed the Board’s finding that certain claims of the ’151 patent were unpatentable, but it did not in that appeal – which we have referred to as the *Mangrove* Appeal – raise any issue regarding the Board’s joinder of Black Swamp. *See* 778 F. App’x at 901 n.1 (acknowledging Black Swamp’s joinder); *id.* at 900 (VirnetX challenging Board’s allowance of Apple’s joinder but not challenging Black Swamp’s joinder). Accordingly, the issue is forfeited. *See, e.g., Vivint v. Alarm.com Inc.*,

¹⁴ Claim 14 depends from claim 13. VirnetX raises no additional issues with respect to claim 14 that we have not already considered in connection with claim 13.

856 F. App'x 300, 304 (Fed. Cir. 2021) (explaining “it was [appellant’s] obligation to raise its [issue] before the first court who could have provided it relief” and holding that failure to do so led to forfeiture). We need not, and will not, address this forfeited issue.

VI.

The Board’s findings that Kiuchi anticipates claims of the ’135 and ’151 patents are supported by substantial evidence. VirnetX’s challenge to Black Swamp’s joinder is forfeited. We have considered VirnetX’s additional arguments and find them unpersuasive. Accordingly, we affirm.

AFFIRMED

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APPENDIX B
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2021-1672

VIRNETX INC., LEIDOS, INC., FKA SCIENCE
APPLICATIONS INTERNATIONAL
CORPORATION,
Plaintiffs-Appellees,
v.
APPLE INC.,
Defendant-Appellant.

Appeal from the United States District Court for the
Eastern District of Texas in No. 6:12-cv-00855-RWS,
Judge Robert Schroeder, III.

OPINION

March 31, 2023

JEFFREY A. LAMKEN, MoloLamken LLP, Washington, DC, argued for all plaintiffs-appellees. Plaintiff-appellee VirnetX Inc. also represented by RAYNER HASHEM, LUCAS M. WALKER; BRADLEY WAYNE CALDWELL, JASON DODD CASSADY, JOHN AUSTIN CURRY, Caldwell Cassady & Curry, Dallas, TX.

DONALD SANTOS URRABAZO, Urrabazo Law, P.C., Los Angeles, CA, for plaintiff-appellee Leidos, Inc. Also rep-

resented by ANDY TINDEL, Mann, Tindel & Thompson, Tyler, TX.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for defendant-appellant. Also represented by MARK CHRISTOPHER FLEMING, LAUREN B. FLETCHER; BRITTANY BLUEITT AMADI, STEVEN JARED HORN, Washington, DC; THOMAS GREGORY SPRANKLING, Palo Alto, CA.

Before MOORE, *Chief Judge*, HUGHES and STARK,
Circuit Judges.

STARK, *Circuit Judge*.

We previously affirmed that Apple’s VPN On Demand feature infringed claims of U.S. Patent Nos. 6,502,135 and 7,490,151. *VirnetX Inc. v. Apple Inc.*, 792 F. App’x 796, 813 (Fed. Cir. 2019). We remanded for further proceedings on damages. *Id.* Apple appealed the resulting damages award.

In the meantime, the Patent Trial and Appeal Board found both patents unpatentable. We have now affirmed that decision. *VirnetX Inc. v. Mangrove Partners Master Fund*, Nos. 20-2271, 20-2272 (Fed. Cir. Mar. 30, 2023).

The parties in this case agreed that if we affirmed the Board’s finding of unpatentability, then the Patent and Trademark Office would be obligated to cancel the claims of both patents and, therefore, VirnetX would no longer have a legally cognizable cause of action against Apple. *See* Oral Argument at 13:42-13:45, available at https://oralarguments.cafc.uscourts.gov/default.aspx?fl=21-1672_09082022.mp3 (VirnetX agreeing that in this eventuality it would be appropriate to “remand for dismissal because we’ve lost our cause of action”); Reply Br. 2. Now that we have affirmed the Board’s finding of un-

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patentability, VirnetX has lost its cause of action, and its dispute with Apple is moot. *See Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330, 1347 (Fed. Cir. 2013).

Accordingly, we vacate the district court's judgment and remand with instructions to dismiss the case as moot.

VACATED AND REMANDED

COSTS

Costs shall be assessed against Appellant.

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APPENDIX C

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

No. 2017-1368

VIRNETX INC.,

Appellant,

v.

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

Appellees,

Appeal from the United States Patent and
Trademark Office, Patent Trial and Appeal
Board in No. IPR2015-01046.

No. 2017-1383

VIRNETX INC.,

Appellant,

v.

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

Appellees,

Appeal from the United States Patent and
Trademark Office, Patent Trial and Appeal
Board in No. IPR2015-01047.

OPINION

July 8, 2019

NAVEEN MODI, Paul Hastings LLP, Washington, DC, argued for appellant. Also represented by STEPHEN BLAKE KINNAIRD, JOSEPH PALYS, IGOR VICTOR TIMOFEYEV, MICHAEL WOLFE, DANIEL ZEILBERGER.

MARK CHRISTOPHER FLEMING, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for all appellees. Appellee Apple Inc. also represented by WILLIAM F. LEE, LAUREN B. FLETCHER, DOMINIC E. MASSA; THOMAS GREGORY SPRANKLING, Palo Alto, CA; BRITTANY BLUEITT AMADI, Washington, DC.

JAMES T. BAILEY, Law Office of James T. Bailey, New York, NY, for appellee Mangrove Partners Master Fund, Ltd.

AMEDEO F. FERRARO, Martin & Ferraro, LLP, Los Angeles, CA, for appellee Black Swamp IP, LLC. Also represented by WESLEY MEINERDING, Hartville, OH.

NANCY J LINCK, Rothwell, Figg, Ernst & Manbeck, P.C., Washington, DC, for amici curiae Biotechnology Innovation Organization, Pharmaceutical Research and Manufacturers of America. Amicus curiae Biotechnology Innovation Organization also represented by MELISSA A. BRAND, HANSJORG SAUER, Biotechnology Innovation Organization, Washington, DC. Amicus curiae Pharmaceutical Research and Manufacturers of America also represented by DAVID EVAN KORN, Pharmaceutical Research and Manufacturers Association of America, Washington, DC.

Before PROST, *Chief Judge*, MOORE and REYNA,
Circuit Judges.

MOORE, *Circuit Judge*.

VirnetX Inc. appeals two inter partes review decisions holding claims 1, 3-4, 7-8, 10 and 12 of U.S. Patent No. 6,502,135 and claims 1-2, 6-8, and 12-14 of U.S. Patent No. 7,490,151 unpatentable. VirnetX raises multiple procedural challenges, including that the Patent Trial and Appeal Board (“Board”) erred by joining Apple Inc. to the proceedings, that substantial evidence does not support the Board’s finding that The Mangrove Partners Master Fund, Ltd. (“Mangrove”), named all real parties in interest, and that the Board abused its discretion in denying its request for authorization to file a motion for additional discovery. VirnetX also challenges the merits of the Board’s decision holding the claims unpatentable. For the following reasons, we vacate and remand.

BACKGROUND

VirnetX is the owner of the ’135 and ’151 patents (“Challenged Patents”). These patents have been the subject of ongoing litigation between VirnetX and Apple Inc. and multiple petitions for inter partes review. VirnetX served Apple with a complaint alleging infringement of claims of the Challenged Patents in 2010. In June 2013, Apple filed petitions for inter partes review of the Challenged Patents, which the Board denied as time-barred under 35 U.S.C. §315(b). *E.g.*, *Apple Inc. v. VirnetX Inc.*, IPR2013-00354, Paper 20 at 5 (P.T.A.B. Dec. 13, 2013). In November 2013, RPX Corporation petitioned for inter partes review of the Challenged Patents. The Board again denied institution as time-barred based on evidence that Apple was a real party in interest. *E.g.*,

RPX Corp. v. VirnetX Inc., IPR2014-00171, Paper 57 at 3. In April 2015, Mangrove petitioned for inter partes review of the Challenged Patents, and the Board instituted review. Following institution, Apple filed its own petitions asserting the same grounds of unpatentability as Mangrove’s petitions along with requests for joinder to the instituted proceedings. The Board granted Apple’s requests with certain conditions to Apple’s involvement.¹

Each challenge to claims of the Challenged Patents was based at least in part on a 1996 article by Kiuchi, et al., titled “The Development of a Secure, Closed HTTP-Based Network on the Internet” (“Kiuchi”). For the ’151 patent, the Board held that claims 1-2, 6-8, and 12-14 were anticipated by Kiuchi and rendered obvious by Kiuchi in view of other prior art references not at issue. For the ’135 patent, it held that claims 1, 3-4, 7-8, 10, and 12 were anticipated by Kiuchi and claim 8 was rendered obvious by Kiuchi in view of another prior art reference not at issue. VirnetX timely filed notices of appeal, and the appeals were consolidated. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

I. Procedural Challenges

A

We review questions of statutory interpretation de novo. *Mudge v. United States*, 308 F.3d 1220, 1224 (Fed. Cir. 2002). We must “hold unlawful and set aside agency action, findings, and conclusions found to be in excess of statutory jurisdiction, authority, or limitations, or short of statutory right.” 5 U.S.C. § 706(2)(C). In making this

¹ Black Swamp IP, LLC, also filed a petition with respect to the ’151 patent and was joined to that proceeding.

determination we must take due account of prejudicial error. *Id.*

VirnetX argues that Apple's joinder to these proceedings violates 35 U.S.C. § 315(b). The first sentence of this provision states:

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.

It is undisputed that Apple was served with a complaint alleging infringement of the Challenged Patents more than a year before the filing date. But the second sentence of § 315(b) includes an exception: "The time limitation set forth in the preceding sentence shall not apply to a request for joinder under subsection (c)." Section 315(c) states:

If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter partes review under section 314.

Under the Patent and Trademark Office's ("PTO") regulation, an otherwise time-barred party can file a petition accompanied by a request for joinder after inter partes review is instituted to avoid the one-year bar. 37 C.F.R. § 42.122(b). That is what occurred here.

We decline to decide whether Apple’s joinder was permitted under §315(b)-(c) because VirnetX has not demonstrated that it was prejudiced by Apple’s involvement. Apple’s petitions did not add any issues to the proceedings. J.A. 1983 (the Board stating that the grounds on which review was instituted “are unchanged and no other grounds are included in the joined proceeding”); J.A. 3859 (same). They brought the same challenges to the Challenged Patents as Mangrove’s petitions. In granting Apple’s request for joinder, the Board imposed restrictions on Apple’s involvement, stating that Apple must adhere to the existing schedule, must consolidate its filings with Mangrove, is bound by any discovery agreements between Mangrove and VirnetX, and is not entitled to any additional discovery. J.A. 1982-83; J.A. 3858. It gave Mangrove the authority to designate the attorneys to depose witnesses and present at the oral hearing. 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.

B

“A petition filed under section 311 may be considered only if . . . the petition identifies all real parties in interest.” 35 U.S.C. §312(a)(2). The real-party-in-interest inquiry at common law, which defines the meaning of the term in §312(a)(2), “seeks to ascertain who, from a practical and equitable standpoint, will benefit from the redress that the chosen tribunal might provide.” *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1349 (Fed. Cir. 2018) (“*AIT*”). One factor relevant to whether a third party is a real party in interest, which the Board focused on here, is whether it “exercised or could have exercised control over a party’s participation in a proceeding.” Office Patent Trial Practice Guide, 77

Fed. Reg. 48,756, 48,759 (Aug. 14, 2012). A “petitioner’s initial identification of the real parties in interest should be accepted unless and until disputed by a patent owner.” *Worlds Inc. v. Bungie, Inc.*, 903 F.3d 1237, 1243 (Fed. Cir. 2018). To dispute it, the patent owner “must produce *some* evidence that tends to show that a particular third party should be named a real party in interest.” *Id.* at 1244. Whether a third party is a real party in interest is a question of fact we review for substantial evidence. *See AIT*, 897 F.3d at 1356.

VirnetX argues the Board’s finding that Mangrove identified all real parties in interest is not supported by substantial evidence. VirnetX argues Mangrove failed to name Mangrove Partners Hedge Fund (“Mangrove Partners”), which, according to VirnetX, has complete discretion over the investment of Mangrove’s assets and entered an agreement with Mangrove that gives Mangrove Partners authority to act on behalf of Mangrove in certain situations. It points to the fact that Mangrove Partners wired money to Mangrove’s attorneys to pay the filing fee for its petitions. Based on this evidence, VirnetX asserts that Mangrove Partners exercised or could have exercised control over Mangrove’s participation in the proceedings. It asks that we vacate and remand to the Board with instructions to terminate.

Petitioners contend that we lack jurisdiction to review this issue under § 314(d), which states that the decision to institute is “final and nonappealable.” “The scope of review of a final written decision and the limit on that review imposed by the appeal bar of § 314(d) are not jurisdictional issues.” *Mayne Pharma Int’l Pty. v. Merck Sharp & Dohme Corp*, No. 2018-1593, 2019 WL 2553514, at *4 (Fed. Cir. June 21, 2019). In *Mayne*, we held that we did not need to decide the issue of appealability be-

cause the Board did not commit reversible error. *Id.* at *5. For the same reason here, we need not decide whether this issue is appealable.

Substantial evidence supports the Board's finding that Mangrove Partners is not a real party in interest. Mangrove Partners is Mangrove's investment manager and has discretionary authority to manage the assets in its fund. J.A. 5031, 5045. The agreement between the two entities states that Mangrove Partners "agrees to act as the investment manager of [Mangrove] and serve as [Mangrove's] agent and attorney-in-fact to invest and re-invest all of [its] assets." J.A. 7045. It states that Mangrove Partners "shall have no authority to act for, represent, bind or obligate [Mangrove] except as provided." J.A. 7046. Mangrove Partners' specified authority to act on behalf of Mangrove relates to its role in investing Mangrove's assets. The fact that Mangrove Partners transmitted some of Mangrove's money that it was managing to pay for these petitions is not evidence that Mangrove Partners exercised any control over these proceedings. This evidence supports the Board's finding that Mangrove Partners did not need to be named as a real party in interest.

Even if we agreed that Mangrove Partners was a real party in interest, there would be no reason to terminate these proceedings as VirnetX requests. We have stated that if the petition fails to identify a real party in interest, the Director may allow the petitioner to cure its noncompliance with § 312(a)(2), provided that doing so does not run afoul of § 315(b). *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc). There is no evidence in the record that Mangrove Partners is time-barred under § 315(b).

To file a motion before the Board, a party generally must first obtain authorization from the Board. 37 C.F.R. §42.20(b). But “a party may move for additional discovery” when parties fail to agree to additional discovery. 37 C.F.R. §42.51(B)(2)(i). “The moving party must show that such additional discovery is in the interests of justice.” *Id.* The 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.” *Garmin Int’l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (P.T.A.B. Mar. 5, 2013) (precedential). We review a denial of a motion for additional discovery for abuse of discretion. *Wi-Fi One*, 887 F.3d at 1339.

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

VirnetX argues the Board abused its discretion by refusing to allow VirnetX to even file a motion for additional discovery into the connection between Mangrove and RPX. Petitioners do not respond to this argument, but rather argue that the Board did not abuse its discretion when it concluded that additional discovery was not warranted. We agree with VirnetX.

While the PTO’s regulations generally require prior authorization before filing any motion, 37 C.F.R. §42.20(b), they also expressly give a party authorization to move for additional discovery, 37 C.F.R. §42.51(b)(2)(i). This provision states that “[w]here the parties fail to agree [to additional discovery], a party may move for additional discovery.” *Id.* VirnetX must show that such discovery is in the interests of justice for that motion to be granted. *Id.* The Board, however, denied that VirnetX had made such a showing without ever permitting a motion allowing VirnetX to show the evidence that it had and to state the discovery sought. Because §42.51(b)(2)(i) authorizes a motion for additional discovery, the Board abused its discretion in denying VirnetX the ability to even file a motion. We do not express a view on the merits of such a motion should VirnetX file one on remand.

II. Merits

We review the Board’s legal determinations de novo and its underlying factual findings for substantial evidence. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2013). Anticipation is a question of fact. *Husky Injection Molding Sys. Ltd. v. Athena Automation Ltd.*, 838 F.3d 1236, 1248 (Fed. Cir. 2016). “A prior art document may anticipate a claim if it describes every element of the claimed invention, either expressly or inherently.” *Id.* Obviousness is a question of law based on underlying facts. *Belden*, 805 F.3d at 1073.

The Challenged Patents share a substantially identical specification.² They are directed to establishing secure communications over the Internet. Specifically, they address problems related to communications involving conventional domain name servers (“DNS”). The specification states that, conventionally, when a user via a client application enters the name of a web site, a request is sent to a DNS, which returns the IP address associated with that web site to the client application. ’151 patent at 36:61-37:10. The client application then uses that IP address to communicate with the web site. *Id.* According to the specification, “nefarious listeners on the Internet could intercept” the DNS request and “learn what IP addresses the user was contacting.” *Id.* at 37:11-14.

To solve this problem, the specification discloses using a DNS proxy to intercept all DNS lookup functions from the client and determine whether access to a secure site has been requested. *Id.* at 37:60-62. If so, the DNS proxy transmits a message to a gatekeeper requesting that a virtual private network (“VPN”) be created be-

² The application that issued as the ’151 patent was a divisional application of the application that issued as the ’135 patent.

tween the user computer and the secure site. *Id.* at 37:66-38:2. A secure VPN is then established. If the client requests access to an unsecure web site, the DNS proxy would pass through the request to a conventional DNS, which would be handled in the conventional manner. *Id.* at 38:12-16.

Kiuchi, the only prior art reference at issue on appeal, discloses using a closed HTTP-based network (“C-HTTP”) to provide secure communications between a closed group of institutions on the Internet. Its system consists of five relevant elements: a user agent (also referred to as a client), a client-side proxy, a C-HTTP name server, a server-side proxy, and an origin server. The user agent and client-side proxy communicate behind one firewall, and the origin server and server-side proxy communicate behind another. When the user agent requests access to a host, the client-side proxy asks the C-HTTP name server whether it can communicate with that host. The C-HTTP name server checks whether the server-side proxy associated with that host is registered on the network and is permitted to accept the connection from the client-side proxy. If it determines the communication is not permitted, it returns an error code to the client-side proxy, which then acts as a typical DNS. If the communication is permitted, the C-HTTP name server sends the server-side proxy’s information to the client-side proxy, which then sends a connection request to the server-side proxy. The server-side proxy similarly communicates with the C-HTTP server to verify the request. Once verified, a connection between the client-side and server-side proxies is established, and communication occurs over a secure, encrypted protocol. All encryption and decryption occur at the proxies, and the user agent

and origin server receive the relevant decrypted information from their respective proxies.

A. The '151 Patent

The parties treat claim 1 of the '151 patent as representative of the claims at issue involving that patent. It recites:

A data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client and, for each intercepted DNS request, performs the steps of:

- (i) determining whether the intercepted DNS request corresponds to a secure server;
- (ii) when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer, and
- (iii) when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server.

1

VirnetX challenges the Board's finding that Kiuchi's C-HTTP name server performs the functions of the claimed DNS proxy module under the APA. According to VirnetX, Petitioners initially asserted that Kiuchi's client-side proxy discloses the claimed DNS proxy module and then asserted in its reply that the combination of Kiuchi's client-side proxy and C-HTTP name server discloses this element. VirnetX argues it lacked notice and an opportunity to respond to the argument that the C-HTTP name server, alone, discloses this element.

The APA requires that the Board “timely inform the patent owner of the matters of fact and law asserted, give all interested parties the opportunity to submit and consider facts and arguments, and allow a party to submit rebuttal evidence as may be required for a full and true disclosure of the facts.” *EmeraChem Holdings, LLC v. Volkswagen Grp. of Am., Inc.*, 859 F.3d 1341, 1348 (Fed. Cir. 2017) (internal quotation marks omitted). The Board did not violate the APA when it relied on Kiuchi’s C-HTTP name server for the disclosure of the claimed DNS proxy module. Petitioners’ reply argued that the combination of the client-side proxy and the C-HTTP name server and the C-HTTP name server alone perform the functions of the claimed DNS proxy module. J.A. 3235 (identifying two “scenarios,” depending on whether the DNS request originates from the user agent or client-side proxy). After VirnetX argued to the Board that Petitioners’ reply raised new arguments, the Board authorized VirnetX to file a sur-reply to respond to the arguments that it contended were improperly raised. J.A. 3454. The fact that VirnetX only responded to the combination mapping in its sur-reply does not mean the Board violated the APA in relying on an argument for which there was an adequate notice and opportunity to respond.

2

VirnetX argues that substantial evidence does not support the Board’s finding that the C-HTTP name server performs all the claimed functions of the DNS proxy module. Specifically, it argues that the evidence relied on to support the finding that Kiuchi discloses “forwarding the DNS request to a DNS function” “when the intercepted DNS request does not correspond to a secure server” relates to Kiuchi’s client-side proxy, not the C-

HTTP name server. Petitioners do not contest that this is what the evidence shows but argue that the Board relied on their argument that the combination of the client-side proxy and the C-HTTP name server perform the functions of the DNS proxy module.

Petitioners misread the Board's decision. While the Board confusingly states at different points that Kiuchi's user agent and client-side proxy correspond to the claimed "client," it never states that the combination of the client-side proxy and C-HTTP name server corresponds to the claimed DNS proxy module. The decision makes clear that the Board relied on only the C-HTTP name server to perform the functions of the DNS proxy module. J.A. 60 ("Petitioner argues that Kiuchi discloses a client (i.e., client-side proxy) that sends a request to a [DNS] proxy module (i.e., C-HTTP name server) that returns a corresponding IP address. We agree with Petitioner."); J.A. 62 ("Petitioner equates Kiuchi's 'C-HTTP name server' (and not the client-side proxy) with the claimed DNS proxy module."); J.A. 65-66 ("Petitioner equates Kiuchi's client-side proxy with the claimed 'client.'"); J.A. 86 (noting that the Board did not rely on the portion of Petitioners' reply arguing that the combination of the client-side proxy and C-HTTP name server corresponds to the DNS proxy module). The Board could not have found that the client-side proxy corresponds to the claimed "client" and is also a part of the DNS proxy module, as the claim makes clear that these are separate components.

Substantial evidence does not support the Board's finding that the C-HTTP name server performs the functions of the claimed DNS proxy module. The claims require that the DNS proxy module "forward[s] the DNS request to a DNS function that returns an IP address of

a nonsecure computer” “when the intercepted DNS request does not correspond to a secure server.” That is not how Kiuchi’s system works. Instead, if a connection between the client-side and server-side proxies is not permitted, the C-HTTP name server sends an error status to the client-side proxy. J.A. 3983. Upon receipt, the client-side proxy “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” J.A. 3983. The C-HTTP name server does not forward a DNS request to a DNS function, but rather sends an error message back to what the Board relied on as the claimed “client.”

3

VirnetX argues the Board erred by failing to resolve the claim construction dispute between the parties as to the meaning of “client.” Below, VirnetX argued that a “client” should be construed as a “user’s computer.” J.A. 3123. Petitioners argued this term should mean “a device, computer, system, or program from which a data request to a server is generated.” J.A. 3201. VirnetX argues that under its proposed construction, Kiuchi’s client-side proxy is not a “client.” Petitioners respond that the Board did not need to resolve this dispute because it made alternative findings that Kiuchi’s user agent and client-side proxy are both clients under either proposed construction.

VirnetX also argues that the Board’s anticipation finding is not supported by substantial evidence because it cites different components of Kiuchi as corresponding to the claimed “secure server.” It points out that the Board first refers to Kiuchi’s origin server as the claimed “secure server,” then later refers to Kiuchi’s server-side proxy as the same element. Petitioners respond that both are secure servers and this inconsistency is irrelevant because the Board discussed Kiuchi’s origin server

in the context of a limitation that does not recite a “secure server.”

Anticipation requires that “every element and limitation of the claimed invention must be found in a single prior art reference, *arranged as in the claim.*” *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001) (emphasis added). The Board at different points confusingly relied on Kiuchi’s user agent and client-side proxy as corresponding to the claimed “client” and Kiuchi’s server-side proxy and origin server as corresponding to the claimed “secure server.” J.A. 58-59 (referring to the formation of an encrypted channel “between the user agent (i.e., ‘client’) and origin server (i.e., ‘the secure server’)”); J.A. 61 (referring to the formation of “an encrypted channel that extends from the client-side proxy (i.e., ‘client’) and the server-side proxy (i.e., ‘secure server’)”). There is no question that these are different components in Kiuchi’s system, and Petitioners do not contend otherwise. *See* J.A. 3984 (noting that “a client-side proxy forwards HTTP/1.0 requests from the user agent in encrypted form”); *id.* (noting that “a server-side proxy communicates with an origin server inside the firewall”). Instead, Petitioners characterize these as alternative findings. It is unclear to us that this is the case.

The claims require a DNS proxy module that intercepts a DNS request from a “client” and, when that request corresponds to a “secure server,” automatically initiates an encrypted channel between “the client and the secure server.” The Board’s only reference to Kiuchi’s user agent and origin server corresponding to the claimed “client” and “secure server,” respectively, occurs when analyzing whether Kiuchi discloses the claimed “DNS request.” The rest of its analysis refers to Kiuchi’s client-side and server-side proxies for those claimed ele-

ments. There is no clear indication that these were meant to be alternative findings. If they were, the Board's analysis is lacking. It seems just as likely that the reference to Kiuchi's user agent and origin server was a typo, given its inconsistency with the rest of the Board's analysis, or that the Board intended to rely on combinations of components to satisfy the claimed "client" and "secure server." To the extent the Board intended to rely on different components in Kiuchi for the disclosure of all the claimed limitations attributed to the "client" or the "secure server," its finding of anticipation is not supported by substantial evidence.

To the extent the Board intended to rely exclusively on Kiuchi's client-side proxy for the claimed "client," we agree with VirnetX that the Board erred in failing to resolve the claim construction dispute as to the meaning of "client." VirnetX's proposed construction of a "client" was a "user's computer." In its patent owner response, it argued that "[t]here is no question that Kiuchi's client-side proxy is not a user's computer. Kiuchi does not disclose any user associated with the client-side proxy In Kiuchi, the user's computer is the user agent, not the client-side proxy." J.A. 3041. The Board declined to explicitly construe "client" because, in its view, Kiuchi's client-side proxy is a client even under VirnetX's construction. But it only reached this determination by redefining VirnetX's proposed construction so that the client-side proxy is a "client" as long as it is associated with a user. After twisting VirnetX's proposed construction, the Board found that the client-side proxy meets this definition because it is "associated with" the user agent, which is "associated with" a user. J.A. 63.

VirnetX's proposed construction is a user's computer, not any device that is associated with a user, however in-

directly. It was improper for the Board to take language out of context from the patent owner response and treat it as VirnetX's proposed construction, rather than analyzing the language of its proposed construction, which the patent owner response makes clear does not cover the client-side proxy.

4

Petitioners asserted various obviousness challenges based on Kiuchi in view of additional references. The Board did not consider the disclosures of these additional references because it did not identify any deficiencies of Kiuchi in its anticipation challenge. J.A. 67-68. The Board's obviousness conclusion thus suffers from the same errors as its anticipation finding. We vacate and remand the Board's decision. On remand, the Board should consider Petitioners' obviousness challenges in light of this opinion.

B. The '135 Patent

The parties treat claim 1 of the '135 patent as representative of the claims at issue involving that patent. It recites:

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.

1

VirnetX challenges the Board’s alternative findings that Kiuchi’s user agent and client-side proxy meet the limitations of the claimed “client computer.” The Board’s analysis that the client-side proxy satisfies this limitation is substantially similar to its analysis regarding the ’151 patent that the client-side proxy meets the limitations of the claimed “client.” As in that proceeding, VirnetX argued that a “client computer” should be construed as a “user’s computer” and that Kiuchi’s client-side proxy does not meet this limitation. J.A. 1226-27. The Board again declined to construe “client computer,” latching on to the same out-of-context language to find that the client-side proxy is “associated with” a user because it is associated with a user agent, which is associated with a user. J.A. 26-27. For the same reasons, the Board erred.

VirnetX argues that the Board’s finding that the user agent also meets its construction of a “client computer” violates the APA. According to VirnetX, the Board relied on Kiuchi’s client-side proxy for this limitation in its institution decision then changed theories midstream in its final written decision, in violation of *SAS Institute, Inc. v. ComplementSoft, LLC*, 825 F.3d 1341, 1351-52 (Fed. Cir. 2016), *rev’d on other grounds*, 138 S. Ct. 1348 (2018). We disagree.

An APA violation is premised on a lack of notice and an opportunity to respond. *See EmeraChem*, 859 F.3d at 1348. As VirnetX admitted in its patent owner response, Petitioners advanced alternative theories in their peti-

tions, one of which was that the user agent meets the limitations of the “client computer.” J.A. 1222 (stating that Petitioners “appear to advance two alternative theories”). Even if the Board’s institution decision relied only on the client-side proxy for this limitation, that does not give rise to an APA violation when VirnetX was on notice that this theory was advanced by Petitioners. Moreover, the institution decision cites to the portion of the petition discussing this theory and only mentioned the client-side proxy as an “example” of what was argued in the petition. J.A. 403.

2

VirnetX argues the Board should have construed a “VPN between the client computer and the target computer” as requiring direct communication between the client computer and target computer. Its argument is premised on prosecution-history disclaimer. During inter partes reexamination of the ’135 patent, VirnetX responded to a rejection based on a prior art reference, Aventail. In that response, VirnetX argued:

Aventail discloses a system in which a client on a public network transmits data to a SOCKS server via a singular, point-to-point SOCKS connection at the socket layer of the network architecture. The SOCKS server then relays that data to a target computer on a private network on which the SOCKS server also resides. All communications between the client and target stop and start at the intermediate SOCKS server. The client cannot open a connection with the target itself.

J.A. 6228 (internal citations omitted). As a result, “Aventail has not been shown to disclose a VPN because computers connected according to Aventail do not communicate directly with each other.” J.A. 6228.

The Board did not consider whether these statements were so “clear and unmistakable” as to constitute disclaimer. *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003). Instead, it dismissed them altogether, relying on *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973 (Fed. Cir. 2014), to conclude that any disclaimers “are binding on the patent owner only.” J.A. 32. Petitioners agree, arguing that prosecution disclaimer “does not provide a mechanism for a *patentee* to avoid invalidity without engaging in the formal process of amendment where, as here, the claims would otherwise be construed more broadly.” Appellees Br. 42.

In inter partes review, the Board construes claims according to “their broadest reasonable construction in light of the specification as they would be interpreted by one of ordinary skill in the art.” *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1061-62 (Fed. Cir. 2016).³ In applying this standard, “words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and the prosecution history.” *Id.* at 1062. The Board must “exclude any interpretation that was disclaimed during prosecution.” *Arendi S.A.R.L. v. Google LLC*, 882 F.3d 1132, 1135 (Fed. Cir. 2018). Never have we authorized the Board to disregard clear and unmistakable statements of disclaimer from the prosecution history of a patent simply because it is the patent owner arguing for disclaimer. In *Arendi*, we held that the Board erred in declining to apply prosecution disclaimer,

³ The Board’s decision issued prior to the effective date of the U.S. Patent and Trademark Office’s change to the claim construction standard applied in inter partes review. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018).

for which the patent owner advocated. 882 F.3d at 1136. Claim construction is an objective inquiry. *See Inno-va/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). It “is not a policy-driven inquiry.” *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1339 (Fed. Cir. 2005). The meaning of a claim term does not change depending on the party that argues prosecution disclaimer.

Tempo does not say otherwise. There, we stated that “the PTO is under no obligation to accept a claim construction proffered as a prosecution history disclaimer, which generally only binds the patent owner.” *Tempo*, 742 F.3d at 978. This means the Board is not required to accept a patent owner’s arguments as disclaimer when deciding the merits of those arguments. It does not mean the Board in an inter partes review can ignore statements made in a prior reexamination. Indeed, *Tempo* relied on the prosecution history to construe the claim. *Id.* at 977.

The statements VirnetX made during reexamination constitute disclaimer. VirnetX described a system in which a client computer communicates with an intermediate server via a singular, point-to-point connection. That intermediate server then relays the data to a target computer on the same private network on which the server resides. VirnetX stated that because the computers “do not communicate directly with each other” and “[t]he client cannot open a connection with the target itself,” the computers are not on the same VPN. J.A. 6228. This clearly and unmistakably states that a “VPN between the client computer and the target computer” requires direct communication between the client and target computers.

VirnetX argues that under the proper construction, Kiuchi does not satisfy this limitation. This is a question of fact. As such, we leave it to the Board to assess Kiuchi's disclosure in light of the proper construction in the first instance. Because the Board erred in construing this term, which impacts both its anticipation finding and obviousness determination, we vacate and remand.

III. CONSTITUTIONAL CHALLENGE

Prior to the Supreme Court's decision in *Oil States Energy Servs., LLC v. Green's Energy Grp., LLC*, 138 S. Ct. 1365 (2018), VirnetX argued we should wait for the Supreme Court to decide whether inter partes review is constitutional. That issue is now moot. To the extent VirnetX attempts to raise a constitutional challenge based on retroactivity in its reply, that issue is waived. See *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1095 (Fed. Cir. 2019).

CONCLUSION

For the foregoing reasons, we hold that (1) on the record, VirnetX has not shown how it is prejudiced by Apple's joinder and continued participation; (2) substantial evidence supports the Board's finding that Mangrove Partners is not a real party in interest; (3) the Board abused its discretion in denying VirnetX's request for authorization to file a motion for additional discovery; (4) substantial evidence does not support the Board's finding of anticipation of claims 1-2, 6-8, and 12-14 of the '151 based on Kiuchi; (5) the Board erred in construing claims 1, 3-4, 7-8, 10 and 12 of the '135 patent; and (6) VirnetX's constitutional challenge is moot. We vacate the Board's decisions and remand for further proceedings consistent with this opinion.

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**VACATED AND REMANDED
COSTS**

Costs to VirnetX.

55a

APPENDIX D
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)

ORDER
PAPER 116

October 29, 2021

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.

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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APPENDIX E
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

JUDGMENT
FINAL WRITTEN DECISION ON REMAND
DETERMINING ALL CHALLENGED
CLAIMS UNPATENTABLE
35 U.S.C. §§ 144, 318
PAPER 112

July 14, 2020

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

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

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 (Pa-

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

per 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, “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.

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).

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 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.”⁵ 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 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”).

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.

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

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.

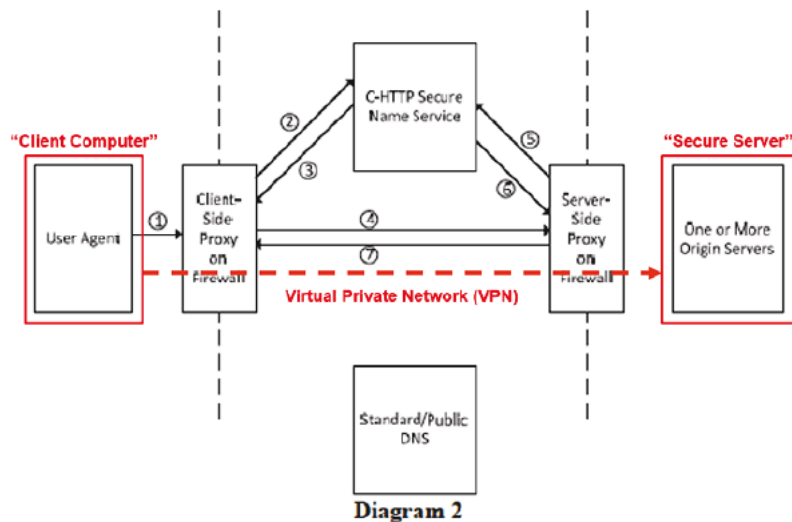
closed group of institutions on the Internet, where each member is protected by its own firewall.” Ex. 1002, 64 (Abstract). It terms its approach C-HTTP, indicating “a closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP).” *Id.*

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 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

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 rec-

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. Monroe, testified that Kiuchi's 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.").

ord—including expert testimony—justifies our finding that Kiuchi *does* anticipate the claims.

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 client-side 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 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

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*

In summary

Claim(s)	35 U.S.C. §	Refer- ence(s)/ Basis	Claims Shown Un- patenta- ble	Claims Not Shown Un- patenta- ble
1, 3, 4, 7, 8, 10, 12	102	Kiuchi	1, 3, 4, 7, 8, 10, 12	
8	103 ¹⁰	Kiuchi, RFC 1034		
Overall Outcome			1, 3, 4, 7, 8, 10, 12	

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.

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.

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APPENDIX F
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

FINAL WRITTEN DECISION
35 U.S.C. § 318(A) AND C.F.R. § 42.73
PAPER 71

September 9, 2016

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

SIU, *Administrative Patent Judge.*

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

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. 6,502,135 B1 (“the ’135 patent”). We issued a Decision to institute an *inter partes* review (Paper 11, “Inst. Dec.”) of the ’135 patent on the following grounds:

1) Claims 1, 3, 4, 7, 8, 10, and 12 under 35 U.S.C. § 102 as anticipated by Kiuchi²

2) Claim 8 under 35 U.S.C. § 103(a) as unpatentable over Kiuchi and RFC 1034.³

Inst. Dec. 2, 12.

After institution of trial, VirnetX Inc. (“Patent Owner”) filed a Patent Owner’s Response (Paper 44, “PO Resp.”), to which Petitioner replied (Paper 51, “Petitioner’s Consolidated Reply Brief” or “Pet. Reply” – see also Paper 50, non-redacted version). Apple Inc. also filed a Separate Reply (Paper 53, “Pet. Separate Reply”). Patent Owner filed a Motion to Exclude, to which Petitioner filed an Opposition to Patent Owner’s Motion to Exclude, to which Patent Owner filed a Reply to Petitioner’s Opposition of Motion to Exclude. Papers 59, 61, 62. Patent Owner and Petitioner also filed a Motion to Seal. Papers 43, 52. Oral argument was conducted on June 30, 2016. A transcript of that argument has been made of record. Paper 70, “Tr.”; see also Paper 69.

² Takahiro Kiuchi and Shigekoto Kaihara, C-HTTP – *The Development of a Secure, Closed HTTP-Based Network on the Internet*, PROCEEDINGS OF THE SYMPOSIUM ON NETWORK AND DISTRIBUTED SYSTEM SECURITY, IEEE 64-75 (1996) (Ex. 1002, “Kiuchi”).

³ P. Mockapetris, *Domain names – Concepts and Facilities*, Network Working Group, Request for Comments: 1034 (1987) (Ex. 1005, “RFC 1034”).

We have jurisdiction under 35 U.S.C. §318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner met its burden of showing, by a preponderance of the evidence, that claims 1, 3, 4, 7, 8, 10, and 12 of the '135 patent are unpatentable.

RELATED MATTERS

The '135 patent is the subject of 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.

The '135 patent is also the subject of Reexamination Control Nos. 95/001,679, 95/001,682, and 95/001,269. Pet. 2.

THE '135 PATENT (EX. 1001)

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, 2:66-67, 37:19-21.

ILLUSTRATIVE CLAIM(S)

Independent claim 1 is representative of the claimed subject matter. Claim 1 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.

OVERVIEW OF PRIOR ART

Kiuchi (Exhibit 1002)

Kiuchi discloses closed networks (i.e., closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP)) of related institutions on the Internet. Ex. 1002, 64. A client and client-side-proxy “asks the C-HTTP name server whether it can communicate with the [specified] host” and, if “the query is legitimate” and if “the requested server-side proxy is registered in the closed network and is permitted to accept the connection,” the “C-HTTP name server sends the [requested] IP address.” Ex. 1002, 65. After confirmation by the C-HTTP name server “that the specified server-side proxy is an appropriate closed network member, a client-side proxy sends a request for connection to the server-side proxy, which is encrypted.” *Id.*

The server-side proxy “accepts [the] request for connection from [the] client-side proxy” (Ex. 1002, 65) and, after the C-HTTP name server determines that “the client-side proxy is an appropriate member of the closed network,” that “the query is legitimate,” and that “the client-side proxy is permitted to access . . . the server-side proxy,” the “C-HTTP name server sends the IP address [of the client-side proxy].” Ex. 1002, 66. Upon receipt of the IP address, the server-side proxy “authenti-

cates the client-side proxy” and sends a connection ID to the client-side proxy. After the client-side proxy “accepts and checks” the connection ID, “the connection is established,” after which time the client-side proxy forwards “requests from the user agent in encrypted form using C-HTTP format.” Ex. 1002, 66.

RFC 1034 (Exhibit 1005)

RFC 1034 discloses that a “name server may be presented with a query” and that the name server may either “pursue[] the query for the client at another server” (recursive approach) or “refer[] the client to another server and lets the client pursue the query” (iterative approach). Ex. 1005, 4.

ANALYSIS

Regarding claim 1, for example, Petitioner explains that Kiuchi discloses “a method of transparently creating a virtual private network (VPN) between a client computer and a target computer.” Pet. 26-27, Ex. 1003, 18-20, 30, 31; Ex. 1002, 64, 65, 69. Kiuchi also discloses “(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 (Pet. 27, Ex. 1002 65; Ex. 1003 20-24), (2) determining whether the DNS request transmitted in step (1) is requesting access to a secure web site (Pet 27-28; Ex. 1002 65; Ex. 1003 22-26), 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. 1005 28-29; Ex. 1002 65-66; Ex. 1003 23, 24, 26-31.

DNS Request

Patent Owner argues that Kiuchi fails to disclose a “DNS request,” as recited in claim 1. PO Resp. 20. Claim

1 recites a DNS request “that requests an IP address corresponding to a domain name associated with the target computer and determining whether the DNS request is requesting access to a secure web site.” Hence, a “DNS request,” as recited in claim 1, is a request for an IP address corresponding to a domain name associated with a target computer and is capable of potentially requesting access to a secure web site. As Petitioner explains, Kiuchi discloses a request from a user agent and from the client-side proxy to “a C-HTTP name server asking to resolve the hostname in the request into an IP address” and that the C-HTTP name server “evaluates the request to determine if the hostname specifies a destination that is part of the closed network.” If “the hostname specifies a secure destination and the connection is permitted [the C-HTTP name server] returns an IP address associated with the secure hostname.” Pet. 27-28 (citing Ex. 1002, 65). Hence, we determine the “request” of Kiuchi and the “request,” as recited in claim 1, both request an IP address corresponding to a domain name and both are capable of potentially requesting access to a secure web site.

Patent Owner argues that the “request” of Kiuchi differs from the claimed “DNS request” because “Kiuchi explains that the C-HTTP name service is used ‘instead of DNS.’” PO Resp. 20. As Patent Owner points out, Kiuchi discloses that “[i]n a C-HTTP-based network” a “C-HTTP-based secure, encrypted name and certification service is used” “instead of DNS.” Ex. 1002, 64, Abstract. However, other than what is tantamount to a mere difference in nomenclature, Patent Owner does not point out specific differences between the “request” of Kiuchi and the “request” as claimed. As discussed above, Kiuchi discloses a “request” that requests an IP address corre-

sponding to a domain name that is capable of potentially requesting access to a secure web site, which appears to be the same as the request as claimed, with the only apparent difference being the use of the descriptor “DNS” recited in claim 1. Furthermore, Patent Owner has argued in related proceedings that its claimed “secure domain name” “cannot be resolved by a *conventional domain name service*.” See, e.g., *Apple Inc. v. Virnetx Inc.*, IPR2015-00870, slip. op. at 22 (PTAB Jan. 25, 2016) (Paper 23) (citing related reexamination proceedings advancing the argument) (emphasis added). This further obscures what Patent Owner intends to cover by the term “DNS.”

In addition, we credit testimony of Dr. Fabian Monroe that the claim term “domain name service request” “does not limit it to . . . specific RFCs” and Dr. Monroe’s observation of the lack of “any analysis as to [a domain name service request] being limited or not thereof to a specific RFC.” Ex. 1036, 104:21-22, 105:18-19; see also Ex. 1036, 106:15-16 (“I haven’t provided any analysis that [a request as claimed] must comply with any RFC”). During oral argument, in response to a questions asking what a DNS requires, Patent Owner declined to define it, generally contending that whatever it is, Kiuchi does not disclose it. See Tr. 70:6-12 (“I think one of ordinary skill in the art would know that. But clearly when a reference specifically tells you it is not using DNS, you don’t even have to go down that road,” *id.* 71:8-9 (processing the DNS request in Patent Owner’s invention “might not be conventional”), *id.* 71:1-74:24, 84:4-24 (“It is still a DNS request . . . whether you want to call it conventional - - non-conventional or whatever.”). Hence, we disagree with Patent Owner’s implied contention that renaming a request that requests an IP address corresponding to a

domain name that is capable of requesting access to a secure web site from “DNS request” to “C-HTTP-based . . . service . . . instead of DNS” (as disclosed by Kiuchi and as recited in claim 1) alone is sufficient to create a patentable difference between the seemingly identical requests.

Patent Owner also argues that Kiuchi’s “request” differs from the claimed “request” because Kiuchi discloses “that the . . . DNS lookup is generated only if an error condition occurs in which C-HTTP connectivity fails.” PO Resp. 20-21. However, claim 1 does not appear to recite any specific steps to be performed with respect to an error condition or whether connectivity fails (or not) in conjunction with the (non-recited) error condition.

Target Computer (and IP Address corresponding to a domain name)

Patent Owner argues that “Kiuchi’s C-HTTP name server does not return the IP address of the URL in the request, which identifies Kiuchi’s origin server, but instead returns a server-side proxy’s IP address.” PO Resp. 23 (citing Ex. 2047 95:9-14). We agree with Patent Owner that Kiuchi discloses returning the IP address of the requested server-side proxy. However, we conclude that Petitioner has met its burden by a preponderance of the evidence for demonstrating the lack of sufficient differences between Kiuchi and the disputed claim limitation. For example, both Kiuchi and claim 1 provide for a request that requests an IP address (i.e., of a server-side proxy, in Kiuchi) corresponding to a domain name (i.e., the URL provided in the request, in Kiuchi) associated with the target computer (i.e., associated with the origin server in Kiuchi).

Patent Owner argues that the domain name in the request (corresponding to the IP address of the “server-

side proxy” of Kiuchi) is not “associated with” the “origin server” (i.e., target computer) of Kiuchi (*see, e.g.*, Patent Owner’s Sur-Reply, Paper 67, 13-14). We disagree with Patent Owner’s contention. As Kiuchi discloses, the domain name in the request corresponds to the IP address of the server-side proxy of Kiuchi. One of skill in the art would have understood that the domain name that corresponds to the IP address of the server-side proxy would be “associated with” the origin server of Kiuchi at least because the requested server-side proxy itself is “associated with” the origin server. For example, the “server-side proxy communicates with an origin server inside the firewall” and “forwards requests to the origin server.” In addition, according to Kiuchi, “[i]t is possible to map any of the virtual directories on the server-side proxy to any of the directories in one or more origin servers inside the firewall.” Ex. 1002, 66. One of skill in the art would have understood that if there were no “association” between the two components, then communication, transfer of requests, or mutual mapping of directories between the two components would not be possible, the two components having no association with each other. Thus, the domain name corresponding to the IP address of the server-side proxy (that is “associated with” the origin server) is itself “associated with” the origin server (or “target computer”).

Client Computer

Patent Owner argues that the “client computer,” as recited in claim 1, is a “user’s computer” and that “Kiuchi’s client-side proxy is not a user’s computer” because “Kiuchi does not disclose any user associated with the client-side proxy.” PO Resp. 24-25.

As an initial matter and as discussed above, Petitioner argues that “Kiuchi describes a method . . . that allows a

user agent . . . to access private web pages” and that the “user agent makes an HTTP request to connect to a host that is specified within a URL,” which “[t]he client-side proxy receives . . . and [the client-side proxy then] sends a request to a C-HTTP name server.” Pet. 26-27. In other words, Petitioner equates Kiuchi’s “user agent” with the claimed “client computer” because Petitioner argues that the “user agent” is allowed access to private web pages and the “user agent makes [a] . . . request to connect to a host.” We agree with Petitioner. Nor does Patent Owner provide sufficient arguments to persuasively refute Petitioner’s showing that Kiuchi’s “user agent” constitutes a “client computer,” even under Patent Owner’s proposed definition of a “client computer” as being “associated with” a user. Indeed, it appears that Patent Owner agrees that Kiuchi’s “user agent” is the same as the claimed “client computer.”⁴

Patent Owner also argues that Petitioner equates the “client-side proxy” of Kiuchi (and not the “user agent”) with the claimed “client computer.” *See, e.g.*, PO Resp. 24-25. Assuming Patent Owner to be correct that Petitioner’s position is that the “client-side proxy” (and not the “user agent”) of Kiuchi is a “client computer” as claimed, and assuming that a “client computer” must be “associated with” a user, we are not persuaded by Patent Owner that Kiuchi fails to disclose this feature. For example, Kiuchi discloses that users within an institution (e.g., “hospitals and related institutions” – Ex. 1002, 64) are provided with access to “information [that is] shared among” institutions in which a “client-side proxy” re-

⁴ For example, Patent Owner points out that “Kiuchi discloses a communication system [including] a ‘client,’ also referred to as a ‘user agent’.” PO Resp. Br. 25.

ceives a request for access from a user agent. One of skill in the art would have understood that in order for a user or “user agent” in an “institution” to provide a request to access information, the “user agent” (itself being “associated with” a user) would be “associated with” the “client-side proxy” to which the user agent sends a request. Otherwise, the user would be unable to send a request to the client-side proxy, the client-side proxy not being associated with the user in the first place. Patent Owner does not demonstrate sufficient differences between a “client-side proxy” of Kiuchi that is “associated with” a user (and receives a request from the associated user via the user agent) and the claimed “client computer” that Patent Owner argues must also be somehow “associated with” a user.

Still operating under the presumption that Patent Owner is correct that Petitioner equates the client-side proxy of Kiuchi (and not the user agent) with the claimed “client computer,” Patent Owner argues that Kiuchi’s “client-side proxy” is distinct from the claimed “client computer” because, according to Patent Owner, Kiuchi provides “separate references to the ‘client’ and ‘client-side proxy.’” PO Resp. 25. We are not persuaded by Patent Owner’s argument, at least because, even assuming that Kiuchi refers to a “client” and “client-side proxy” separately as Patent Owner contends, Patent Owner does not point out sufficient differences between the “client-side proxy” of Kiuchi and a “client computer,” as recited in claim 1, for at least the previously stated reasons.

Patent Owner argues that the Federal Circuit “found evidence that the ‘client’ of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy.” PO Resp. 26 (citing *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1324 (Fed. Cir.

2014)). Presumably, Patent Owner argues that the “client-side proxy” cannot be equated with the “client computer,” as recited in claim 1, because the Federal Circuit held that the “web browser” of Kiuchi must be equated with the claimed “client computer” (and, presumably, Kiuchi’s client-side proxy may not be equated with the claimed “client computer”). We are not persuaded by Patent Owner’s implied argument.

First, the Federal Circuit held that “the district court did not err in denying [Defendant’s] JMOL motion with respect to invalidity,” because “there was evidence that the ‘client’ of Kiuchi is actually a web browser.” *Cisco*, 767 F.3d at 1324. We disagree with Patent Owner’s implied argument that the Federal Circuit held that 1) Kiuchi’s “web browser” must be equated with the claimed “client computer,” 2) Kiuchi’s “client-side proxy” must not be equated with the claimed “client computer,” and 3) Kiuchi’s “web browser” (which is supposedly mandated by the Federal Circuit to be exclusively equated with the claimed “client computer”) differs materially from the claimed “client computer” such that Kiuchi fails to disclose a “client computer.” Rather, the Federal Circuit actually held that there was sufficient “evidence” that Kiuchi discloses a web browser as a “client” such that the district court did not err in denying defendant’s JMOL motion. *See id.* This holding does not address whether Kiuchi’s client-side proxy (which Patent Owner asserts Petitioner equates with the claimed “client computer”) is the same as or is different from (and, if so, in what way) the claimed “client computer.”

Second, as Patent Owner points out, the district court and the Federal Circuit do not construe claim terms under a broadest reasonable interpretation standard as we do. Patent Owner argues that despite the differing

standards of claim construction, the Federal Circuit “has emphasized that the Board nevertheless has an ‘obligation to acknowledge that interpretation’ and ‘to assess whether it is consistent with the broadest reasonable construction of the term.” PO Resp. 26-27 (citing *Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326 (Fed. Cir 2015)). We acknowledge the district court’s construction as being slightly narrower than our construction and as involving different evidence, arguments, and standards of proof. See *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142-2146 (2016).

Third, as previously discussed, Patent Owner contends that the Federal Circuit “found evidence that the ‘client’ of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy.” Hence, the Federal Circuit states that the district court was presented with evidence that Kiuchi discloses a web browser that is a client and is not the same as the client-side proxy of Kiuchi. In other words, the Federal Circuit makes no comment on claim construction at all (under any standard, much less a broadest reasonable standard) since the “web browser” and the “client-side proxy” are both terms disclosed by Kiuchi and neither term is recited in claim 1, for example.

VPN

Claim 1 recites “automatically initiating the VPN between the client computer and the target computer.” Patent Owner argues that Kiuchi fails to disclose a VPN because Kiuchi discloses a “point-to-point connection that exists only between the two proxies, and thus is not a network.” PO Resp. 30. Hence, Patent Owner argues that Kiuchi fails to disclose a “network.” We are not persuaded by Patent Owner’s argument for at least the reasons set forth by Petitioner. Consol. Pet. Reply 12-13.

For example, Kiuchi discloses the use of a C-HTTP name server (and client-side and server-side proxies) in “networks among hospitals and related institutions.” Ex. 1002, 64. At least in view of this explicit disclosure of “networks,” we are not persuaded by Patent Owner that Kiuchi fails to disclose a “network” even assuming we were to adopt Patent Owner’s proposed definition of a “network” as requiring more than two devices.

Patent Owner argues that Kiuchi fails to disclose a Virtual Private Network (VPN) because “a VPN necessarily requires a . . . ‘direct communication’” and Kiuchi discloses that “the C-HTTP proxy servers preclude the user agent and origin server (the true client and target) from directly communicating with one another.” PO Resp. 29, 31.

Claim 1 recites “initiating the VPN between the client computer and the target computer” but does not recite or otherwise require a “direct communication” between the client computer and the target computer. Hence, we need not consider whether or not Kiuchi discloses a “direct communication” between any specific devices.

Patent Owner argues that one of skill in the art would have understood that a VPN must include “direct communication” under a broadest reasonable interpretation of the claim term “VPN” in light of the Specification because the Specification discloses this requirement (and should be imported into the claims). PO Resp. 7-8 (citing Ex. 1001, 38:30-33; 39:22-25; 40:30-35; 41:23-27; 7:40-49; 31:62-32:3; 36:25-28; Figs. 2, 24, 26, 28, 29, 33). We note that the cited portions of the Specification disclose various examples of “a virtual private network [] created between user computer . . . and secure target site” (*see, e.g., id.* at 38:30-33) but none of the examples appear to disclose that a VPN must have a “direct communication”

between any specific components. We further note that the cited portions of the Specification disclose that the examples provided are “representative configuration[s] only and is not intended to be limiting.” *See, e.g., id.* at 31:66-67. Thus, even assuming that the Specification discloses that a VPN must contain a “direct communication” (Patent Owner does not demonstrate persuasively that the Specification provides this disclosure, however), Patent Owner does not explain sufficiently why this feature alleged to be disclosed in selected examples in the Specification, that is “not intended to be limiting,” should be imported into the claim.

Patent Owner argues that “[i]n litigation, Patent [O]wner’s adversaries have repeatedly recognized that [a link that traverses various network devices such as Internet Service Providers, firewalls, and routers] is a ‘direct’ communication.” PO Resp. 8 (citing Ex. 2035, 42:16-21, 44:13-45:12). Patent Owner does not assert or demonstrate sufficiently, however, that “Patent Owner’s adversaries,” during litigation (or at any other time), have “repeatedly recognized” that one of skill in the art would have understood a VPN to require a “direct communication” between two specific devices within the network under a broadest reasonable interpretation in light of the Specification. Indeed, Patent Owner does not assert or demonstrate adequately that “Patent Owner’s adversaries” made any statement regarding the broadest reasonable interpretation of the term “VPN” with respect to a “direct communication” at all.

Patent Owner argues that “Patent Owner . . . disclaimed any virtual private networks and virtual private network communication links that are not direct” and that “Patent Owner’s adversaries acknowledged that disclaimer is clear and unambiguous.” PO Resp. 8 (citing

Ex. 2036, 7; Ex. 2045, 6-9); PO Resp. 9 (citing Ex. 2030, 5). Patent Owner asserts that a “disclaimer . . . informs the patent’s scope and should be given effect” even though, under *Tempo Lighting*,⁵ such a disclaimer “generally only binds the patent owner.” PO Resp. 10, 11. Hence, the evidence of record indicates (1) the lack of a requirement of a “direct communication” in a VPN as recited in the claims, (2) the lack of the requirement of a “direct communication” in a VPN as disclosed in the Specification, (3) the lack of disclosure of what a “direct communication” would entail even if disclosed in the Specification, (4) the explicit disclosure in the Specification that examples provided in the disclosure are non-limiting, and (5) the fact that any Patent Owner disclaimers (assuming there are any) are binding on the patent owner only. We weigh all of the evidence of record collectively and, as previously indicated, we determine that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 1 with respect to this issue. We also determine that Patent Owner’s generalized argument that an alleged disclaimer by Patent Owner somehow “informs the patent’s scope” in some way is not sufficiently persuasive in refuting Petitioner’s showing. In other words, we find that the collective evidence outweighs Patent Owner’s argument.

Patent Owner argues that “the Federal Circuit noted that a virtual private network requires direct communication” and that “the Federal Circuit explained that a VPN, as claimed, [must] include[] direct communication [between a client computer and a target computer].” PO Resp. 12, 31. We note, however, that the Federal Circuit does not appear to have held that a VPN must include a

⁵ *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973 (Fed. Cir. 2014).

“direct communication,” much less that such a construction would apply under a broadest reasonable standard. Rather, the Federal Circuit merely stated that “the jury heard evidence that Kiuchi’s proxy servers at least do not teach ‘direct communication’” in the context of finding that “the district court did not err in denying [Defendant’s] JMOL motion with respect to invalidity.” *Cisco*, 767 F.3d at 1323-24. In addition, as the Federal Circuit indicates, the parties during litigation “must establish invalidity by clear and convincing evidence,” which differs from the standard applied at the PTO (i.e., preponderance of the evidence). *Id.* at 1323.

Hence, the issue discussed by the Federal Circuit was not whether or not a VPN must include a “direct communication” between a client computer and target computer under a broadest reasonable standard or whether or not Kiuchi discloses such a feature under a preponderance of the evidence standard. *Cisco* does not involve an appeal about the claim construction of VPN—no party disputed whether or not a VPN required a direct connection, so that this agreed-upon feature reasonably could have amounted to a litigation tactic by the parties for different reasons. Rather, the issue discussed by the Federal Circuit was whether or not there was sufficient evidence justifying the district court’s denial of Defendant’s motion for judgment as a matter of law with respect to invalidity using the clear and convincing standard (the Federal Circuit held that sufficient evidence was, in fact, presented justifying a holding that the district court did not err in denying Defendant’s JMOL motion). *Id.* at 1323-24. Furthermore, Patent Owner’s briefs do not explain clearly how to interpret “direct.”

As such, we do not see, and Patent Owner does not point out, the relevance of the cited matter to the issue

before us, that is: (1) whether or not one of skill in the art would have understood, under the broadest reasonable interpretation standard in light of the specification, that a VPN must include a “direct communication”; (2) what such a “direct communication” would (and would not) encompass; and (3) whether or not Kiuchi discloses such a “direct communication” under a preponderance of the evidence standard.

We are not persuaded by Patent Owner’s arguments. On this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claim 1 is unpatentable.

Claim 4

Patent Owner argues that Kiuchi only discloses “checking whether” a client computer “is registered in the network” but fails to disclose determining whether a client computer is “authorized” to establish a VPN with the target computer, as recited in claim 4, because “whether the server-side proxy [of Kiuchi] is permitted to connect says nothing as to the client computer’s authorization.” PO Resp. 35. However, as previously indicated, based on our review of Petitioner’s arguments, we determine that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 4 with respect to this issue and Patent Owner’s arguments are not persuasive in refuting Petitioner’s showing by demonstrating sufficiently a difference between determining if a user or device is “permitted” to connect (as disclosed by Kiuchi) and determining if the user or device is “authorized” to connect. One of skill in the art would have understood that a user or device that is determined to be “permitted to connect” also would be determined to be “authorized” to do so. Otherwise, the user or device would not be permitted to connect (not be-

ing “authorized” to do so), which would be contrary to the determination that the user or device is “permitted to connect.” *See, e.g.*, Pet 30-31 (citing Ex. 1003, 22-25; Ex. 1002, 64-65). Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claim 4 is unpatentable.

Claim 7

Claim 7 recites a gatekeeper computer that allocates VPN resources. Patent Owner argues that Kiuchi discloses a “server-side proxy” that corresponds to a “target computer,” as claimed, and cannot, therefore, also correspond to the claimed “gatekeeper,” as alleged by Petitioner. PO Resp. 36. However, based on our review of Petitioner’s arguments, we determine that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 7 and Patent Owner’s arguments are not persuasive in refuting Petitioner’s showing. For example, as previously discussed, Petitioner equates the “origin server” of Kiuchi with the claimed “target computer.”⁶ Patent Owner also acknowledged, adopted, and provided argument pertaining to this claim mapping.⁷ As such, on this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claim 7 is unpatentable.

⁶ E.g., in discussing the claim limitation of “initiating the VPN between the client computer and the target computer,” Petitioner states that “[d]ata is securely transmitted between the user agent and origin server.” Pet. 29.

⁷ Patent Owner states that “the user’s requests are not provided for direction to the server-side proxy, but to the origin server” and that “a proxy server is distinct from the target computer.” PO Resp. 28. Patent Owner also states that “Petitioners . . . allege that Kiuchi’s origin server corresponds to the claimed ‘target computer.’” PO Resp. Br. 37.

Claim 10

Patent Owner argues that Petitioner states “that Kiuchi’s client-side proxy and C-HTTP name server correspond to the claimed ‘DNS proxy server’” (PO Resp. 32) but that Kiuchi fails to disclose that the DNS proxy server (or combination of Kiuchi’s client-side proxy and C-HTTP name server) generates a request to create the VPN between the client computer and the secure target computer, as recited in claim 10, because, according to Patent Owner, the request from the client side proxy “for connection to the server-side proxy” “cannot correspond to the claimed ‘request to create the VPN.’” PO Resp. 33. However, as previously indicated, based on our review of Petitioner’s arguments, we determine that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 10 and Patent Owner’s arguments are not persuasive in refuting Petitioner’s showing. In addition, Petitioner’s additional arguments pertaining to this issue further persuade us that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 10. Pet. 33-34; Pet. Reply 17. For example, assuming Patent Owner is correct that Petitioner asserts that the combination of Kiuchi’s client-side proxy and C-HTTP name server correspond to the claimed “DNS proxy server,” as Petitioner explains, Kiuchi discloses that the client-side proxy (within the combination of the client-side proxy and C-HTTP name server) “sends a request for connection to the server-side proxy,” and subsequently, a “connection is established.” Ex. 1002, 65-66; *see also* Pet. 34. We are not persuaded of any substantive difference between this feature and the claimed feature of “the DNS proxy server generates a request to create the VPN between the

client computer and the secure target computer.” In both cases, a request is made by a “DNS proxy server” (or combination of client-side proxy and C-HTTP name server of Kiuchi) for a secure connection.

Patent Owner argues that Kiuchi fails to disclose that the DNS proxy server “returns the IP address for the requested domain name if it is determined that access to a non-secure web site has been requested,” as recited in claim 10, because, according to Patent Owner, “Kiuchi does not disclose that the client-side proxy returns the IP address to the user agent.” (PO Resp. 34). We note that claim 10 recites that a DNS name server “returns the IP address for the requested domain name.” Patent Owner does not assert or demonstrate sufficiently that claim 10 also recites that the DNS name server must also “return the IP address for the requested domain name to the user agent.” Indeed, claim 10 does not appear to require any specific destination for returning the IP address at all.

As such, on this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claim 10 is unpatentable.

Obviousness – Claim 8

Patent Owner argues that “Petitioners do not allege that RFC 1034 makes up for any of the deficiencies of Kiuchi” and therefore, according to Patent Owner, “claim 8 should be confirmed.” PO Resp. 37-38. However, based on our review of Petitioner’s arguments, we determine that Petitioner met its burden of demonstrating, by a preponderance of the evidence, unpatentability of claim 8 and Patent Owner’s arguments are not persuasive in refuting Petitioner’s showing. For example, Patent Owner does not assert or demonstrate sufficiently that the combination of Kiuchi and RFC 1034 fails to disclose or sug-

gest each limitation of claim 8. On this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claim 8 is unpatentable.

Obviousness – Printed Publication

Patent Owner asserts that “Petitioners have not established by a preponderance of the evidence that RFC 1034 qualifies as a ‘printed publication.’” PO Resp. 41. The determination of whether a given reference qualifies as a prior art “printed publication” involves a case-by-case inquiry into the facts and circumstances surrounding the reference’s disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). On its face, RFC 1034 is a dated “Request for Comments” from the “Network Working Group,” discussing generally known methods for responding to a query from a client. Ex. 1005, 4. Moreover, RFC 1034 explicitly states that “[d]istribution of this memo is unlimited.” Ex. 1005, 1. These indicia suggest that it is more likely than not that the document was made available to the public (over the Internet).

To bolster its showing, Petitioner provides evidence suggesting that RFC 1034 would have been accessible to the interested public. For example, Petitioner provides testimony of Dr. Roch Guerin who explains that “RFC documents are published on a specific date, which starts a period for others to provide comments on the document” and the “publication date of each RFC is contained in the RFC, . . . in the top right corner of the first page of the document [which is] the date it was released for public distribution on the Internet.” Ex. 1003, 44.

Petitioner also relies on evidence describing the general practice of publishing documents “as part of the ‘Request for Comments’ (RFC) document series” in which “RFCs can be obtained from a number of Internet

hosts using anonymous FTP, gopher, World Wide Web, and other Internet document-retrieval systems.” Pet. Reply 21 (citing Ex. 1003, 41-47; Ex. 1010, 6). Exhibit 1010 further corroborates the testimony of Dr. Guerin and the indicia of availability on the face of RFC 1034.

Patent Owner characterizes Petitioner’s showing as providing “naked assertions.” PO Resp. 42. Patent Owner contends that “Dr. Guerin refers to RFC 2026 [but that RFC 2026 is] irrelevant in determining whether RFC 1034 qualifies as a printed publication” (PO Resp. 42) and challenges other evidence as too general and lacking a sufficient foundation. *See* PO Resp. 42, 44.

The parties agree that Exhibit 1010, RFC 2026, reflects “generally accepted practices” for RFC documents and states that “any interested person can obtain RFCs from a number of Internet hosts.” *See Ex.* 1010, 6. Patent Owner characterizes this evidence of “generally accepted practices” as being published “*nine years after* the alleged publication date of RFC 1034” (PO Resp. 42) and, therefore, irrelevant to the publication of RFC 1034. Patent Owner does not demonstrate persuasively, however, how the publication date of RFC 2026, which describes general practices of publishing documents in the RFC series, fails to relate to the public availability of RFC 1034, RFC 1034 being a document within the RFC series. On the contrary, RFC 2026 confirms the statement in RFC 1034 that “[d]istribution of [RFC 1034] is unlimited.” Ex. 1005, 1. Accordingly, we are not persuaded by Patent Owner’s arguments. Instead, we agree with Petitioner that RFC 1034 is a prior art printed publication.

Petitioner’s Declarant’s (Dr. Roch Guerin) testimony

Petitioner filed a Declaration of Dr. Roch Guerin. Ex. 1003. Patent Owner argues that Petitioner’s Declarant’s testimony should “be given little, if any, weight” because,

according to Patent Owner, “Dr. Guerin failed to consider, let alone opine on, how any of the claim features are disclosed in asserted references.” PO Resp. 38. Patent Owner’s arguments are moot in view of the fact that we did not rely on Dr. Guerin’s testimony in determining whether “claim features are disclosed in asserted references.” In any event, Dr. Guerin’s testimony is helpful in the other respects to which he testified and entitled to due weight.

Alleged previous challenges

Patent Owner argues that “[t]he ’135 patent has been challenged eleven times in inter partes proceedings before the Office” and, therefore, “this proceeding is barred by 35 U.S.C. §§ 312(a)(2) and 315(b) – (c).” PO Resp. 45-46. Under 35 U.S.C. §§ 312(a)(2), a “petition . . . may be considered only if . . . the petition identifies all real parties in interest.” Under 35 U.S.C. §§ 315(b) and (c), an “inter partes review may not be instituted if the petition . . . is filed more than one year after the date on which the petitioner . . . is served with a complaint” and that the Director “may join as a party . . . any person.” Neither of the cited statutes appears to state that a petition may not be instituted or otherwise considered if the patent being challenged has been previously challenged. Thus, even assuming Patent Owner’s contention to be correct that the ’135 patent has been challenged previously, we are not persuaded by Patent Owner’s argument that this alleged fact provides sufficient cause to terminate the present proceedings.

To the extent that Patent Owner argues that the present proceedings should be terminated pursuant to 35 U.S.C. § 325(d), this argument was previously raised and addressed. Prelim. Resp. 17-20; Inst. Dec. 10-11. We re-

main unpersuaded by Patent Owner's argument for the reasons stated in the Decision.

Real Parties in Interest

Patent Owner argues that The Mangrove Partners Master Fund, Ltd. failed to name all real parties in interest. PO Resp. 46-52, 56-57. In support of this allegation, Patent Owner re-iterates arguments that were previously raised and addressed in the record. Prelim. Resp. 1-13; Inst. Dec. 7-8; Patent Owner's Request for Rehearing Under 37 C.F.R. § 42.71(d)(1) filed October 21, 2015, Paper 13, 3-7; Decision on Request for Rehearing, dated November 13, 2015, Paper 19, 2-9. We remain unpersuaded by Patent Owner's arguments.

For example, Patent Owner argues that "The Mangrove Partners Hedge Fund is 'the investment manager' for" unnamed funds and that "[a]ll of the funds have a 'shared investment objective . . . [to] compound their net worth while minimizing the chances of a permanent loss of capital.'" PO Resp. 47 (citing Ex. 2001 4). As previously discussed,

[w]e are not persuaded by Patent Owner's arguments because Patent Owner does not explain sufficiently how any of these statements, even if assumed to be true, demonstrate or even suggest that any of the cited additional entities "exercised control over a party's participation in" the preparation or filing of the Petition. Indeed, the fact that other funds have a common objective . . . does not . . . relate to whether or not the other funds exercised control over any aspect of the filing of the present Petition or not.

Paper 19, 4.

Patent Owner also argues that “the Mangrove Partner’s Hedge Fund has ‘*complete discretion*’ regarding the investment of” the unnamed funds and ‘has repeatedly demonstrated that, in practice, it exercises total control over Petitioner Mangrove.’ PO Resp. 47, 48. As we previously explained,

even assuming that the Mangrove Partners Hedge Fund has “complete discretion” regarding investment objectives of the Funds, as Patent Owner contends, Patent Owner does not demonstrate that the Mangrove Partners Hedge Fund also has “complete discretion” over the preparation or filing of the Petition to the extent of exercising control over the preparation or filing of the Petition.

Paper 19, 4-5.

Patent Owner argues that unnamed entities “fund all of the activities of Petitioner Mangrove . . . , receive management and investment fees from investors, and are co-owners of Petitioner Mangrove.” PO Resp. 49. As we previously explained, Patent Owner’s “contention, even if assumed to be true, is insufficient to demonstrate that any of [the unnamed entities] played any role in the preparation or filing of the petition (i.e., controlled the preparation or filing of the Petition),” and “Patent Owner has not demonstrated sufficiently that [the unnamed entities], in fact, fund[] *all* of the activities of the Petitioner, *including* the preparation or filing of the present Petition to the extent of exercising control over the preparation or filing of the present Petition.” Paper 19, 7-8.

Patent Owner argues that “Mangrove Capital . . . is an ‘affiliate’ of the Mangrove Partners Hedge Fund and ‘serves as the general partner of the US Feeder.’” PO Resp. 49. Patent Owner further argues that “Mangrove Capital is allocated 20% of the annual increase in the net

worth of an Investor's interest in a Fund" and that "[a]ny persons acting on behalf of Mangrove Capital are subject to the supervision and control of [the named Petitioner] in connection with any investment advisory activities." *Id.* Even assuming to be correct Patent Owner's contention that any persons acting on behalf of Mangrove Capital are subject to the supervision and control of the named Petitioner in connection with any investment advisory activities, we are still not persuaded by Patent Owner. For example, Patent Owner does not assert or demonstrate persuasively that "Mangrove Capital" exercised control over the preparation or filing of the present Petition.

Patent Owner argues that "investors would have each provided substantial funding for the Petitioner" and that "undisclosed investors that provided substantial funding for the Petitioner . . . are RPIs." PO Resp. 51. As we previously explained,

Patent Owner does not demonstrate persuasively that any specific investor provided [funds] to exercise control over the preparation or filing of the Petition (or that any specific investor was even aware of the Petition) or that any of the alleged [funds] was, in fact, used to exercise control over the preparation or filing of the Petition on behalf of any specific investor.

Paper 19, 9.

Patent Owner argues that "the fiduciary relationship between the unnamed investors and the Mangrove Partners Hedge Fund . . . further compels a finding that the investors are RPIs." PO Resp. 51. As we previously stated,

[e]ven assuming that the Mangrove Partners

Hedge Fund seeks to increase profits for its investors under a “fiduciary duty,” as Patent Owner alleges, Patent Owner does not demonstrate persuasively that the Mangrove Partners Hedge Fund also exercised control over any aspect of the preparation or filing of the present Petition. Indeed, it is assumed that many funds in existence would also seek to increase profits for its investors but are not real-parties-in-interest in the present matter (i.e., “exercised control” over the preparation or filing of the Petition) merely by virtue of the fact that these funds seek to increase profits.

Paper 19, 5.

RPX Corporation as Real Party in Interest

Patent Owner now argues that “RPX Corporation . . . is an RPI to the Petition filed by Mangrove” and the failure to name RPX Corporation as a real party in interest should bar the proceeding. PO Resp. 52-54, 56-57. In particular, Patent Owner argues that the Mangrove entities “are RPX’s fifth largest shareholder,” “owned ‘approximately 5.0% of the shares outstanding’ for RPX,” had “recently met with management for RPX,” “received 211,736 shares of RPX stock, then valued at over \$3.5 million,” subsequently “received still more shares, with its ownership increasing to 513,137 shares of RPX stock,” and are represented by “James Bailey [who] represent[ed] RPX in [related matters].” *Id.* at 52-54. Patent Owner also argues that “Mr. [James] Bailey is not counsel in any other PTAB proceedings.” *Id.* at 54. Hence, Patent Owner argues that RPX Corporation constitutes a real party in interest in the instant proceeding because the named real party in interest (i.e., Mangrove) owns shares of stock of RPX Corporation and/or Mangrove is represented by counsel who previously represented

RPX. We are not persuaded by Patent Owner's argument at least because Patent Owner provides insufficient evidence supporting the implied contention that the alleged fact that a fund owns stock in a company and/or retains the services of an attorney who previously represented the company in a different matter would implicate that company as a real party in interest in any *inter partes* review proceedings filed by the fund.

35 U.S.C. § 315(b)

Patent Owner argues that Apple Inc. is "time-barred from this proceeding" because, according to Patent Owner, Apple Inc. failed to "'properly file[] a petition' within the one-year deadline specified in section 315(b)." PO Resp. 58. Patent Owner further argues that "the term 'properly filed' was meant to encompass the timing requirement of section 315(b), and that section 315(b)'s timing exemption was not intended to alter that requirement." *Id.* at 58-59. The argument was previously presented and previously addressed in IPR2016-00062 prior to consolidation with this case. IPR2016-00062, Prelim. Resp. 1-3 (Paper 10); IPR2016-00062 Inst. Dec. 3-4, Paper 14; Patent Owner's Request for Rehearing Under 37 C.F.R. § 42.71(d)(1) of Institution Decision in IPR2016-00062, dated February 8, 2016, Paper 35, 6-12; Decision on Request for Rehearing, dated February 26, 2016, Paper 38, 2. We remain unpersuaded by Patent Owner's arguments for the reasons stated in the Decisions cited above.

Alleged improper argument(s) in the Reply Brief

Patent Owner argues that Petitioner presented various improper arguments in the Petitioner's Consolidated Reply Brief and in the Separate Reply filed by Apple Inc. Paper 55. Patent Owner argues that Petitioner provided in Petitioner's Consolidated Reply Brief (i.e., Papers 50,

51)⁸ a new argument mapping the claimed DNS request to a “request for connection to the server-side proxy.” Paper 55, 2 (citing Papers 50, 51 at 10). In the Petition, Petitioner argues that Kiuchi discloses that “the client-side proxy . . . sends a request to a C-HTTP name server.” Pet 27-28. Thus, contrary to Patent Owner’s contention, this argument was previously raised by Petitioner in the Petition. Also, see further discussion above.

Patent Owner also argues that Petitioner presented a new argument in Petitioner’s Consolidated Reply Brief regarding “the ‘collective[.]’ actions of the client-side proxy and C-HTTP name server for the claimed ‘determining.’” Paper 55, 2. Petitioner argued in the Petition that “the C-HTTP name server and client-side proxy each determine whether the user agent is requesting to connect to a secure destination.” Pet. 28. Thus, contrary to Patent Owner’s contention, Petitioner presented an argument in the Petition (and prior to the filing of Patent Owner’s Response) that the client-side proxy and the C-HTTP name server perform the “determining” step (i.e., determining whether the DNS request transmitted in step (1) is requesting access to a secure web site). We also note that, in Patent Owner’s Response (Paper 49), Patent Owner argues that Petitioner states “that Kiuchi’s client-side proxy and C-HTTP name server correspond to the claimed ‘DNS proxy server.’” PO Resp. Br. 32 (citing Pet. 34). Patent Owner does not explain sufficiently how Petitioner’s argument is presented for the first time in the Petitioner’s Consolidated Reply Brief (Papers 50, 51) when Patent Owner addresses this argument in Pa-

⁸ As previously noted, Petitioner filed a redacted version of Petitioner’s Consolidated Reply Brief (Paper 51) and a corresponding non-redacted version (Paper 50).

tent Owner's Response (Paper 49), which was filed prior to the filing of Petitioner's Consolidated Reply Brief.

Patent Owner argues that Petitioner provided new arguments in Petitioner's Consolidated Reply Brief mapping Kiuchi's client-side proxy to the claimed "client computer." Paper 55, 3 (citing Papers 50, 51, 18). We note that Patent Owner has provided arguments responsive to Petitioner's claim mapping of Kiuchi's client-side proxy to the claimed "client computer." For example, Patent Owner argues in Patent Owner's Response that "Kiuchi's client-side proxy is not a user's [client's] computer" because, according to Patent Owner, "Kiuchi does not disclose any user associated with the client-side proxy." PO Resp. Br. 24-25. Patent Owner does not explain sufficiently how this argument was allegedly presented for the first time in Petitioner's Consolidated Reply Brief when Patent Owner already responded to this argument in Patent Owner's Response, which was filed prior to Petitioner's Consolidated Reply Brief.

Patent Owner argues that Petitioner provided new arguments in Petitioner's Consolidated Reply Brief including arguments that the claimed "DNS request" corresponds to "'C-HTTP requests' to the server-side proxy, arguments "relying on Kiuchi's appendices," arguments relying on RFC 1945 (Exhibit 1014), and Apple's "numerous accusations against Patent Owner." Paper 55, 2-3 (citing Paper 51, 6-7, 10; Ex. 1002, 66). Patent Owner's arguments are moot in view of the fact that we did not rely on these cited portions of Petitioner's Consolidated Reply Brief or the cited portion of the Separate Reply filed by Apple Inc.

MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude in which Patent Owner requests that Exhibits 1005, 1010, 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1049 be excluded from the record. Paper 59.

Exhibits 1005 and 1010

Patent Owner argues that Exhibits 1005 and 1010 “lack relevance.” Paper 59, 7. Exhibit 1005 is RFC 1034, a reference cited by Petitioner in a proposed ground of unpatentability of claim 8. Exhibit 1010 corresponds to RFC 2026, a document that Petitioner relies upon to demonstrate the general practice of publication of documents in the RFC series (in response to Patent Owner’s argument regarding the public availability of RFC 1034). In view of Petitioner’s reliance on Exhibit 1005 as prior art in a proposed ground of unpatentability and reliance on Exhibit 1010 in response to the issue of public availability of RFC 1034 (as raised by Patent Owner), we disagree with Patent Owner that these documents lack relevance. Patent Owner’s motion to exclude is denied with respect to Exhibits 1005 and 1010.

Exhibits 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1049

Patent Owner moves to exclude Exhibits 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1049. We either did not rely on the disputed exhibits (i.e., Exhibits 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1044), the disputed exhibits are not part of the record (Exhibits 1045 and 1047-1049) or are a demonstrative exhibit (Exhibit 1046) and, therefore, we did not rely on the exhibits. Patent Owner’s motion to exclude with respect to Exhibits 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1049 is dismissed as moot.

MOTION TO SEAL

Patent Owner filed a Motion to Seal Exhibits 2049, 2061, and 2062, as well as portions of Patent Owner's Response. Petitioner has not filed an opposition to the Motion to Seal.

There is a strong public policy in favor of making information filed in an *inter partes* review open to the public, especially because the proceeding determines the patentability of claims in an issued patent and, therefore, affects the rights of the public. Under 35 U.S.C. §316(a)(1) and 37 C.F.R. §42.17, the default rule is that all papers filed in an *inter partes* review are open and available for access by the public; however, a party may file a concurrent motion to seal and the information at issue is sealed pending the outcome of the motion. It is only "confidential information" that is protected from disclosure. 35 U.S.C. §316(a)(7); *see* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,760 (Aug. 14, 2012). The standard for granting a motion to seal is "good cause." 37 C.F.R. §42.54(a). The party moving to seal bears the burden of proof in showing entitlement to the requested relief, and must explain why the information sought to be sealed constitutes confidential information. 37 C.F.R. §42.20(c). As set forth in the Trial Practice Guide (77 Fed. Reg. at 48,761), there is an expectation that information will be made public if identified in this Final Written Decision.

We have reviewed Exhibits 2049, 2061, 2062, and the unredacted versions of Patent Owner's Response. We conclude that they contain confidential business information. None of the content of those documents that is asserted as constituting confidential business information has been identified in this Final Written Decision in

reaching a determination in this proceeding with respect to the claims of the '135 patent. We are persuaded that good cause exists to have those documents remain under seal.

The record will be maintained undisturbed pending the outcome of any appeal taken from this decision. At the conclusion of any appeal proceeding, or if no appeal is taken, the documents will be made public. *See* Trial Practice Guide, 77 Fed. Reg. at 48,760-61. Further, either party may file a motion to expunge the sealed documents from the record pursuant to 37 C.F.R. §42.56. Any such motion will be decided after the conclusion of any appeal proceeding or the expiration of the time period for appealing.

CONCLUSION

Petitioner has shown by a preponderance of the evidence that claims 1, 3, 4, 7, 8, 10, and 12 are unpatentable under 35 U.S.C. §102 as anticipated by Kiuchi and claim 8 is unpatentable under 35 U.S.C. §103(a) over Kiuchi and RFC 1034.

ORDERS

After due consideration of the record before us, it is:

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

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibits 1005 and 1010 is *denied*;

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibits 1014, 1020, 1025, 1029, 1031-1033, 1037, and 1039-1049 is *dismissed*;

FURTHER ORDERED that Patent Owner's Motion to Seal (Paper 43) is *granted*; and

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

PETITIONER:

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APPENDIX G
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

DECISION
REQUEST FOR REHEARING
37 C.F.R. § 42.71(d)
PAPER 74

October 20, 2016

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

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

SIU, *Administrative Patent Judge*.

VirnetX Inc. (“Patent Owner”), in its Request for Rehearing (“Req. Reh’g.” or “Request”), seeks reversal of the Board’s Decision (“Decision”) pertaining to Patent Owner’s arguments regarding Petitioner’s alleged failure to name all real parties in interest and disputes all references to Exhibit 1003 in the Decision. *See* Req. Reh’g. 1. For the reasons that follow, the Board denies the requested relief.

The applicable standard for a request for rehearing is set forth in 37 C.F.R. §42.71(d), which provides in relevant part:

A party dissatisfied with a decision may file a request for rehearing, without prior authorization from the Board. The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or a reply.

Patent Owner argues that The Mangrove Partners Master Fund, Ltd. failed to name all real parties in interest and that “[t]he Decision misapprehended or overlooked that a number of new arguments were presented in Patent Owner’s Response.” Paper 73, 7. In particular, Patent Owner argues that “the Decision misapprehended or overlooked [that]:

In a form filed with the SEC on March 17, 2016, Petitioner Mangrove admitted that the US Feeder and the Cayman Feeder are “controlling shareholders” of the Mangrove Petitioner and, because of

this relationship, shares of RPX Corporation owned by the Mangrove Petitioner “may be deemed to be beneficially owned by the US Feeder and the Cayman Feeder.” Ex. 2057 at 14; Response at 52.

Paper 73, 7-8.

We are not persuaded by Patent Owner’s argument. Even assuming that Petitioner, in fact, “admitted that the US Feeder and the Cayman Feeder are ‘controlling shareholders’ of the Mangrove Petitioner,” as Patent Owner asserts, Patent Owner does not demonstrate persuasively that Petitioner also “admitted” that the “US Feeder and the Cayman Feeder” exerted control over the filing or preparation of the Petition. Nor does Patent Owner provide sufficient evidence demonstrating such control.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

The SEC filing explained that by virtue of the relationship between Nathaniel August, the Mangrove Partners Hedge Fund, Mangrove Capital, and the Mangrove Petitioner, “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August may be deemed to beneficially own the Shares owned by the [Mangrove Petitioner].” Ex. 2057 at 14; Response at 52.

Paper 73, 8

We are not persuaded by Patent Owner’s argument. Even assuming that an SEC filing, in fact, states that “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August may be deemed to beneficially own the Shares owned by the [Mangrove Petitioner],” as Patent Owner asserts, Patent Owner does not

demonstrate persuasively that the alleged SEC filing also states that “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August” exerted control over the filing or preparation of the Petition. Nor does Patent Owner provide sufficient evidence demonstrating such control.

Patent Owner also argues that we “misapprehended or overlooked” that Ward Dietrich (Chief Operating Officer of the Mangrove Partners Hedge Fund) allegedly reimbursed the filing fees for filing the Petition in accordance with a prior “agreement to reimburse such fees.” Paper 73, 8 (citing Ex. 2061, Paper 50, 23), Paper 50, 23. Patent Owner does not demonstrate sufficiently that a party honoring a prior agreement to reimburse fees to Petitioner constitutes sufficient control of the preparation or filing of the Petition. Therefore, we are not persuaded by Patent Owner’s argument.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

Nathaniel August, Ward Dietrich, and Jeff Kalicka (who, as discussed above, work for the Mangrove Partners Hedge Fund), also commented extensively on the petitions and expert declarations in IPR2015-01046 and IPR2015-01047, even asking for changes to be made after Petitioner Mangrove’s attorneys thought the papers “were ready to file.” Ex. 2061 at 12-18, 20-23, 28, 29; see also Ex. 2062 at 3 (“It is likely that Mr. Dietrich had one or more oral conversations that were not immediately reduced to writing with Nathaniel August and/or Jeff Kalicka pertaining to Mr. Dietrich’s involvement in the preparation and filing of the Petitions.”); Response at 55.

Paper 73, 9.

Upon review of the cited portions of Exhibit 2061, we note that the only suggestions provided are a “few small nits” and questioning the use of the term “see” with no subsequent use of the term “see also.” Exhibit 2061, 22, 28. While it is stated that suggestions are embedded in the draft, no other specific suggested modifications are noted, much less any indication that any alleged suggested modifications were actually adopted. In any event, we conclude that these suggestions (e.g., a “few small nits” and the use of the term “see”) are minor and do not rise to the level of exerting control over the filing or preparation of the Petition. Therefore, we are not persuaded by Patent Owner’s argument.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

Petitioner Mangrove and the Mangrove Partners Hedge Fund in fact had a pre-established plan as to the hiring of “intellectual property advisors and attorneys,” and fees that the Mangrove Partners Hedge Fund would receive based on the success of Petitioner Mangrove. Ex. 2049 at 9, 10; Response at 56.

Paper 73, 9.

We note that the cited portion of Exhibit 2049 states that “[t]he Master Fund” pays a “monthly management fee” to “the Investment Manager” and that “[t]he Funds . . . will reimburse the Investment Manager for . . . operating expenses of the Master Fund” that includes “legal and other costs.” Ex. 2049, 9, 10. In other words, Petitioner agrees to pay a management fee and reimburse legal costs to the Investment Manager. We do not identi-

fy, and Patent Owner does not indicate, where this agreement also mandates that the Investment Manager (or any specific entity other than Petitioner) controls the filing or preparation of the Petition. Therefore, we are not persuaded by Patent Owner's argument.

Patent Owner also argues that we "misapprehended or overlooked" the following argument that was allegedly previously presented:

An agreement between Mangrove Partners Hedge Fund and Petitioner Mangrove shows that the former, as investment manager in its "sole and absolute discretion," has the authority to "effect all necessary registrations, notices or other filings with governmental or similar agencies" (Ex. 2049 at 2-3), which would include the Patent Office. See also Ex. 2061 at 7 (providing Ward Dietrich with authorization to execute the power of attorney in this proceeding); Response at 56.

Paper 73, 9-10.

While Patent Owner asserts that a general agreement exists between Mangrove Partners Hedge Fund and Petitioner that Mangrove Partners Hedge Fund has "sole and absolute discretion" to "effect all necessary registrations," Patent Owner provides insufficient evidence to demonstrate that an agreement exists between Mangrove Partners Hedge Fund and Petitioner that Mangrove Partners Hedge Fund controls the filing or preparation of the Petition or that Mangrove Partners Hedge Fund, in fact, exerted control over the filing or preparation of the Petition. Therefore, we are unpersuaded by Patent Owner's argument.

Patent Owner also argues that "the Decision failed to address evidence and arguments presented in Patent

Owner's Response that Exhibit 1003 should not be given any weight because it is an altered document that was not reviewed and signed by Dr. Guerin. Response at 39-41." Paper 73, 11. The sole reference to Exhibit 1003 in the Decision is confirmation that "RFC documents are published on a specific date" and that the "publication date of each RFC is contained in the RFC, . . . in the top right corner of the first page of the document [which is] the date it was released for public distribution on the Internet." Decision 22-23 (citing Ex. 1003, 44). The fact that RFC documents are published on a specific date and that the top right corner of such documents specify a date is clear on simple inspection of the RFC document itself. Therefore, we determine that the importance of any alleged modifications to Dr. Guerin's testimony confirming what is already apparent on its face is of insubstantial importance. Also, Patent Owner does not demonstrate sufficiently that any modifications were, in fact, made to Dr. Guerin's testimony that RFC documents are published on a specific date and that the top right corner of such documents specify a date.

Patent Owner "suggests that an expanded panel that includes the Chief Judge consider this request for rehearing." Paper 73, 14. Discretion to expand a panel rests with the Chief Judge, who, on behalf of the Director, may act to expand a panel on a suggestion from a judge or panel. *AOL Inc. v. Coho Licensing LLC*, Case IPR2014-00771, slip op. at 2 (PTAB Mar. 24, 2015)(Paper 12)(informative). Patent Owner's suggestion was considered by the Chief Administrative Patent Judge, who declined to expand the panel.

ORDERS

After due consideration of the record before us, it is:

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ORDERED that Patent Owner's Request for Rehearing is denied.

PETITIONER:

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**APPENDIX H
UNITED STATES PATENT
AND TRADEMARK OFFICE**

**BEFORE THE PATENT TRIAL
AND APPEAL BOARD**

APPLE, INC.,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.

IPR2016-00062
PATENT 6,502,135 B2

DECISION
INSTITUTION OF INTER PARTES REVIEW
37 C.F.R. § 42.108
PAPER 14

January 25, 2016

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

I. INTRODUCTION

Apple, Inc. (“Petitioner”) filed a Petition (“Pet.”) on October 26, 2015 (Paper 1) requesting *inter partes* review of claims 1, 3, 4, 7, 8, 10, and 12 of U.S. Patent No. 6,502,135 (“the ’135 Patent,” Ex. 1001). Along with the Petition, Petitioner filed a Motion for Joinder (Paper 2, “Mot.”) with IPR2015-01046, *The Mangrove Partners Master Fund, Ltd. v. VirnetX Inc.*, a pending *inter partes* review involving the ’135 patent.

VirnetX Inc. (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”) and an Opposition to the Motion for Joinder (Paper 9, “Opp.”) on January 8, 2016. Petitioner filed a Reply to Patent Owner’s Opposition to the Motion for Joinder on January 15, 2016 (Paper 12, “Reply”). For the reasons described below, we institute an *inter partes* review of all the challenged claims and grant Petitioner’s Motion for Joinder.

II. INSTITUTION OF *INTER PARTES* REVIEW

The Petition in this proceeding asserts the same grounds as those on which we instituted review in the IPR2015-01046. On October 7, 2015, we instituted a trial in the IPR2015-01046 matter on the following grounds:

Reference(s)	Basis	Claims challenged
Kiuchi ¹	§ 102	1, 3, 4, 7, 8, 10, and 12
Kiuchi and RFC 1034 ²	§ 103	8

¹ Takahiro Kiuchi and Shigekoto Kaihara, C-HTTP – *The Development of a Secure, Closed HTTP-Based Network on the Internet*, PROCEEDINGS OF THE SYMPOSIUM ON NETWORK AND DISTRIBUTED SYSTEM SECURITY, IEEE 64-75 (1996) (Ex. 1002, “Kiuchi”).

The Mangrove Partners Master Fund, Ltd. v. VirnetX Inc., Case IPR2015-01046, slip. op. at 12 (PTAB October 7, 2015) (Paper 11) ('1046 Decision).

In view of the identity of the challenge in the instant Petition and in the petition in IPR2015-01046, we institute an *inter partes* review in this proceeding on the same grounds as those on which we instituted *inter partes* review in IPR2015-01046.

III. GRANT OF MOTION FOR JOINDER

An *inter partes* review may be joined with another *inter partes* review, subject to the provisions of 35 U.S.C. §315(c), which governs joinder of *inter partes* review proceedings:

(c) JOINDER. – If the Director institutes an *inter partes* review, the Director, in his or her discretion, may join as a party to that *inter partes* review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under 313 or the expiration of the time for filing such a response, determines warrants the institution of an *inter partes* review under section 314.

As the moving party, Petitioner bears the burden of proving that it is entitled to the requested relief. 37 C.F.R. §42.20(c). A motion for joinder should: (1) set for the reasons joinder is appropriate; (2) identify any new grounds of unpatentability asserted in the petition; and

² P. Mockapetris, *Domain Names – Concepts and Facilities*, Network Working Group, Request for Comments: 1034 (1987) (Ex. 1005, “RFC1034”).

(3) explain what impact (if any) joinder would have on the trial schedule for the existing review.

The Petition in this proceeding has been accorded a filing date of October 26, 2015 (Paper 4), which satisfies the joinder requirement of being filed within one month of our instituting a trial in IPR2015-01046 (i.e., within one month of October 7, 2015). 37 C.F.R. § 42.122.

Patent Owner argues that Petitioner's Motion for Joinder "is barred by 35 U.S.C. § 315(b) ... [b]ecause [Petitioner's] untimeliness precludes institution under § 315(b) [and so] it also precludes joinder under § 315(c)." Opp. 4. However, 35 U.S.C. § 315(b) states that "[t]he time limit ... shall not apply to a request for joinder." 35 U.S.C. § 315(b). Hence, if a party filing a time-barred petition requests joinder, the one-year time bar "shall not apply." This is confirmed by the Board's rules, which provide that a petition requesting *inter partes* review may not be "filed more than one year after the date on which the petitioner, the petitioner's real party-in-interest, or a privy of the petitioner is served with a complaint alleging infringement of the patent," but the one-year time limit "shall not apply when the petition is accompanied by a request for joinder." 37 C.F.R. §§ 42.101(b), 42.122(b); *see also* IPR2013-00109, Paper 15 and IPR2013-00256, Paper 10 (permitting joinder of a party beyond the one-year window). The Board's rules do not conflict with the language of the statute as Patent Owner suggests.

We have considered Patent Owner's arguments regarding an alternate interpretation of the statute. *See, e.g.*, Opp. 3-8. However, we do not find these arguments persuasive for at least the reasons set forth by Petitioner. *See, e.g.*, Reply 2-3.

Patent Owner also argues that “joining ... will have an impact on the '046 proceeding.” Opp. 8. In particular, Patent Owner argues that the “petition raises additional issues and evidence.” Opp. 8 (citing Pet 39-42; Mot. 6). Patent Owner does not provide details about any specific “additional issue” that is allegedly raised. However, referring to the cited portions of the Petition and Motion, Petitioner states that Petitioner “is also filing ... additional evidence confirming that RFC 1034 is a printed publication that was publicly available before the earliest effective filing date of the challenged claims” (Pet. 39; Mot. 6). Hence, Patent Owner appears to argue that the Petition in this matter raises the “additional issue” of whether RFC 1034 is a printed publication that was publicly available before the earliest effective filing date of the challenged claims.

We note that Patent Owner previously argued that “the burden is on Petitioner to establish that RFC 1034 ... was ‘sufficiently accessible to the public interested in the art’” but that Petitioner allegedly failed to do so. IPR2015-01046, Prelim. Resp. 20-21 (Paper 9). In other words, the issue of whether RFC 1034 is a printed publication that was publicly available before the earliest effective filing date of the challenged claims was previously raised by Patent Owner. Thus, this issue cannot be an “additional issue” raised subsequently by Petitioner. In any event, even assuming that this issue is an “additional issue” raised by Petitioner, Patent Owner does not explain sufficiently how this “additional issue” would impact this proceeding adversely or how an impact, if any, would preclude joinder.

Patent Owner requests that in the event that Petitioner’s Motion for Joinder is granted, the Scheduling Order in IPR2015-01046 should be adopted, that Mangrove “will

be responsible for the preparation and filing of any papers,” that “Mangrove will conduct the deposition of any VirnetX witness,” that “Mangrove will be responsible for any redirect of its expert,” and that “Mangrove will conduct all oral arguments.” Opp. 10.

As a Petitioner in IPR2016-01046, Apple, Inc. shall adhere to the existing schedule of IPR2015-01046. All filings by Apple, Inc. in IPR2015-01046 shall be consolidated with the filings of the other petitioner, unless the filing involves an issue unique to Apple, Inc. or states a point of disagreement related to the consolidated filing. In such circumstances, Apple, Inc. may make a separate filing of no more than five pages, without prior authorization of the Board. The page limits set forth in 37 C.F.R. § 42.24 will apply to all consolidated filings.

Apple, Inc. is bound by any discovery agreements, including deposition arrangements, between Patent Owner and the IPR2015-01046 petitioner and shall not seek any discovery beyond that sought by the IPR2015-01046 petitioner. Patent Owner shall not be required to provide any additional discovery or deposition time as a result of joinder. The IPR2015-01046 petitioner shall designate attorneys to conduct the cross-examination of any witness produced by Patent Owner and the redirect examination of any other witness, within the timeframes set forth in 37 C.F.R. § 42.53(c) or agreed to by Patent Owner and the IPR2015-01046 petitioner. No individual petitioner will receive any additional cross-examination or redirect examination time. Moreover, if an oral hearing is requested and scheduled, the IPR2015-01046 petitioner shall designate attorneys to present at the oral hearing in a consolidated argument.

The Board expects Apple, Inc. and Patent Owner to resolve any disputes between them and/or with the

IPR2015-01046 petitioner and to contact the Board only if such matters cannot be resolved.

IV. ORDER

For the reasons given, it is

ORDERED that Petitioner's Motion for Joinder is granted;

FURTHER ORDERED that IPR2016-00062 is instituted and joined with IPR2015-01046;

FURTHER ORDERED that the grounds on which IPR2015-01046 was instituted are unchanged and no other grounds are included in the joined proceeding;

FURTHER ORDERED that the Scheduling Order entered in IPR2015-01046 (Paper 12) as modified by the Order changing due date 1 (Paper 20) remain unchanged and shall govern the schedule of the joined proceedings;

FURTHER ORDERED that, throughout the joined proceeding, Mangrove will file papers, except for motions that do not involve the other party, as a single, consolidated filing; that the filing party (Mangrove) will identify each such filing as a Consolidated Filing;

FURTHER ORDERED that any separate filing by Apple, Inc. in IPR2015-01046 must not exceed five pages, without prior authorization of the Board;

FURTHER ORDERED that Apple, Inc. is bound by any discovery agreements between Patent Owner and the other petitioner in IPR2015-01046 and that Apple, Inc. shall not seek any discovery beyond that sought by the other petitioner in IPR2015-01046;

FURTHER ORDERED that all petitioners in IPR2015-01046 shall collectively designate attorneys to conduct the cross-examination of any witness produced by Patent Owner and the redirect examination of any

other witness; within the timeframes set forth in 37 C.F.R. § 42.53(c) or agreed to by the parties;

FURTHER ORDERED that all petitioners in IPR2015-01046 shall collectively designate attorneys to present at the oral hearing, if requested and scheduled, in a consolidated argument;

FURTHER ORDERED that IPR2016-00062 is terminated under 37 C.F.R. § 42.72 and all further filings in the joined proceedings are to be made in IPR2015-01046;

FURTHER ORDERED that a copy of this Decision will be entered into the record of IPR2015-01046; and

FURTHER ORDERED that the case caption in IPR2015-01046 shall be changed to reflect joinder with this proceeding in accordance with the attached example.

For PETITIONER:

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Example Case Caption for Joined Proceeding

**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 IPR2015-01046³

PATENT 6,502,135 B2

³ Apple, Inc., who filed a petition in IPR2016-00062, has been joined as a Petitioner in the instant proceeding.

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APPENDIX I
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.

IPR2015-1046¹
PATENT 6,502,135 B1

DECISION
REQUEST FOR REHEARING
37 C.F.R. § 42.71(d)
PAPER 38

February 26, 2016

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

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

SIU, *Administrative Patent Judge*.

I. BACKGROUND

VirnetX Inc. (“Patent Owner”), in its Request for Rehearing, Paper 35 (“Req. Reh’g” or “Request”), seeks reversal of the Board’s Decision granting institution in IPR2016-00062 and joining IPR2016-00062 with IPR2015-01046. *See* Req. Reh’g 1. The Board denies the requested relief.

II. DISCUSSION

In the Decision dated January 25, 2016, Paper 28 (“Decision”), we granted institution of IPR2016-00062 (filed by Apple Inc.) and joined IPR2016-00062 with the instant matter (i.e., IPR2015-01046). Decision 6.

Patent Owner argues that we incorrectly granted institution of IPR2016-00062 under 35 U.S.C. § 315(b). *See, e.g.*, Req. Reh’g 6-10. Contrary to Patent Owner’s contention, our granting of institution of IPR2016-00062 is in accordance with 35 U.S.C. § 315(b) for at least the reasons previously discussed. Decision 3-4. Patent Owner reiterates that an alternative interpretation of 35 U.S.C. § 315(b) should be adopted to permit denial of institution of IPR2016-00062. *See, e.g.*, Req. Reh’g 6-10. In support of this contention, Patent Owner continues to cite the dissent in *Target Corp. v. Destination Maternity Corp.*, Case IPR2014-00508, dissent slip op. at 18 (PTAB Feb. 12, 2015) (Fitzpatrick, Bisk, & Weatherly, A.P.JJ., dissenting) (Paper 28) but does not explain why a dissent in this cited matter should compel us to adopt an alternate interpretation of 35 U.S.C. § 315(b). We therefore continue not to do so.

Patent Owner argues that “Apple’s past conduct and the numerous challenges to the ’135 patent nonetheless compel that the Petition be denied under § 325(d).” Req.

Reh'g 10. According to 35 U.S.C. §325(d), "the Director may take into account whether, and reject the petition or request, because the same or substantially the same prior art or arguments previously were presented to the Office." Having carefully considered Patent Owner's arguments (Req. Reh'g 10-12), we decline to exercise our discretion to reject the Petition because the same or substantially the same prior art or arguments previously were presented (allegedly) to the Office, even assuming that the same or substantially the same prior art or arguments were, in fact, previously presented to the Office. Apple has been joined in this proceeding. *Supra* note 1. Also, Patent Owner's Request indicates that most, if not all, of the prior petitions were denied for time bar reasons, and that the Office has not reached a final decision on the merits based on the same or substantially same prior art in an IPR or a reexamination proceeding. *See* Req. Reh'g 2-5.

Patent Owner requests rehearing by an expanded panel that includes the Chief Judge. *Id.* at 12-14. Discretion to expand a panel rests with the Chief Judge, who, on behalf of the Director, may act to expand a panel on a suggestion from a judge or panel. *AOL Inc. v. Coho Sicensing LLC*, Case IPR2014-00771, slip op. at 2 (PTAB Mar. 24, 2015)(Paper 12)(informative). Patent Owner's suggestion was considered by the Acting Chief Administrative Patent Judge, who declined to expand the panel.

We have considered Patent Owner's arguments in the Request but find them unpersuasive to demonstrate that we misapprehended or overlooked any points.

III. CONCLUSION

Patent Owner's Request is granted to the extent that the Board has reconsidered its Decision, but Patent Owner's requested relief for a reversal of the Decision is

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denied because Patent Owner has not shown that the Decision overlooks or misapprehends a material point.

IV. ORDER

For the reasons given, it is

ORDERED that the Request for Rehearing is denied.

PETITIONER:

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APPENDIX J
UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

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

Petitioner,

v.

VIRNETX INC.,

Patent Owner.

IPR2015-01047¹
Patent 7,490,151 B2

JUDGMENT
FINAL WRITTEN DECISION ON
REMAND DETERMINING ALL
CHALLENGED CLAIMS UNPATENTABLE
35 U.S.C. §§ 144, 318
PAPER 122

July 14, 2020

¹ Apple Inc. and Black Swamp IP, LLC, which filed petitions in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in this proceeding.

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

I. INTRODUCTION

A. BACKGROUND AND SUMMARY

The Mangrove Partners Master Fund, Ltd., Apple Inc., and Black Swamp IP, LLC (collectively, “Petitioner”) requested *inter partes* review of claims 1, 2, 6-8, and 12-14 (the “challenged claims”) of U.S. Patent No. 7,490,151 B2 (“the ’151 patent”). Paper 2 (“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 54 (redacted version), “PO Resp.”; Paper 48 (non-redacted version)), to which Petitioner replied (Paper 58 (redacted version); Paper 56 (non-redacted version), “Pet. Reply”; and Paper 59, “Pet. Separate Reply”). Oral argument was conducted on June 30, 2016. Transcripts of that argument have been made of record. Paper 79 (“Original Tr.”); *see also* Paper 78. Our Final Written Decision was issued September 9, 2016. Paper 80 (“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 90), to which Petitioner filed an Opposition (Paper 91) and Patent Owner filed a

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

Reply (Paper 96). We granted in part Patent Owner's Motion. Paper 97. Patent Owner requested rehearing of our decision on its Motion for Additional Discovery (Paper 101), to which Petitioner opposed (Paper 102) and Patent Owner replied (Paper 103).

We permitted the parties to brief the issues for consideration on remand from the Federal Circuit. Petitioner filed a principal brief (Paper 104, "Pet. Remand Br."), Patent Owner filed an opposition (Paper 105, "PO Remand Br."), Petitioner filed a reply (Paper 106, "Pet. Remand Reply"), and Patent Owner filed a sur-reply (Paper 107, "PO Remand Sur-Reply"). Oral argument was conducted on January 24, 2020, and a transcript appears in the record. Paper 115 ("Tr.").

This is a final written decision 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 '151 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 '151 patent is the subject of Reexamination Control Nos. 95/001,697 and 95/001,714. Pet. 1-2; Paper 8, 2-3.

Petitioner additionally identifies the following:

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 111.

Additionally, Patent Owner identifies a number of PTO proceedings that involve U.S. Patent No. 6,502,135 ("the '135 patent"). Paper 8, 4. Of particular significance here, the '135 patent is at issue in IPR2015-01046, which has been treated as largely a companion proceeding to the present one.

Patent Owner identifies multiple other proceedings involving "patents stemming from the same applications that led to the '151 patent." Paper 8, 3-10.

C. THE '151 PATENT

The '151 patent discloses a system and method for automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function. Ex. 1001, 36:58-60.

D. Illustrative Claims

Claim 1 of the '151 patent is illustrative of the claimed subject matter and is reproduced below:

1. A data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client and, for each intercepted DNS request, performs the steps of:
 - (i) determining whether the intercepted DNS request corresponds to a secure server;

(ii) when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer, and

(iii) when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server.

Ex. 1001, 46:55-67.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts unpatentability on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)
1, 2, 6-8, 12-14	102	Kiuchi ³
1, 2, 6-8, 12-14	103	Kiuchi, Rescorla ⁴
1, 2, 6-8, 12-14	103	Kiuchi, RFC 1034 ⁵
1, 2, 6-8, 12-14	103	Kiuchi, RFC 1034, Rescorla

Pet. 4.

F. CAFC REMAND

On appeal, the Federal Circuit held that our prior decision “relied on only the C-HTTP name server to perform the functions of the DNS proxy module.” *VirnetX*, 778 F. App’x at 906. The Court held that we had not

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 E. Rescorla and A. Schiffman, “The Secure Hypertext Transfer Protocol,” Internet Draft (Feb. 1996) (Ex. 1004).

⁵ P. Mockapetris, Request for Comment (“RFC”) 1034, “Domain Names–Concepts and Facilities,” Nov. 1997 (Ex. 1005).

identified substantial evidence “that the C-HTTP name server performs the functions of the claimed DNS proxy module.” *Id.* It further noted that we “could not have found that the client-side proxy corresponds to the claimed ‘client’ and is also a part of the DNS proxy module, as the claim makes clear that these are separate components.” *Id.*

Regarding how the claimed “client” mapped to Kiu-chi’s disclosures, the Federal Circuit held that our prior decision had inconsistencies in various parts of its analysis. *Id.* at 907-08. Attempting to resolve that inconsistency, the Court held that relying exclusively on Kiu-chi’s client-side proxy for the claimed “client” would require resolving a claim-construction dispute over the meaning of that term. *Id.* at 908.

Finally, the Federal Circuit held that we should consider Petitioner’s obviousness challenges anew in light of the Court’s decision. *Id.*

II. ANALYSIS

A. CLAIM CONSTRUCTION

In a Board proceeding based on a petition filed before November 13, 2018, as here, claims in an unexpired patent are interpreted according to their broadest-reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2018); see *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144-46 (2016).⁶

⁶ A recent amendment to this rule does not apply here because the Petition was filed before November 13, 2018. See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b), effective Nov. 13, 2018) (codified at 37 C.F.R. § 42.100(b) (2019)).

The Federal Circuit held that, “[t]o the extent the Board intended to rely exclusively on Kiuchi’s client-side proxy for the claimed ‘client,’” it would be necessary to construe the meaning of “client.” *VirnetX*, 778 F. App’x at 907-08. The parties dispute that construction, along with the construction of “between.”

1. “*client*”

As to the proper construction of “client,” Petitioner submits that its “anticipation argument does not implicate this issue—there, the user agent is the ‘*client*’” Pet. Remand Br. 6. As noted below, because we find claims 13 and 14 anticipated by Kiuchi and all claims obvious over Kiuchi and Rescorla, we do not reach Petitioner’s obviousness contentions regarding RFC 1034. *See infra* at 28. Construing “client” in this proceeding would therefore have no impact on our judgment—it would only influence a ground we do not reach. In copending IPR2015-01046, we construe “client computer.” *See* IPR2015-01046, Paper 106. We note here that we would reach the same construction for “client” as “client computer” in that proceeding, as the parties treat the terms as essentially synonymous. Pet. Remand Br. 7 n.2.⁷

2. “*between the client and secure server*”

Each independent challenged claim includes a phrase requiring an element between two points—claims 1 and 7 recite “initiating an encrypted channel between the client and the secure server” and claim 13 recites “creating a secure channel between the client and the secure server.”

Patent Owner submits that the district court correctly construed such phrases as “extending from [A] to [B].” PO Remand Br. 9-10 (citing Ex. 2031, 25-26). Patent

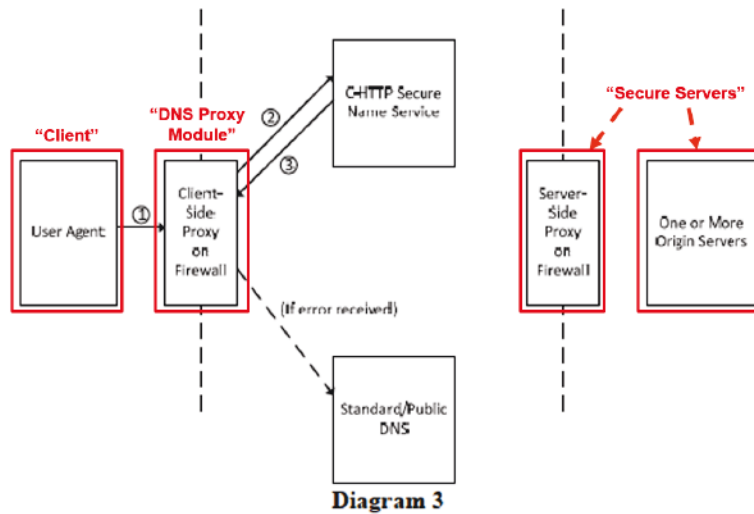
⁷ In the related proceeding, we construe “client computer” as “user’s computer.” IPR2015-01046, Paper 106.

Owner notes that construing this term was not required for the prior decision in this case, which considered Kiuchi's client-side and server-side proxies as the two relevant endpoints. *Id.* at 10 n.4. Petitioner contends that the broadest-reasonable construction applies and that we should adopt the construction Patent Owner sought before the district court, that “[s]ecurity—i.e., encryption—is only necessary for public communication paths for the security objective of the patents to be met because security can be inherently present on private portions of the path.” Pet. Remand Br. 9-10 (quoting Ex. 1009, 10). According to Petitioner, that construction must be consistent with the broadest-reasonable construction because Patent Owner offered it to the district court. *Id.* at 10.

Petitioner does not offer any substantive basis to adopt a construction other than Patent Owner's proposed construction. The plain and ordinary meaning of the claim language supports Patent Owner's proposed construction, and we apply it here—between the client and the secure server means extending from the client to the secure server, not simply a piece of the way between the two.

B. Anticipation

Petitioner illustrates its mapping of the claim language to Kiuchi's disclosures using the following annotated version of a diagram appearing in Petitioner's expert declaration of Dr. Guerin:



Pet. Remand Br. 11 (annotating Ex. 1003 ¶24; Pet. 25-37). The annotated diagram is not itself evidence, but helps illustrate Petitioner’s contentions.

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) 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 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.* If, on the other hand, connection from the client-side proxy to the appropriate server-side proxy is not permitted, the C-HTTP name server sends the client-side proxy a status code that indicates an error. *Id.* In that event, the client-side proxy “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” *Id.*

When connection is permitted, the client-side proxy and server-side proxy negotiate details and establish an encrypted connection between them, over which the user agent’s request is passed. *Id.* at 66. The “server-side proxy communicates with an origin server inside the firewall” such 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.” *Id.*

Petitioner asserts that Kiuchi’s user agent, acting as the claimed client, generates a request for content corresponding to a hostname in a URL. Pet. Remand Br. 10 (citing Pet. 25-28); *see also id.* at 6 (“Petitioners’ anticipation argument does not implicate this issue—there, the user agent is the ‘*client.*’”).

Petitioner asserts that Kiuchi discloses “determining whether the intercepted DNS request corresponds to a secure server.” Kiuchi’s client-side proxy intercepts a user agent’s requests and uses the C-HTTP name server to determine whether requested content corresponds to an origin server reachable through a server-side proxy. *Id.* (citing Pet. 28-29). Thus, Petitioner asserts that the client-side proxy, working with the C-HTTP name server, acts as the claimed DNS proxy module. *Id.*; Pet. 25 (citing Ex. 1003 ¶¶18, 20-21) (“client-side proxy – working in concert with the C-HTTP name server – is a do-

main name server (DNS) proxy module that intercepts DNS requests sent by a user agent acting as a client”).

Petitioner asserts that Kiuchi discloses “when the intercepted DNS request corresponds to a secure server, . . . automatically initiating an encrypted channel between the client and the secure server.” If the requested content corresponds to a server-side proxy and origin server, Kiuchi’s client-side proxy establishes a connection with the origin server through the server-side proxy. Pet. Remand Br. 10-12 (citing Pet. 29-32).

Petitioner asserts that Kiuchi discloses “when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer.” If the requested content does not require such a connection, the client-side proxy forwards the request to a conventional DNS server for resolution. *Id.* at 10-13.

Patent Owner disputes several aspects of Petitioner’s contentions.

1. *Kiuchi discloses
“forwarding the DNS
request to a DNS function”*

When Kiuchi’s client-side proxy (which, together with the C-HTTP name server, maps to the claimed “DNS proxy module”) receives an error response from the C-HTTP name server (indicating the client’s request does not correspond to a secure server) it “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” 1002, 65 (§ 2.3). Petitioner submits that Kiuchi therefore discloses “when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a

nonsecure computer.” Pet. 29-30 (quoting Ex. 1002, 65 (§2.3)).

Patent Owner challenges that conclusion, arguing that “there is no disclosure of any forwarding of the DNS request to a DNS function.” PO Remand Br. 14. In that regard, Patent Owner relies on a statement by the Federal Circuit that Kiuchi’s C-HTTP name server does not, alone, meet the claim requirement. *VirnetX*, 778 F. App’x at 906-07. Because the Court was not addressing functionality of the combined client-side proxy and C-HTTP name server, this statement does not undermine Petitioner’s asserted combination on which we rely. Indeed, the client-side proxy alone forwards the DNS request to a DNS function when it determines (in conjunction with the C-HTTP name server) that the request does not correspond to a secure server.

Patent Owner argues also that simply accessing a DNS function falls short of forwarding a received DNS request to a DNS function, making the distinction between generating a new request and forwarding a received request. PO Remand Sur-Reply Br. 11-12. In Patent Owner’s view, Kiuchi is silent on the details of the interaction and thus cannot anticipate the challenged claims. *Id.* We do not agree, because Kiuchi’s statement that the client-side proxy behaves “like an ordinary HTTP/1.0 proxy” to perform DNS lookup indicates that the client-side proxy passes on a request already received.

Moreover, continues Patent Owner, to the extent Kiuchi addresses the issue, it explains that it uses C-HTTP name service “instead of DNS.” *Id.* at 12 (quoting Ex. 1002, 7 (“In a C-HTTP-based network, instead of DNS, a C-HTTP based secure, encrypted name and certification service is used.”)). We do not agree. Kiuchi’s statement

that it uses its C-HTTP name service instead of DNS does not mean all aspects of Kiuchi's system use a different format from DNS. Rather, the client-side proxy handling all "external (outside the firewall) access" for user agents within the firewall is consistent with Kiuchi's user agents using standard DNS-formatted requests. Ex. 1002, 65 (§2.3); see Ex. 1003 ¶22 (citing Ex. 1002, 65 (§2.3)). Moreover, the format of Kiuchi's C-HTTP requests is not at issue because the claim limitation relates to requests for resources outside the secure system—those for which the C-HTTP name server returns an error. See Ex. 1002, 66 (§2.3). In such cases, Kiuchi's client-side proxy "performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy." *Id.* at 65 (§2.3). Kiuchi further indicates that nonsecure requests use standard DNS, as it discloses that an alternative service "is used for the C-HTTP-based network," not for all requests. *Id.* at 64 (§2.1).

We find that the claim language reads on Kiuchi's disclosure of the client-side proxy "behaving like an ordinary HTTP/1.0 proxy" to perform a DNS lookup. As Petitioner points out, Kiuchi's client-side proxy receives from the client (user agent) a request that contains a URL specifying a hostname. Ex. 1002, 65 (§2.3); Pet. 25-28; Pet. Remand Br. 10. Behaving like an ordinary proxy to perform the DNS lookup means that the client-side proxy will send the DNS request to a public DNS server. Pet. 30 (citing Ex. 1003 ¶23; Ex. 1002, 65 (§2.3)). Against the evidence supporting Kiuchi's operation for nonsecure connections, Patent Owner has not shown that Kiuchi's client-side proxy in any way reformats or restructures requests from the user agent.

Accordingly, based on a preponderance of the evidence, we find Kiuchi discloses "when the intercepted

DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function,” as recited in independent claims 1, 7, and 13.

2. *Kiuchi discloses “determining whether the intercepted DNS request corresponds to a secure server”*

Petitioner asserts that Kiuchi’s client-side proxy and C-HTTP name server, acting together, determine whether the intercepted DNS request corresponds to a secure server. Reply 8-9. That argument is consistent with the Petition’s assertion that Kiuchi’s client-side proxy makes the determination “by asking ‘the C-HTTP name server whether it can communicate with the host specified in a given URL.’” Pet. 28-29 (quoting Ex. 1002, 65 (§2.3); citing Ex. 1003 ¶¶23-24, 26). Patent Owner challenges Petitioner’s mapping, arguing that Petitioner relies on the C-HTTP name server alone and that its operation cannot be “imputed to the client-side proxy.” PO Remand Br. 14-15.

Petitioner’s mapping of the claimed functionality to two devices in Kiuchi is consistent with the ’151 patent’s description. The Specification discloses that functionality may be located in a single computer or may instead be distributed among multiple computers. *See* Ex. 1001, 38:30-50 (“DNS proxy 2610 returns to user computer 2601 the resolved address passed to it by the gatekeeper Gatekeeper 2603 can be implemented on a separate computer (as shown in FIG 25) or as a function within modified DNS server 2602. . . . It will be appreciated that the functions of DNS proxy 2610 and DNS server 2609 can be combined into a single server for convenience. . . . [A] check [whether the user is authorized to connect to the secure host] can be made by communicating with gatekeeper 2603 . . .”), Fig. 26.

Patent Owner disputes such reliance on the specification, arguing the specification's flexibility relates only to "a determination of whether a user has sufficient authorization," not to "whether the intercepted request corresponds to a secure host." PO Remand Sur-Reply 13. The Specification is not so constrained. When discussing how the DNS proxy "determines whether access to a secure site has been requested," it discloses that the determination may be made "for example, by a domain name extension, or by reference to an internal table of such sites." Ex. 1001, 37:60-65. The use of "for example," along with the flexible description of various DNS proxy, DNS server, and gatekeeper functions noted above, supports that the claims are not limited to a particular arrangement of hardware. Kiuchi's client-side proxy using information returned from the C-HTTP name server is consistent with the '151 patent's description.

Further, in Petitioner's mapping of the claim language to Kiuchi's disclosures, Petitioner does not rely on the C-HTTP name server as performing any other aspect of the claims. *See* Pet. 25-32; Pet. Remand Br. 10-13. Thus, Petitioner does not attempt to use the C-HTTP name server as an element corresponding to multiple claim limitations. *See VirnetX*, 778 Fed. App'x at 906 ("The Board could not have found that the client-side proxy corresponds to the claimed 'client' and is also a part of the DNS proxy module, as the claim makes clear that these are separate components.").

Accordingly, based on a preponderance of the evidence, we find Kiuchi discloses its client-side proxy acting with the C-HTTP name server as the claimed DNS proxy module "determining whether the intercepted

DNS request corresponds to a secure server,” as recited in independent claims 1, 7, and 13.⁸

3. *Kiuchi discloses “a secure channel between the client and the secure server” but not “an encrypted channel . . .”*

Petitioner asserts that, when the user agent requests a resource on an available origin server, “the client-side proxy initiates an encrypted channel on public communication paths between the user agent and the origin server (i.e., the communication path over the Internet between the client-side proxy and the server-side proxy).” Pet. 31 (citing Ex. 1003 ¶¶28, 31). Petitioner does not assert, however, that Kiuchi discloses an encrypted connection between its user agent and client-side proxy. *See* PO Remand Br. 15-16.

As Patent Owner argues, an encrypted channel between only the client-side and server-side proxies does not satisfy the requirement of claims 1 and 7 for an encrypted channel *between the client and the secure server*.

Based on the ordinary meaning of the claimed “between” phrases in claims 1 and 7, we agree with Patent Owner that Kiuchi does not disclose encryption extending from the user agent to either the server-side proxy or the origin server. PO Remand Sur-Reply Br. 14; *see supra* at 8.

We reach a different conclusion, however, for claim 13, which requires only a “secure” connection rather than the “encrypted” connection of claims 1 and 7. The Petition relies on Kiuchi’s disclosure of encrypting C-HTTP connections between client-side and server-side proxies. Pet. 34 (citing Ex. 1002, 64 (Abstract), 65). It is undis-

⁸ The variation in claim 13’s language for this limitation does not affect our analysis.

puted that the link between Kiuchi's client-side proxy and server-side proxy is encrypted, and thus secure. Patent Owner disputes whether Petitioner has adequately shown that communications between the user agent and client-side proxy or communications between the server-side proxy and origin server are secure.

The Petition asserts that when a server-side proxy receives a request for connection, it "verifies that the client-side proxy is a member of the closed network." Pet. 34 (citing Ex. 1002, 65 (§§2.2, 2.3); Ex. 1003 ¶¶26-28). Further, the Petition points out that Kiuchi permits secure communication "within a closed group of institutions on the Internet, where each member is protected by its own firewall." *Id.* at 17 (citing Ex. 1002, 64 (Abstract)); *accord* Tr. 6:9-11; *see also* Pet. 25 (showing Kiuchi's "C-HTTP connection 'provides [a] secure HTTP communication mechanisms' in which communications over the C-HTTP connection are encrypted." (quoting Ex. 1002, 64-66)).

Beyond Kiuchi's disclosures, Petitioner relies on the Federal Circuit's recognition in an earlier case that Patent Owner's "expert testified that one of ordinary skill would understand that the path extending from the VPN server to the target computer, i.e., within the private network, would be secure and anonymous owing to protection provided by the private network." *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1321 (Fed. Cir. 2014); *see* Pet. Remand Reply 17-18; Tr. 6:12-19. Patent Owner contests such reliance, pointing out that its expert testified the accused network was secure both because it had a firewall and because it had "been physically secured." PO Remand Sur-Reply 14 (quoting *VirnetX*, 767 F.3d at 1321).

We find that a preponderance of the evidence shows that Kiuchi discloses “a secure channel between the client and the secure server.” The Specification states that “[i]t is desired for the communications to be secure, that is, immune to eavesdropping.” Ex. 1001, 1:34-35. Based on that disclosure, we understand “secure” to be used consistently with its plain and ordinary meaning, rather than imparting some particularized meaning.

Kiuchi discloses that “in-hospital networks are usually protected using a dual home gateway and packet filter (firewall) and the Internet can only be accessed through proxies on the firewalls.” Ex. 1002, 67 (§4.2). Further, Kiuchi discloses that it “provides secure HTTP communication mechanisms within a closed group of institutions on the Internet, where each member is protected by its own firewall.” *Id.* at 64 (Abstract).

Patent Owner argues a firewall is insufficient to secure network communications. *See* PO Remand Sur-Reply 14. We do not agree. As noted above, the record does not support limiting the claim to such a strict application of “secure.”

Thus, we agree Kiuchi discloses a “secure channel between the client and the secure server” because data in Kiuchi’s C-HTTP network is encrypted when sent over public segments of the network path and protected using firewalls when sent over private segments.⁹ Pet. Remand Reply 10.

⁹ Though not critical to our conclusion, the testimony of Petitioner’s declarant, Dr. Guerin, supports the conclusion that Kiuchi discloses a secure network. Ex. 1003 ¶¶ 17, 29 (“Communications between the user agent and the client-side proxy as well as those between the original server [sic] and the server-side proxy are behind the firewall of their respective site, and therefore protected. This, together with the security afforded by the encrypted C-HTTP connection over the

4. *Additional claims*

As discussed above, Kiuchi discloses the limitations of claim 13. Patent Owner does not provide additional arguments in support of claim 14 with respect to Kiuchi's disclosures. PO Resp. 25-26; PO Remand Br. 10-25. We have reviewed Petitioner's contentions and determine that, on this record, for the reasons given by Petitioner, a preponderance of the evidence shows that claim 14 is unpatentable over Kiuchi. *See* Pet. 35-37.

5. *Summary*

Having considered the parties' evidence and argument, we find that a preponderance of the evidence shows that Kiuchi discloses the limitations of claims 13 and 14. We find that a preponderance of the evidence does not show that Kiuchi discloses the limitations of claims 1 or 7, and therefore that Petitioner has not proven unpatentability of claims 1, 2, 6-8, or 12.

C. OBVIOUSNESS OVER KIUCHI AND RESCORLA

Rescorla is an Internet Draft, a working document of the Internet Engineering Task Force that describes "The Secure HyperText Transfer Protocol," or S-HTTP. Ex. 1004, 1. As it describes, "Secure HTTP (S-HTTP) provides secure communication mechanisms between an HTTP client-server pair." *Id.* at 5. Petitioner relies on Rescorla's description that "[s]everal cryptographic message format standards may be incorporated into S-HTTP clients and servers" and that "S-HTTP provides full flexibility of cryptographic algorithms, modes and parameters." Pet. 39-40 (quoting Ex. 1004 § 1.1).

public communication path between the client-side proxy and the server-side proxy, ensures that communications between the user agent and the origin server are over a secure channel.") (citation omitted) (citing Ex. 1002, 64).

1. *Rescorla qualifies as prior art*

Patent Owner contests Petitioner's assertions, arguing that Rescorla "does not qualify as a printed publication, and thus cannot be used in an obvious combination." PO Remand Sur-Reply 15; *accord* PO Resp. 41-42. According to Patent Owner, "a work is not publicly accessible if the only people who know how to find it are the ones who created it." PO Remand Sur-Reply 15-16 (quoting *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1372 (Fed. Cir. 2019)). In Patent Owner's view, Petitioner has not adequately shown that the relevant group knew how to find Rescorla. *Id.* at 16 ("Petitioners introduced no evidence that those outside of the RFC development process would have known how to find Rescorla."). Patent Owner asserts that Internet Drafts, while developed for "eventual publication as an RFC," were limited to those developing the draft. *Id.*

Petitioner presents adequate evidence of Rescorla's public availability. Reply 19-21; *see Samsung Elecs.* 929 F.3d at 1374 ("Our cases have consistently held that the standard for public accessibility is whether a person of ordinary skill in the art *could*, after exercising reasonable diligence, access a reference."). Rescorla's face indicates a February 1996 date. Ex. 1004, 1. It states that it is an Internet-Draft, which is a "working document[] of the Internet Engineering Task Force (IETF)." *Id.* Rescorla discloses that prior drafts were "distributed" and "published." *Id.* As we found in an earlier order, RFC documents, on their face, show that they "are prepared and distributed, are for others to provide comments, are published on a specific date, and that the top right corner of such documents specify a date." Paper 83, 7.

Additionally, RFC 2026 supports the process used for Internet Drafts. Ex. 1010, 8.¹⁰ As RFC 2026 states, placing Internet Drafts such as Rescorla on multiple public servers “makes an evolving working document readily available to a wide audience.” *Id.* That wide availability is consistent with Rescorla, which notes that people at multiple institutions reviewed earlier drafts, supporting both dissemination and availability of documents throughout the process. Ex. 1004, 91.

Additionally, Kiuchi refers to an earlier version of Rescorla. Ex. 1002, 70.¹¹ Patent Owner argues that the URL Kiuchi cites is “not the same URL that’s actually on Rescorla.” Tr. 31:12-14. Even so, Kiuchi supports Rescorla’s public availability—Kiuchi’s reference to Rescorla’s predecessor draft shows it was likely people other than “the ones who created” Rescorla knew how to find it. *See Samsung*, 929 F.3d at 1372. The record supports that artisans reading Kiuchi were aware of Internet Drafts and had specific reason to follow Rescorla’s development.

Thus, Rescorla was publicly accessible to the relevant group of skilled artisans.¹² Based on the totality of evi-

¹⁰ We recognize that RFC 2026 was published after Rescorla. *See* PO Resp. 41. But given the relatively close time of the two documents, we view RFC 2026 as evidence regarding how Internet Drafts were disseminated.

¹¹ Patent Owner argues that Petitioner raises a new argument by relying on Kiuchi to support Rescorla’s public availability. Tr. 30:26-31:2; *but see* Pet. 39 (“Kiuchi expressly refers to an earlier Internet-Draft published as part of the development of RFC 2660.”); Ex. 1024 (Rescorla, E. and A. Schiffman, “The Secure HyperText Transfer Protocol,” RFC 2660, August 1999.).

¹² Indeed, the record shows Internet Drafts were shared among “the Internet community for the standardization of protocols and procedures,” and thus embrace the nature of publishing for collaboration.

dence in the record, we have evaluated Petitioner's evidence against Patent Owner's evidence and argument, and we find by a preponderance of evidence that Rescorla was publically accessible as of its February 1996 date.

2. *Skilled artisans had reason to modify Kiuchi based on Rescorla*

Petitioner asserts that a skilled artisan would have had reason to modify Kiuchi's system in light of Rescorla and would have considered the challenged claims obvious. Pet. 37-41. Petitioner submits that skilled artisans had reason to look to Rescorla's teachings in light of Kiuchi's disclosure that C-HTTP "can co-exist with" other secure HTTP proposals and that, "[a]lthough the current C-HTTP implementation assumes the use of HTTP/1.0 compatible user agents and servers, it is possible to develop C-HTTP proxies which can communicate with other secure HTTP compatible user agents and servers." Pet. 38-39 (quoting Ex. 1002, 69 (§4.4)) (citing Ex. 1003 ¶33). Moreover, Petitioner points out, Kiuchi expressly refers to an earlier Internet Draft in Rescorla's line of development. Pet. 39 (citing Ex. 1002, 69-70 (Reference 12: "Rescorla E., Schiffman A. The Securer Hypertext Transfer Protocol, Internet Draft, 1995 (Work in progress, available on the World Wide Web as 'ftp:ds.internic.net/internet-drafts/draftietf-wts-shhttp-00.txt'"))).

Petitioner asserts that modifying Kiuchi's system with Rescorla's teachings "would result in encrypted communications between the user agent and origin server using S-HTTP messages instead of standard HTTP/1.0 mes-

See Samsung, 929 F.3d at 1372 ("To hold otherwise would disincentivize collaboration and depart from what it means to *publish* something").

sages.” Pet. 40 (citing Ex. 1003 ¶34). Using S-HTTP for communications “would ensure end-to-end encryption between the user agent and origin server” and thereby enhance security by adding “personal-level security.” *Id.* at 40-41 (citing Ex. 1003 ¶35).

Patent Owner asserts that Kiuchi’s and Rescorla’s approach are incompatible and that Kiuchi discourages end-to-end encryption. PO Remand Sur-Reply 16-17. That argument was not raised in the Patent Owner Response or Patent Owner’s Remand Opposition; thus, it was waived.^{13,14} See Paper 12 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”).

Moreover, we agree with Petitioner that skilled artisans had reason to use Rescorla’s teachings in conjunction with Kiuchi. For the reasons provided above, we find that making the asserted combination would have been “the mere application of a known technique to a piece of prior art ready for the improvement.” See *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). The record does not support that the combination of Kiuchi

¹³ Patent Owner argued in the Response that “Kiuchi discourages end-to-end encryption” and “because encryption does not extend to Kiuchi’s user agent, Kiuchi does not disclose an ‘encrypted channel between the user agent and the origin server via the server side proxy,’ as claimed.” PO Resp. 18; *accord* PO Remand Br. 16. Those arguments about what Kiuchi teaches were not applied to whether skilled artisans would have combined Rescorla’s teachings with Kiuchi’s. See PO Resp. 27-28.

¹⁴ Even considering the argument, Kiuchi’s statement that its approach is “fundamentally different from” “[o]ther secure HTTP protocols” such as those described in Rescorla (Ex. 1002, 66-67) does not discourage using both together. Kiuchi’s assertions of “the following enhancements for security protection” (*id.* at 68) do not mandate that a skilled artisan would necessarily adopt Kiuchi unchanged.

and Rescorla would have been unpredictable. Thus, the record shows that Rescorla's technique for end-to-end encryption would improve Kiuchi's system just as it was used in Rescorla. *See id.* (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

Other than as discussed above, Patent Owner does not contest the combination of Kiuchi and Rescorla. *See* PO Resp. 27-28.¹⁵

3. *Patent Owner's asserted objective indicia of nonobviousness are not persuasive*

Patent Owner asserts that objective indicia of nonobviousness support a conclusion of patentability. PO Resp. 29-36. Patent Owner asserts that Apple's market success supports nonobviousness of the patented invention through commercial success, because a jury found Apple to infringe the '151 patent. PO Resp. 33. As Patent Owner points out, “success of an infringing product is considered to be evidence of the commercial success of the claimed invention.” *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Although Petitioner challenges Patent Owner's reliance on its declarant Dr. Short, as discussed be-

¹⁵ Patent Owner argued Petitioner belatedly raises “mapping No. 2 in their obviousness argument” and that the Petitioner only maps “the client side proxy to the origin server.” Tr. 30:9-10; *but see* Pet. 38 (asserting that Rescorla buttresses Kiuchi's teachings regarding a “channel that extends from the client to the secure server rather than just an intermediate portion there-between”), 41 (identifying a “channel that starts at the user agent (acting as a client) and ends at the origin server (a secure server)”).

low, Petitioner does not address Patent Owner's reliance on the jury's infringement finding. *See* Reply 17.

Patent Owner points out that the jury's damages award exceeded \$625 million, but does not address that the case included two additional patents. *See* Ex. 2052. More significantly, however, Patent Owner does not provide evidence allowing us to understand how the jury's damages award relates to the overall industry—the record does not reflect the scope of that industry or Apple's place within it. *Cf. In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (noting that “evidence related solely to the number of units sold provides a very weak showing of commercial success, if any”). Thus, Patent Owner's evidence at most weakly shows commercial success of the patented invention.

Patent Owner's other assertions rely on a declaration from Dr. Short, Ex. 2050. *See* PO Resp. 29-36. But Patent Owner did not make Dr. Short available for cross examination in this proceeding, and we therefore afford his declaration little to no weight. *See* Ex. 2060, 12:18-13:3, 19:17-20. As discussed in the Original Decision, Patent Owner does not establish the required factual support for its asserted indicia of nonobviousness. Original Decision 16-24.

In light of the minor modification Petitioner proposes to Kiuchi's system based on Rescorla's teachings, Patent Owner's evidence of Apple's commercial success does not outweigh the evidence of obviousness. *See Lectrosonics Inc. v. Zaxcom, Inc.*, IPR2018-00972, Paper 41, 23-24 (“Ultimately, the fact finder must weigh the secondary considerations evidence presented in the context of whether the claimed invention as a whole would have been obvious to a skilled artisan.” (citing *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331-32 (Fed. Cir. 2016))).

Patent Owner's assertions of nonobvious, considered together with the evidence of commercial success, similarly fail to persuade us that the claimed invention would not have been obvious over Kiuchi and Rescorla.

4. *Additional Claims*

As discussed above, the combination of Kiuchi and Rescorla directly remedies the deficiency with Kiuchi's disclosure regarding an encrypted channel between the client and the secure server. Thus, the combination of Kiuchi and Rescorla renders obvious claims 1 and 7. The combination renders obvious claim 13 also because applying Rescorla's methods to claim 13 would not undermine any of Kiuchi's disclosures that support anticipation; if anything, Rescorla's methods would further support creation of a secure channel between the client and the secure server.

Claim 2 recites determining whether the client is authorized to access the secure server. Patent Owner argues that Kiuchi only discloses "checking whether" a server "is registered in the network" but fails to disclose determining whether a client is "authorized" to access the secure server, as recited in claim 2, because "whether the server-side proxy [of Kiuchi] is permitted to connect says nothing as to the client computer's authorization." PO Resp. 26. However, Patent Owner does not assert or demonstrate sufficiently a difference between (1) determining if a device is "permitted" to connect (as disclosed by Kiuchi) and establishing a connection between a client and the server only if the device is determined to be "permitted" to connect and (2) determining if the client is "authorized" to access the secure server. One of skill in the art would have understood that a client determined to be "permitted to connect" is also determined to be "authorized" to connect. Otherwise, the client would not be

permitted to connect with the server, which would be contrary to the determination that the device is “permitted to connect.”

Patent Owner does not provide additional arguments in support of claims 6-8 or 12-14 with respect to Kiuchi’s disclosures. PO Resp. 25-26; PO Remand Br. 10-25. We have reviewed Petitioner’s contentions and determine that, on this record, for the reasons given by Petitioner, a preponderance of the evidence shows that claims 2, 6, 8, 12, and 14 are unpatentable. *See* Pet. 35-37.

5. *Summary*

Kiuchi discloses all elements of claims 1 and 7 other than “an encrypted channel between the client and secure server.” *See supra* at 8-19. Considering Kiuchi’s disclosures together with Rescorla’s methods for encrypted S-HTTP communication renders the entire subject matter of each claims 1 and 7 obvious, along with that of claim 13. Skilled artisans had reason, as Petitioner explains, to combine Rescorla’s teachings with Kiuchi’s to result in the claimed system. Petitioner has also shown that Kiuchi discloses the additional limitations of dependent claims 2, 6, 8, 12, and 14. *See* Pet. 35-37.

Accordingly, Petitioner has shown by a preponderance of the evidence that claims 1, 2, 6-8, and 12-14 are unpatentable as obvious over Kiuchi and Rescorla.

D. Obviousness over Kiuchi and RFC 1034

Petitioner’s obviousness contentions include modifying Kiuchi based on RFC 1034, with or without Rescorla. Pet. Remand Br. 15-27. Because we conclude the challenged claims are unpatentable as either anticipated by Kiuchi or rendered obvious by Kiuchi and Rescorla alone, we do not reach Petitioner’s ground based on Kiuchi and RFC 1034.

E. 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, "[w]e note that Exhibit 1003 merely confirms what is already apparent in the Petition and/or the Kiuchi reference itself." Paper 83, 6. We reached the same conclusion as to public availability of RFC documents—that our conclusion did not turn on Dr. Guerin's declaration. *Id.* at 6-7.

We reach the same conclusion here. Dr. Guerin's declaration does not drive our conclusion on any disputed issue. Additionally, Patent Owner has not demonstrated that any relevant modifications were made without Dr. Guerin's agreement. Thus, Patent Owner's argument is not persuasive.

F. 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. 29-30. 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. 29-30. 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).

G. CONSTITUTIONALITY

Patent Owner raises an argument relying on *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019). PO Remand Br. 29. That argument, however, is not sufficient 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.¹⁶

¹⁶ 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

In summary

Claims	35 U.S.C. §	Refer- ence(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 6-8, 12-14	102	Kiuchi	13, 14	1, 2, 6-8, 12
1, 2, 6-8, 12-14	103	Kiuchi, Rescorla	1, 2, 6-8, 12-14	
1, 2, 6-8, 12-14	103 ¹⁷	Kiuchi, RFC 1034		
1, 2, 6-8, 12-14	103 ¹⁸	Kiuchi, RFC 1034, Rescorla		
Overall Outcome			1, 2, 6-8, 12-14	

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 2, 6-8, and 12-14 of the '151 patent are unpatentable; and

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).

¹⁷ 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.

¹⁸ 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.

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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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APPENDIX K
UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

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

Petitioner,

v.

VIRNETX INC.,

Patent Owner.

IPR2015-01047¹
Patent 7,490,151 B2

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and C.F.R. § 42.73
PAPER 80

September 9, 2016

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

¹ Apple Inc. and Black Swamp IP, LLC, which filed petitioners in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in the instant proceeding.

The Mangrove Partners Master Fund, Ltd., Apple Inc., and Black Swamp IP, LLC (collectively, “Petitioner”) 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”). We issued a Decision to institute an *inter partes* review (Paper 11, “Inst. Dec.”) of claims 1, 2, 6-8, and 12-14 of the ’151 patent as unpatentable under 35 U.S.C. 102 as anticipated by Kiuchi² or under 35 U.S.C. 103(a) over the combination of Kiuchi, RFC 1034,³ and Rescorla⁴ or the combination of Kiuchi and any one of Rescorla or RFC1034. Inst. Dec. 3, 12; Paper 24 1-2.

After institution of trial, VirnetX Inc. (“Patent Owner”) filed a Patent Owner’s Response (Paper 54 (redacted version), “PO Resp.” and Paper 54 (non-redacted version)), to which Petitioner replied (Paper 58 (redacted version), “Pet. Reply”; Paper 56 (non-redacted version); and Paper 59, “Pet. Separate Reply”). Patent Owner and Petitioner also each filed a Motion to Exclude, a corresponding Patent Owner’s Opposition to Petitioner’s Motion to Exclude and Petitioner’s Opposition to Patent Owner’s Motion to Exclude, and corresponding Petitioner’s Reply to Patent Owner’s Opposition to Motion to Exclude and Patent Owner’s Reply to Petitioner’s Opposition of Motion to Exclude. Papers 64, 66, 68, 69, 70, 71. Patent Owner and Petitioner each also filed a Motion to

² Takahiro Kiuchi and Shigekoto Kaihara, C-HTTP – *The Development of a Secure, Closed HTTP-Based Network on the Internet*, PROCEEDINGS OF THE SYMPOSIUM ON NETWORK AND DISTRIBUTED SYSTEM SECURITY, IEEE 64-75 (1996) (Ex. 1002, “Kiuchi”).

³ P. Mockapetris, *Domain names – Concepts and Facilities*, Network Working Group, Request for Comments: 1034 (1987) (Ex. 1005, “RFC 1034”).

⁴ E. Rescorla and A. Schiffman, *The Secure HyperText Transfer Protocol*, Feb. 1996 (Ex. 1004, “Rescorla”).

Seal. Paper 47, 57. Oral argument was conducted on June 30, 2016. Transcripts of that argument has been made of record. Paper 79, “Tr.”; *see also* Paper 78.

We have jurisdiction under 35 U.S.C. §318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner met its burden of showing, by a preponderance of the evidence, that claims 1, 2, 6-8, and 12-14 of the '151 patent are unpatentable.

RELATED MATTERS

The '151 patent is the subject of 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.

The '151 patent is also the subject of Reexamination Control Nos. 95/001,697 and 95/001,714. Pet. 2.

THE '151 PATENT (EX. 1001)

The '151 patent discloses a system and method for automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function. Ex. 1001, 36:58-60.

ILLUSTRATIVE CLAIM(S)

Independent claim 1 is representative of the claimed subject matter. Claim 1 is reproduced below:

1. A data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client and, for each intercepted DNS request, performs the steps of:

- (i) determining whether the intercepted DNS request corresponds to a secure server;
- (ii) when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer, and
- (iii) when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server.

OVERVIEW OF PRIOR ART

Kiuchi

Kiuchi discloses closed networks (i.e., closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP)) of related institutions on the Internet. Ex. 1002, 64. A client and client-side-proxy “asks the C-HTTP name server whether it can communicate with the [specified] host” and, if “the query is legitimate” and if “the requested server-side proxy is registered in the closed network and is permitted to accept the connection,” the “C-HTTP name server sends the [requested] IP address.” Ex. 1002, 65. After confirmation by the C-HTTP name server “that the specified server-side proxy is an appropriate closed network member, a client-side proxy sends a request for connection to the server-side proxy, which is encrypted.” *Id.*

The server-side proxy “accepts [the] request for connection from [the] client-side proxy” (Ex. 1002, 65) and, after the C-HTTP name server determines that “the client-side proxy is an appropriate member of the closed network,” that “the query is legitimate,” and that “the client-side proxy is permitted to access . . . the server-side proxy,” the “C-HTTP name server sends the IP ad-

dress [of the client-side proxy].” Ex. 1002, 66. Upon receipt of the IP address, the server-side proxy “authenticates the client-side proxy” and sends a connection ID to the client-side proxy. After the client-side proxy “accepts and checks” the connection ID, “the connection is established,” after which time, the client-side proxy forwards “requests from the user agent in encrypted form using C-HTTP format.” Ex. 1002, 66.

RFC1034

RFC 1034 discloses that a “name server may be presented with a query” and that the name server may either “pursue[] the query for the client at another server” (recursive approach) or “refer[] the client to another server and lets the client pursue the query” (iterative approach). Ex. 1005, 4.

Rescorla

Rescorla discloses syntax for securing messages sent using Hypertext Transfer Protocol. Ex. 1004, 1.

ANALYSIS

Patentability issues

As Petitioner explains, Kiuchi discloses, for example, a data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client. *See, e.g.*, Pet. 25-28; Ex. 1003 at 18, 20-22, 27, 28, 31; Ex. 1002, 64-66. Kiuchi also discloses determining whether the intercepted DNS request corresponds to a secure server (Pet. 28-29; Ex. 1003, 23, 24, 26; Ex. 1002, 65), when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns a IP address of a nonsecure computer (Pet. 29-30; Ex. 1003, 23; Ex. 1002, 65), and when the intercepted DNS request corresponds to a secure server, automatically initiating

an encrypted channel between the client and the secure server (Pet. 30-32; Ex. 1003 23-25, 28-31; Ex. 1002, 64-66).

DNS Features

Patent Owner argues that “Kiuchi does not disclose the recited DNS features” (PO Resp. 13) because “Kiuchi repeatedly differentiates its C-HTTP features from DNS.” PO Resp. 14 (citing Ex. 2038 41-42).

Claim 1 recites a DNS request. The DNS request is “sent by a client,” potentially “corresponds to a secure server,” and may result in any one of a return of an IP address of a nonsecure computer or the initiation of an encrypted channel between the client and the secure server. Claim 1 does not appear to recite any other specific features of the DNS request.

As Petitioner explains, Kiuchi discloses the “client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL,” that the C-HTTP name server “examines whether the requested server-side proxy . . . is permitted to accept the connection from the client-side proxy,” and if so, “sends the IP address . . . of the server-side proxy.” Ex. 1002 65; Pet. 29.

Patent Owner argues that the “request” of Kiuchi differs from the claimed “DNS request” because “Kiuchi explains that the C-HTTP name service is used ‘instead of DNS.’” PO Resp. 14. As Patent Owner points out, Kiuchi discloses that “[i]n a C-HTTP-based network” a “C-HTTP-based secure, encrypted name and certification service is used” “instead of DNS.” Ex. 1002, 64, Abstract. However, other than what is tantamount to a mere difference in nomenclature, Patent Owner does not point out specific differences between the “request” of Kiuchi and the “request” as claimed. As discussed above,

Kiuchi discloses a “request” from a user agent (i.e., “client”) that requests an IP address corresponding to a domain name with subsequent formation of an encrypted channel (i.e., secure communication link) between the user agent (i.e., “client”) and origin server (i.e., “the secure server”), which appears to be the same as the request as claimed with the only apparent difference being the use of the descriptor “DNS” recited in claim 1. Furthermore, Patent Owner has argued in related proceedings that its claimed “secure domain name” “cannot be resolved by a *conventional domain name service.*” *See, e.g., Apple Inc. v. Virnetx Inc.*, IPR2015-00870, slip. op. at 22 (PTAB Jan. 25, 2016) (Paper 23) (citing related reexamination proceedings advancing the argument) (emphasis added). This further obscures what Patent Owner intends to cover by the term “DNS.”

In addition, we credit testimony of Dr. Fabian Monroe that the claim term “domain name service request” “does not limit it to . . . specific RFCs” and Dr. Monroe’s observation of the lack of “any analysis as to [a domain name service request] being limited or not thereof to a specific RFC.” Ex. 1036, 104:21-22, 105:18-19; see also Ex. 1036, 106:15-16 (“I haven’t provided any analysis that [a request as claimed] must comply with any RFC”). During oral argument, in response to a questions asking what a DNS requires, Patent Owner declined to define it, generally contending that whatever it is, Kiuchi does not disclose it. *See* Tr. 70:6-12 (“I think one of ordinary skill in the art would know that. But clearly when a reference specifically tells you it is not using DNS, you don’t even have to go down that road,” *id.* 71:8-9 (processing the DNS request in Patent Owner’s invention “might not be conventional”), *id.* 71:1-74:24, 84:4-24 (“It is still a DNS request whether you want to call it conventional —

non-conventional or whatever.”). Hence, we disagree with Patent Owner’s implied contention that renaming a request that requests an IP address corresponding to a domain name that is capable of requesting access to a secure web site (as disclosed by Kiuchi and as recited in claim 1) from “DNS request” to “C-HTTP-based . . . service . . . instead of DNS” alone is sufficient to create a patentable difference between requests that appear identical in all other respects.

Patent Owner also argues that Kiuchi’s “request” differs from the claimed “request” because Kiuchi discloses “that the . . . DNS lookup is generated only if an error condition occurs in which C-HTTP connectivity fails.” PO Resp. 14. However, claim 1 does not appear to recite any specific steps to be performed with respect to an error condition or whether connectivity fails (or not) in conjunction with the (non-recited) error condition.

Determining whether the DNS request corresponds to a Secure Server

Petitioner explains that Kiuchi discloses “[t]he C-HTTP name server ‘determin[es]’ whether the host in the C-HTTP name request sent by the client-side proxy is part of the closed network and whether the connection is permitted, and if so, returns an IP address and public key.” Pet. Reply. 8 (citing Ex 1002 65). Hence Petitioner argues that Kiuchi discloses a client (i.e., client-side proxy) that sends a request to a domain name server (DNS) proxy module (i.e., C-HTTP name server) that returns a corresponding IP address. We agree with Petitioner. Ex. 1002, 65.

Patent Owner argues “Kiuchi does not anticipate claim 1” because “it is the C-HTTP name server [of Kiuchi] . . . that examines whether the server-side proxy is registered in the closed network” (PO Resp. 17). Hence, Pa-

tent Owner does not appear to dispute that Kiuchi discloses a C-HTTP name server (or domain name server proxy module) that determines whether the DNS request corresponds to a secure server, as recited in claim 1, for example.

Automatically initiating

Patent Owner argues that Kiuchi fails to disclose automatically initiating an encrypted channel between the client and the secure server, as recited in claim 1, “because encryption does not extend to Kiuchi’s user agent” and “Kiuchi discourages end-to-end encryption, from a client to a target device.” PO Resp. 18. However, claim 1 does not recite “end-to-end encryption” or that encryption must extend to the user agent. For at least this reason, we are not persuaded by Patent Owner’s argument.

In any event, as previously discussed, Kiuchi discloses establishing an encrypted channel between a client (i.e., “client-side proxy”) and a secure server (i.e., “server-side proxy”). Even assuming Patent Owner’s contention to be correct that one of skill in the art would have broadly but reasonably understood that a channel that is “between [A] and [B]” requires that the channel “extend[] from [A] and [B]” such that the channel “should be provided all the way from [one component] to [the other component]” (PO Resp. Br. 11), we agree that Petitioner has met its burden by a preponderance of the evidence that Kiuchi discloses an encrypted channel that extends from the client-side proxy (i.e., “client”) and the server-side proxy (i.e., “secure server”) or, alternatively, that an encrypted channel is “provided all the way from” the client-side proxy (i.e., “client”) to the server side proxy (i.e., “secure server”). *See e.g.*, Paper 58 14; Ex. 1002 65-66. Patent Owner does not demonstrate persuasively a difference between such a channel and the encrypted channel be-

tween the client (“client-side proxy”) and secure server (“server-side proxy”) of Kiuchi.

Client

Patent Owner argues that Petitioner relies “on Kiuchi’s client-side proxy for the ‘client’ part of the claimed ‘encrypted channel’” but that Kiuchi’s client-side proxy cannot be equated with “the “client” part of the claimed “encrypted channel” because “Petitioner Black Swamp is already relying on the client-side proxy for the claimed ‘domain name server (DNS) proxy module.’” PO Resp. Br. 19 (citing IPR2016-00167 Pet. 13). Petitioner Black Swamp explains that Kiuchi discloses an embodiment in which the “client-side proxy asks the C-HTTP name server whether it can communicate with the host.” IPR2016-00167 Pet. 20. In other words, in this embodiment relied upon by Petitioner and contrary to Patent Owner’s assertion, Petitioner equates Kiuchi’s “C-HTTP name server” (and not the client-side proxy) with the claimed DNS proxy module. Patent Owner does not explain sufficiently a difference between Kiuchi’s client-side proxy and the claimed client with respect to this issue.

Patent Owner also argues that “Kiuchi’s client-side proxy is not a user’s computer” because “Kiuchi does not disclose any user associated with the client-side proxy.” PO Resp. Br. 20. Hence, Patent Owner disputes Petitioner’s mapping of Kiuchi’s client-side proxy to the claimed “client.” Pet. Reply. 10-12. We are not persuaded by Patent Owner’s argument.

Claim 1 recites “client” but does not recite “user’s computer.” To the extent that Patent Owner argues that Kiuchi’s client-side proxy is not a “client,” as recited in claim 1 and even assuming Patent Owner to be correct that a “client,” as recited in claim 1, must be “associated with” a user, we are not persuaded by Patent Owner that

Kiuchi fails to disclose that the client-side proxy is “associated with” a user. For example, Kiuchi discloses that users within an institution (e.g., “hospitals and related institutions” – Ex. 1002 64) are provided with access to “information [that is] shared among” institutions in which a “client-side proxy” receives a request for access from a user agent. One of skill in the art would have understood that in order for a user or “user agent” in an “institution” to provide a request to access information, the “user agent” (itself being “associated with” a user) would be “associated with” the “client-side proxy” to which the user agent sends a request. Otherwise, the user would be unable to send a request to the client-side proxy, the client-side proxy not being associated with the user in the first place. Hence, even assuming Patent Owner’s proposed definition to be correct that a “client” must be “associated with” a user, Patent Owner does not demonstrate sufficient differences between a “client-side proxy” of Kiuchi that is “associated with” a user (and receives a request from the associated user) and the claimed “client” that Patent Owner argues must be also be somehow “associated with” a user.

Patent Owner argues that Kiuchi’s “client-side proxy” is distinct from the claimed “client” because, according to Patent Owner, Kiuchi provides “separate references to the ‘client’ and ‘client-side proxy.’” PO Resp. Br. 21. We are not persuaded by Patent Owner’s argument at least because even assuming that Kiuchi refers to a “client” and “client-side proxy” separately as Patent Owner contends, Patent Owner does not point out sufficient differences between the “client-side proxy” of Kiuchi and a “client,” as recited in claim 1 for at least the previously stated reasons.

Patent Owner argues that the Federal Circuit “found ‘evidence that the ‘client’ of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy.” PO Resp. 21 (citing *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1324 (Fed. Cir. 2014))). Presumably, Patent Owner argues that the “client-side proxy” cannot be equated with the “client,” as recited in claim 1, because the Federal Circuit held that the “web browser” of Kiuchi must be equated with the claimed “client.” We are not persuaded by Patent Owner’s implied argument.

First, the Federal Circuit held that “the district court did not err in denying [Defendant’s] JMOL motion with respect to invalidity” because “there was evidence that the ‘client’ of Kiuchi is actually a web browser.” *Cisco*, 767 F.3d at 1324. We disagree with Patent Owner’s implied argument that the Federal Circuit held that 1) Kiuchi’s “web browser” must be equated with the claimed “client,” 2) Kiuchi’s “client-side proxy” must not be equated with the claimed “client,” and 3) Kiuchi’s “web browser” (which is supposedly mandated by the Federal Circuit to be exclusively equated with the claimed “client”) differs materially from the claimed “client” such that Kiuchi fails to disclose a “client.” Rather, the Federal Circuit actually held that there was sufficient “evidence” that Kiuchi discloses a web browser as a “client” such that the district court did not err in denying defendant’s JMOL motion. *See id.* This holding does not address whether Kiuchi’s client-side proxy (which Petitioner equates with the claimed “client” in this embodiment) is the same as or is different (and, if so, in what way) from the claimed “client.”

Second, as Patent Owner points out, the district court and the Federal Circuit do not construe claim terms un-

der a broadest reasonable interpretation standard as we do. PO Resp. Br. 21-22. Hence, even assuming that the Federal Circuit held that the claim term “client” must be construed a particular way under a claim construction standard other than the broadest reasonable standard, Patent Owner does not explain sufficiently how this would apply to the present proceedings in which a broadest reasonable standard is used.

Patent Owner argues that despite the differing standards of claim construction, the Federal Circuit “has emphasized that the Board nevertheless has an ‘obligation to acknowledge that interpretation’ and ‘to assess whether it is consistent with the broadest reasonable construction of the term.’” PO Resp. Br. 21-22 (citing *Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326 (Fed. Cir 2015)). We acknowledge the district court’s construction as being slightly narrower than our construction and as involving different evidence, arguments, and standards of proof. See *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142-2146 (2016).

Third, as previously discussed, Patent Owner contends that the Federal Circuit “found evidence that the ‘client’ of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy.” Hence, the Federal Circuit states that the district court was presented with evidence that Kiuchi discloses a web browser that is a client and is not the same as the client-side proxy of Kiuchi. In other words, the Federal Circuit makes no comment on claim construction at all (under any standard, much less a broadest reasonable standard) since the “web browser” and the “client-side proxy” are both terms disclosed by Kiuchi and neither term is recited in claim 1, for example.

Each Intercepted DNS Request

Patent Owner argues that Kiuchi fails to disclose each step recited in claim 1 “for each intercepted DNS request.” PO Resp. Br. 24. As discussed above, Petitioner equates Kiuchi’s client-side proxy with the claimed “client.” Kiuchi discloses that the “client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL,” in response, the C-HTTP name server “examines whether the requested server-side proxy is . . . permitted to accept the connection,” and, if so, “the C-HTTP name server sends the IP address and public key of the server-side proxy [to the client-side proxy]” (Ex. 1002 65), and subsequently, “the connection is established.” Ex. 1002 66. Kiuchi does not appear to also disclose that this process is *not* performed. Therefore, we are not persuaded by Patent Owner’s argument.

Hence, Petitioner has met its burden of demonstrating by a preponderance of the evidence that claim 1 is unpatentable.

Claims 2, 6-8, and 12-14

Claim 2 recites determining whether the client is authorized to access the secure server. Patent Owner argues that Kiuchi only discloses “checking whether” a server “is registered in the network” but fails to disclose determining whether a client is “authorized” to access the secure server, as recited in claim 2, because “whether the server-side proxy [of Kiuchi] is permitted to connect says nothing as to the client computer’s authorization.” PO Resp. 26. However, Patent Owner does not assert or demonstrate sufficiently a difference between 1) determining if a device is “permitted” to connect (as disclosed by Kiuchi) and establishing a connection between a client and the server only if the device is determined to be

“permitted” to connect and 2) determining if the client is “authorized” to access the secure server. One of skill in the art would have understood that a client that is determined to be “permitted to connect” also would be determined to be “authorized” to do so. Otherwise, the client would not be permitted to connect with the server, which would be contrary to the determination that the device is “permitted to connect.”

Patent Owner does not provide additional arguments in support of claims 6-8 and 12-14 with respect to Kiuchi. PO Resp. Br. 25-26. As such, on this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claims 2, 6-8 and 12-14 are unpatentable.

Obviousness - Kiuchi and Rescorla and/or RFC 1034

Patent Owner argues that Rescorla or RFC 1034 “do not remedy the deficiencies of Kiuchi.” PO Resp. Br. 28. However, as previously discussed and taking Patent Owner’s arguments into consideration, Petitioner has met its burden by demonstrating by at least a preponderance of the evidence that the disputed claims are unpatentable over Kiuchi. As such, no “deficiencies” of Kiuchi are identified. Therefore, we are not persuaded by Patent Owner’s argument.

In any event, Petitioner relies upon Rescorla only to the extent that Kiuchi fails to disclose or suggest automatically initiating (or creating) a secure channel between a client and secure server or a secure channel “between” a client and a secure server. Pet 37-38. As discussed above, we agree with Petitioner that Petitioner has met its burden by demonstrating by at least a preponderance of the evidence that Kiuchi discloses these features.

Petitioner relies upon RFC 1034 only in the event that the issue of whether Kiuchi only discloses “the allegedly ‘wrong’ network entity within Kiuchi’s architecture has responsibility for a given task” is raised. We do not identify an alleged “wrong” network entity performing a “responsibility for a given task.” At least for this additional reason, we are not persuaded by Patent Owner’s argument.

Patent Owner also argues that it would not have been obvious to one of ordinary skill in the art to have combined the teachings of Kiuchi with any one or both of Rescorla and/or RFC1034 because there was a “long-felt need” for “ways to easily and conveniently establish secure communication links, such as VPN communication links,” “others attempted to create easy-to-enable secure communications [but] failed,” “the technology was . . . met with skepticism,” “the claimed inventions have experienced commercial success, with multiple companies licensing the technology,” and “[t]hose in the industry have also praised the inventions.” PO Resp. 29, 31, 32, 33, 34. Hence, Patent Owner argues secondary considerations to rebut the *prima facie* showing of obviousness.

Long Felt Need

Patent Owner argues that “[p]rior to the claimed inventions, it was widely recognized that providing secure remote access to a LAN or WAN was extremely difficult for IT support desks” and that the claimed invention “combine[s] both the ease of use and the security aspects of a VPN, without sacrificing one or the other . . . by automatically initiating an encrypted channel between a client and a secure server through a DNS process as claimed.” PO Resp. 29 (citing Ex. 2050, 8, 9, 11, 131-132).

Based on the evidence of record, we are not persuaded by Patent Owner’s argument that “it was widely recog-

nized that providing secure remote access . . . was extremely difficult.” Rather, Patent Owner’s evidence indicate that “[r]emote access . . . [is] insecure and unreliable” but that “[y]ou can solve the security problem using client-to-LAN virtual private network (VPN) technology.” Ex. 2050 ¶8 (citing Ex. B-4 at 1). Hence, rather than being “extremely difficult” to provide secure remote access, as Patent Owner alleges, Patent Owner’s declarant (Dr. Robert Dunham Hosrt III) points out that, in fact, it was known in the art that any security problems associated with remote access could be solved. Hence, solutions were known in the art that provided secure remote access. On this record, however, Patent Owner fails to demonstrate with specific and credible evidence that such solutions were “extremely difficult” to implement (*see e.g.*, Ex. B-4 at 1) prior to the filing of the ’151 patent.

Also, Patent Owner argues that there was a long felt need to combine both the ease of use *and* the security aspects of a VPN by automatically initiating an encrypted channel between a client and a secure server. As discussed above, Kiuchi predates the filing of the ’151 patent and also discloses this feature. Patent Owner does not explain how the claimed invention satisfies this alleged “long felt need” of providing secure remote access when Kiuchi, at least, already provided for secure remote access.

Patent Owner also argues that “the Defense Advanced Research Projects Agency (‘DARPA’) funded various research programs to . . . provide easy-to-initiate secure communication links” and that “SAIC also spent significant resources of its own on their development [of “cutting edge technology].” PO Resp. 31. Patent Owner does not explain sufficiently how the amount of resources spent by either “DARPA” or “SAIC” for various re-

search programs to further “information assurance and survivability” or “cutting edge technology” demonstrates a long felt need for the claimed invention. We are not persuaded by Patent Owner’s argument.

Failure of Others

Patent Owner argues that “Dynamic Coalitions,’ was specifically created to address the ability of the Department of Defense to quickly and easily set up secure communications over the Internet” but that “none of [the organizations operating under “Dynamic Coalitions”] came up with a solution . . . that was even close to providing the ease of use of the solutions provided in the claimed inventions of the ’151 patent.” PO Resp. 31-32 (citing Ex. 2050, 4-5, 10, 11).

We are cautioned by the Federal Circuit that, with respect to secondary considerations alleged by Patent Owner in response to a *prima facie* showing of obviousness, “the obviousness inquiry centers on whether ‘the claimed invention as a whole’ would have been obvious.” *WBIP, LLC v. Kohler Co.*, Appeal Nos. 2015-1038, 2015-1044, slip op. at 15 (Fed. Cir., July 19, 2016). Looking at the “claimed invention as a whole,” we note that claim 1, for example, recites a data processing device that determines whether an intercepted DNS request corresponds to a secure server, forwards the DNS request to a DNS function that returns an IP address of a nonsecure computer (when the intercepted DNS request does not correspond to a secure server), and automatically initiating an encrypted channel between the client and the secure server when the intercepted DNS request corresponds to a secure server. As previously discussed in the record, Kiuchi discloses these features, either taken separately or as a “whole.” Patent Owner does not indicate a portion of the “whole” of the claimed invention that Kiuchi

supposedly does not disclose. Not having identified sufficiently a part of the “whole” of the claimed invention that Kiuchi does not disclose, we conclude that Kiuchi discloses the “whole” of the claimed invention. Therefore, Patent Owner fails to show a nexus to its evidence of secondary considerations.

While Patent Owner argues that DARPA-sponsored entities were supposedly unable to provide “the ease of use of the solutions provided in the claimed inventions of the ’151 patent,” Patent Owner does not demonstrate persuasively and with credible evidence that Kiuchi, for example, was also unable to provide “the ease of use of the solutions provided in the claimed inventions of the ’151 patent.” As previously discussed, Kiuchi appears to have succeeded in providing such solutions.

Skepticism

Patent Owner argues that “a DARPA program manager informed one of the co-inventors that technology disclosed in the ’151 patent would never be adopted” and that “IT offices of many large companies and institutions expressed skepticism that secure connections could ever be enable easily by regular computer users” because secure connections “could only be achieved through difficult-to-provision VPNs and . . . easy-to-set-up connections could not be secure.” PO Resp. 32 (citing Ex. 2050 13-15, 136, 137). We are not persuaded by Patent Owner’s argument.

We are directed by the Federal Circuit to consider the “*claimed* invention as a whole,” when considering secondary considerations raised in response to a prima facie showing of obviousness. Patent Owner does not indicate that the DARPA program manager in question informed the co-inventor that technology *claimed* in the ’151 patent would never be adopted. Further, even assuming

the manager's comment concerns the claimed invention, we are not persuaded by Patent Owner's argument because citing one person's opinion as to whether the claimed invention would be adopted does not constitute general skepticism in the industry. For example, Patent Owner does not list any credible publications on this point or indicate that any studies were performed over a statistically significant proportion of those of skill in the art that would indicate that there was, in fact, a general feeling of skepticism in the field that secure communications could be accomplished.

In any event, we note that Patent Owner's evidence indicate that the problem of providing secure remote access was already solved. See, e.g., Short Decl. Ex. B-4 at 1 ("But fear not: You can solve the security problem"). It is unlikely that those of skill in the art would have been skeptical that secure remote access, for example, could be achieved, given the fact that secure remote access was already being accomplished by ordinarily skilled artisans.

Commercial Success

Patent Owner argues that "the claimed inventions have experienced commercial success, with multiple companies licensing the technology." PO Resp. 33. However, Patent Owner does not provide any data regarding market share or revenue from sales of any products alleged to be encompassed by the claimed invention. *Id.* Rather, Patent Owner argues commercial success based solely on the alleged fact that various business entities entered into licenses with Patent Owner. Even assuming that the cited business entities entered into licenses with Patent Owner, this allegation alone would be insufficient to demonstrate commercial success at least because Patent Owner provides insufficient evidence suggesting that the reason any of the business entities

entered into licenses with Patent Owner was due to the merits of any claim at issue here, as opposed to any number of other reasons (e.g., expediency, advertising, or avoiding a lawsuit).

Even assuming that the cited business entities entered into licensing for the sole reason that Patent Owner's claimed invention was a "commercial success," we are still not persuaded by Patent Owner's argument.

Patent Owner argues that that the claimed invention "automatically initiates the encrypted channel," and that "this was a sought-after goal." PO Resp. 35. Hence, Patent Owner appears to argue a nexus between the alleged secondary considerations and the claim limitation of "automatically initiating an encrypted channel between the client and the secure server." However, as previously discussed, this feature is disclosed by Kiuchi. Under these circumstances, any commercial success stems from what was known in the prior art so that there can be no nexus. *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006).

As previously stated and in accordance with instructions from the Federal Circuit, we consider the "*claimed invention as a whole*" when determining whether Patent Owner has provided a sufficient nexus between the alleged secondary considerations (e.g., commercial success) and the claimed invention ("as a whole") to overcome the prima facie showing of obviousness. As previously discussed above and based on the evidence of record, Kiuchi discloses each of the parts of the claimed invention that constitute the "whole" of the claimed invention and, therefore, also discloses the "whole" claimed invention. Therefore, when considering the "claimed invention as a whole," we still conclude that Patent Owner has not pro-

vided a sufficient showing of nexus between the alleged secondary considerations and the “claimed invention as a whole” to overcome the prima facie showing of obviousness.

Praise in the Industry

Patent Owner argues that “[t]hose in the industry have . . . praised the inventions . . . by investing in the technology or licensing it.” PO Resp. 34. However, as previously discussed, Patent Owner does not demonstrate sufficiently any specific reason for any alleged investment and licensing activity on the part of business entities. As previously discussed, Patent Owner provided insufficient evidence to conclude that any licensing (or investing for that matter) activity was performed for any particular purpose or was related to any specific claim at issue in this proceeding. Nor does Patent Owner demonstrate sufficiently a nexus between the alleged praise and the “claimed invention as a whole.” Based on the evidence of record, we can only conclude that there is an allegation that licenses were entered into and investments were made without any showing as to the motivation behind these alleged activities. This is insufficient to conclude that these alleged activities were performed as a form of “praising” the “claimed invention as a whole” (or as a form of “commercial success”).

In addition, much of Patent Owner’s alleged secondary evidence with respect to praise in the industry appears to involve security—which *Cisco* deemed to include anonymity and data security—but the claims at issue here do not require anonymity. *Cisco* emphasized that the term “‘security’ [in the ’151 patent and related patents] does not have a plain and ordinary meaning” and that the term “secure communication link” requires anonymity. *Cisco*, 767 F.3d at 1317 (“VirnetX has not identified even a sin-

gle embodiment that provides data security but not anonymity”). Any praise or solutions discuss providing secure links in general, so they appear to encompass the specific disclosed security techniques in the ’151 patent that involve providing anonymity using hopping techniques, which is not claimed. But generally providing anonymity and encryption was well-known. *See Cisco*, 1317-18 (describing how the patents provide solutions using a two-layer encryption format for providing encryption and anonymity). Accordingly, Patent Owner’s evidence is not reasonably commensurate in scope with the claims, and it fails to show a nexus because it does not relate to what is disclosed and claimed.⁵ Regarding the reasonably commensurate in scope requirement, *see Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1336 (Fed. Cir. 2010) (“finding no long-felt need *because the claims were broad enough to cover devices that did not solve the problem*”); *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed.Cir.2000) (stating the presumption that commercial success is due to the patented invention applies “if the marketed product embodies the claimed features, *and is coextensive with them*”) (emphasis added); *In re Law*, 303 F.2d 951, 1162 (CCPA 1961) (“Thus, assuming the affidavits are a proper showing of commercial success, they do not show commercial success of dockboards covered by the appealed claims which are not limited to the bead of claim 13.”). In *MeadWestVaco Corp. v. Rexam Beauty and Closures, Inc.*, 731 F.3d 1258 (Fed. Circ. 2013), the court held that a district court erred by considering “secondary considerations of non-obvious [that] involved only fragrance-specific uses, *but the claims now at issue are not*

⁵ Patent Owner does not argue here that its claims here require anonymity and they do not.

fragrance-specific.” *Id.* at 1264 (emphasis added). Similarly, in *In re Tiffin*, 448 F.2d 791 (CCPA 1971), the court found that claims that are “too broad” fail to show that the claims are reasonably commensurate with the scope of the objective evidence of non-obviousness: “The solicitor’s position is that the objective evidence of non-obviousness is not commensurate with the scope of claims 1-3 and 10-16, reciting ‘containers’ generally, but establishes non-obviousness only with respect to “cups” and processes of making them. We agree.” *Id.* at 792.

Printed Publication – RFC 1034 and Rescorla

Patent Owner asserts that “Petitioners have not established by a preponderance of the evidence that RFC 1034 or [Rescorla] qualifies as a ‘printed publication.’” PO Resp. 40. The determination of whether a given reference qualifies as a prior art “printed publication” involves a case-by-case inquiry into the facts and circumstances surrounding the reference’s disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). On its face, RFC 1034 is a dated “Request for Comments” from the “Network Working Group,” discussing generally known methods for responding to a query from a client. Ex. 1005, 4. On its face, Rescorla is a dated “Internet-Draft” from the Internet Engineering Task Force (IETF) and described as a “draft document[] valid for . . . six months.” Ex. 1004, 1. Moreover, RFC 1034 explicitly states that “[d]istribution of this memo is unlimited.” Ex. 1005, 1. These indicia suggest that it is more likely than not that both documents were made available to the public (over the Internet).

To bolster its showing, Petitioner provides evidence suggesting that RFC 1034 and Rescorla would have been accessible to the interested public. For example, Peti-

tioner provides testimony of Dr. Roch Guerin who explains that “Request for Comment” documents or “RFCs” or ‘Internet-Drafts’ are “publications [that] are prepared and distributed” and “can be obtained from a number of Internet hosts using . . . document-retrieval systems.” Ex. 1003, 46. Dr. Guerin also testifies that such documents are “published and widely distributed” for “a period for others to provide comments on the document” and that the “publication date of each RFC is contained in the RFC, . . . in the top right corner of the first page of the document [which is] the date it was released for public distribution on the Internet.” Ex. 1003, 44. Ex. 1003 47-48.

Petitioner also relies on evidence (RFC2026) describing the general practice of publishing documents “as part of the ‘Request for Comments’ (RFC) document series” in which “RFCs can be obtained from a number of Internet hosts using anonymous FTP, gopher, World Wide Web, and other Internet document-retrieval systems.” Pet. Reply 19-20 (citing Ex. 1003, 45-52; Ex. 1010, 4, 8-9, 19-20). Exhibit 1010 further corroborates the testimony of Dr. Guerin and the indicia of availability on the face of RFC 1034.

Patent Owner characterizes Petitioner’s showing as providing “naked assertions.” PO Resp. 41. Patent Owner contends that “Dr. Guerin refers to RFC 2026 [but that RFC 2026 is] irrelevant in determining whether Rescorla or RFC 1034 qualifies as a printed publication” (PO Resp. 41) and challenges other evidence as too general and lacking a sufficient foundation. *See* PO Resp. 41-42.

The parties agree that Exhibit 1010, RFC 2026, reflects “generally accepted practices” for RFC documents and Internet-drafts and states that “any interested per-

son can obtain RFCs from a number of Internet hosts.” See Ex. 1010, 6. Patent Owner characterizes this evidence of “generally accepted practices” as being published “*nine years after* the alleged publication date of RFC 1034” and, therefore, supposedly irrelevant to the publication of RFC 1034 (or Rescorla). Patent Owner does not demonstrate persuasively, however, how the publication date of RFC 2026, which describes general practices of publishing documents in the RFC series fails to relate to the public availability of RFC 1034 or Rescorla. On the contrary, it appears that RFC 2026 confirms the statement in RFC 1034 that “[d]istribution of [RFC 1034] is unlimited” and the statement in Rescorla that the Rescorla is available for at least 6 months from the stated publication date. Ex. 1005 1, Ex. 1004 1. Accordingly, we hold that Petitioner has provided sufficient evidence to establish that RFC 1034 and Rescorla are printed publications and are not persuaded by Patent Owner’s arguments.

Petitioner’s Declarant’s (Dr. Roch Guerin) testimony

Petitioner filed a Declaration of Dr. Roch Guerin. Ex. 1003. Patent Owner argues that Petitioner’s Declarant’s testimony should “be given little, if any, weight” because, according to Patent Owner, “Dr. Guerin failed to consider, let alone opine on, how any of the claim features are disclosed in asserted references.” PO Resp. 36. Patent Owner’s arguments are moot in view of the fact that we did not rely on Dr. Guerin’s testimony in determining whether “claim features are disclosed in asserted references.” *Id.* In any event, Dr. Guerin’s testimony is helpful in the other respects to which he testified and entitled to due weight.

Additional IssuesJoinder of Black Swamp

Patent Owner argues that “Petitioner Black Swamp was improperly joined to the 01047 proceeding” because “[e]xpert testimony was required in this case given the complexity of the technology at issue” and Black Swamp supposedly failed to file this allegedly “required” expert testimony. This argument was previously raised by Patent Owner and previously addressed. IPR2016-00167 Prelim. Resp. 7-10; IPR2016-00167 Dec. Inst. 4-5; Paper 38, 3-4; Paper 42, 2-3. We remain unpersuaded by Patent Owner’s reiterated arguments for at least the reasons previously provided.

In response to the question of whether Petitioner is *required* to rely on expert testimony for purposes of institution, Patent Owner now states that “the Federal Circuit” has held that “Petitioner has both the ‘initial burden of production’ and ‘the burden of persuasion to prove unpatentability by a preponderance of the evidence.’” PO Resp. 40. Patent Owner, however, does not explain the relevance of this statement, even if assumed to be true, to whether or not a Petitioner is required to rely on expert testimony for purposes of institution. We remain unpersuaded by Patent Owner.

Alleged previous challenges

Patent Owner argues that “[t]he ’151 patent has been challenged ten times in *inter partes* proceedings before the Office” and, therefore, “this proceeding is barred by 35 U.S.C. §§312(a)(2) and 315(b)-(c). PO Resp. 45-46. Under 35 U.S.C. §§312(a)(2), a “petition . . . may be considered only if . . . the petition identifies all real parties in interest.” Under 35 U.S.C. §§315(b) and (c), an “*inter partes* review may not be instituted if the petition . . . is

filed more than one year after the date on which the petitioner . . . is served with a complaint” and that the Director “may join as a party . . . any person” Neither of the cited statutes appears to state that a petition may not be instituted or otherwise considered if the patent being challenged has been previously challenged. Thus, even assuming Patent Owner’s contention to be correct that the ’151 patent has been challenged previously, we are not persuaded by Patent Owner’s argument.

To the extent that Patent Owner argues that the present proceedings should be terminated pursuant to 35 U.S.C. § 325(d), this argument was previously raised and addressed. Prelim. Resp. 16-18 and Dec. Inst. 10-11. We remain unpersuaded by Patent Owner’s argument for the reasons stated in the Decision.

Real Parties in Interest

Patent Owner argues that The Mangrove Partners Master Fund, Ltd. failed to name all real parties in interest. PO Resp. 46-52, 56-57. In support of this allegation, Patent Owner re-iterates arguments that were previously raised and addressed in the record. Prelim. Resp. 1-13; Dec. Inst. 8-9; Patent Owner’s Request for Rehearing Under 37 C.F.R. § 42.71(d)(1) filed October 21, 2015, Paper 13, 3-7; Decision on Request for Rehearing, dated November 13, 2015, Paper 19, 2-9. We remain unpersuaded by Patent Owner’s arguments.

For example, Patent Owner argues that “The Mangrove Partners Hedge Fund is ‘the investment manager’ for” unnamed funds and that “[a]ll of the funds have a ‘shared investment objective . . . [to] compound their net worth while minimizing the chances of a permanent loss of capital.” PO Resp. 47 (citing Ex. 2001 4). As previously discussed,

[w]e are not persuaded by Patent owner’s arguments because Patent Owner does not explain sufficiently how any of these statements, even if assumed to be true, demonstrate or even suggest that any of the cited additional entities “exercised control over a party’s participation in” the preparation or filing of the Petition. Indeed, the fact that other funds have a common objective . . . does not . . . relate to whether or not the other funds exercised control over any aspect of the filing of the present Petition or not.

Paper 19, 4.

Patent Owner also argues that “the Mangrove Partner’s Hedge Fund has ‘complete discretion regarding the investment of’ the unnamed funds and ‘has repeatedly demonstrated that, in practice, it exercises total control over Petitioner Mangrove.” PO Resp. 47, 48 (citing Ex. 1001 3, 17). As we previously explained,

even assuming that the Mangrove Partners Hedge Fund has ‘complete discretion’ regarding investment objectives of the Funds, as Patent Owner contends, Patent Owner does not demonstrate that the Mangrove Partners Hedge Fund also has ‘complete discretion’ over the preparation or filing of the Petition to the extent of exercising control over the preparation or filing of the Petition.

Paper 19, 4-5.

Patent Owner argues that unnamed entities “fund all of the activities of Petitioner Mangrove . . . receive management and investment fees from investors, and are co-owners of Petitioner Mangrove.” PO Resp. 48-49 (citing Ex. 2001 15, 17). As we previously explained, Patent Owner’s “contention, even if assumed to be true, is insuf-

ficient to demonstrate that any of [the unnamed entities] played any role in the preparation or filing of the petition (i.e., controlled the preparation or filing of the Petition)” and “Patent Owner has not demonstrated sufficiently that [the unnamed entities], in fact, fund[] *all* of the activities of the Petitioner, *including* the preparation or filing of the present Petition to the extent of exercising control over the preparation or filing of the present Petition.” Paper 19, 7-8.

Patent Owner argues that “Mangrove Capital . . . is an ‘affiliate’ of the Mangrove Partners Hedge Fund and ‘serves as the general partner of the US Feeder.’” PO Resp. 49. Patent Owner further argues that “Mangrove Capital is allocated 20% of the annual increase in the net worth of an Investor’s interest in a Fund” and that “[a]ny persons acting on behalf of Mangrove Capital are subject to the supervision and control of [the named Petitioner] in connection with any investment advisory activities.” *Id.* Even assuming to be correct Patent Owner’s contention that any persons acting on behalf of Mangrove Capital are subject to the supervision and control of the named Petitioner in connection with any investment advisory activities, we are still not persuaded by Patent Owner. For example, Patent Owner does not assert or demonstrate persuasively that “Mangrove Capital” exercised control over the preparation or filing of the present Petition.

Patent Owner argues that “investors would have each provided substantial funding for the Petitioner” and that “undisclosed investors that provided substantial funding for the Petitioner . . . are RPIs.” PO Resp. 51. As we previously explained,

Patent Owner does not demonstrate persuasively that any specific investor provided [funds] to exer-

cise control over the preparation or filing of the Petition (or that any specific investor was even aware of the Petition) or that any of the alleged [funds] was, in fact, used to exercise control over the preparation or filing of the Petition on behalf of any specific investor.

Paper 19, 9.

Patent Owner argues that “the fiduciary relationship between the unnamed investors and the Mangrove Partners Hedge Fund . . . further compels a finding that the investors are RPIs.” PO Resp. 51. As we previously stated,

[e]ven assuming that the Mangrove Partners Hedge Fund seeks to increase profits for its investors under a “fiduciary duty,” as Patent Owner alleges, Patent Owner does not demonstrate persuasively that the Mangrove Partners Hedge Fund also exercised control over any aspect of the preparation or filing of the present Petition. Indeed, it is assumed that many funds in existence would also seek to increase profits for its investors but are not real-parties-in-interest in the present matter (i.e., “exercised control” over the preparation or filing of the Petition) merely by virtue of the fact that these funds seek to increase profits.

Paper 19, 5.

RPX Corporation as Real Party in Interest

Patent Owner argues that “RPX Corporation . . . is an RPI to the Petition filed by Mangrove” and the failure to name RPX Corporation as a real party in interest should bar the proceeding. PO Resp. 52-54, 56-57. In particular, Patent Owner argues that the Mangrove entities “are RPX’s fifth largest shareholder,” “owned ‘approximately

5.0% of the Shares outstanding for RPX,” had “recently met with management for RPX,” “received . . . shares of RPX stock,” subsequently “received still more shares, with its ownership increasing,” and are represented by “James Bailey [who] represent[ed] RPX in [related matters].” *Id.* at 52-54. Patent Owner also argues that “Mr. [James] Bailey is not counsel in any other PTAB proceedings.” *Id.* at 54. Hence, Patent Owner argues that RPX Corporation constitutes a real party in interest in the instant proceeding because the named real party in interest (i.e., Mangrove) owns shares of stock of RPX Corporation and/or Mangrove is represented by counsel who previously represented RPX. We are not persuaded by Patent Owner’s argument at least because Patent Owner provides insufficient evidence supporting the implied contention that the alleged fact that a fund owns stock in a company and/or retains the services of an attorney who previously represented the company in a different matter would implicate that company as a real party in interest in any *inter partes* review proceedings filed by the fund.

Apple Inc.’s Time Bar

Patent Owner argues that Apple, Inc. is “time-barred from this proceeding” because, according to Patent Owner, Apple Inc. failed to “‘properly file[] a petition’ within the one-year deadline specified in 315(b).” PO Resp. 58. Patent Owner further argues that “the term ‘properly filed’ was meant to encompass the timing requirement of section 315(b), and that section 315(b)’s timing exemption was not intended to alter that requirement.” *Id.* at 58-59. The argument was previously presented and previously addressed in IPR2016-00063 prior to consolidation with this case. IPR2016-00063, Prelim. Resp. 1-3 (Paper 10); IPR2016-00063 Dec. Inst. 3-4, Paper 13; Patent Owner’s

Request for Rehearing Under 37 C.F.R. §42.71(d)(1) of Institution Decision in IPR2016-00063, dated February 8, 2016, Paper 38, 6-10; Decision on Request for Rehearing, dated February 26, 2016, Paper 41, 2. We remain unpersuaded by Patent Owner's arguments for the reasons stated in the Decisions cited above.

Alleged Improper Argument(s) in the Reply Brief

Patent Owner argues that Petitioner presented various improper arguments in the Petitioner's Consolidated Reply Brief and in the Separate Reply Brief filed by Apple Inc.

In particular, Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner maps Kiuchi's "user agent" to the claimed "client." Paper 61, 1-2 (citing Paper 58 3). In the Petition, Petitioner states Kiuchi discloses "DNS requests sent by a user agent acting as a client," the "client-side proxy receives a request from the user agent," "the user agent's request," and that "[t]he user agent [of Kiuchi] is a 'client,' under that term's broadest reasonable interpretation." Pet. 25-26. *See also* IPR2016-00167 Pet. 13-14. We do not agree with Patent Owner that Petitioner provided this claim mapping for the first time in the Consolidated Reply Brief given these (and other) explicit statements made by Petitioner in the Petition.

Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner maps Kiuchi's "server-side proxy" to the claimed "secure server." Paper 61, 1-2 (citing Paper 58 3). In the Petition of joined case IPR2016-00167, Petitioner stated that "in addition to the origin server, the server-side proxy is a secure server." IPR2016-00167 Pet. 16-17. We do not agree with Patent Owner that Pe-

tioner provided this claim mapping for the first time in the Consolidated Reply Brief given at least this explicit statement made by Petitioner in the Petition in joined case IPR2016-00167.

Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner argues that "the client-side proxy and C-HTTP name server" perform the claimed determining step but previously only argued that "the client-side proxy" performs this determining step. Paper 61, 2. In the Petition, Petitioner stated that "the client-side proxy [of Kiuchi] determines whether the request corresponds to a secure server by asking . . . the C-HTTP name server [of Kiuchi] whether it can communicate with the host." Pet. 29, *See also* IPR2016-00167 Pet. 15-16. Hence, Petitioner previously argued that the client-side proxy and the C-HTTP name server perform the claimed determining step in the Petition. We do not agree with Patent Owner that this argument was first raised by Petitioner in Petitioner's Consolidated Reply Brief. In any event, we did not rely on this cited portion of the Petitioner's Consolidated Reply Brief so this issue is moot.

Patent Owner argues that Petitioner provided new arguments in Petitioner's Consolidated Reply Brief "relying on Kiuchi's appendices," arguments relying on RFC 1945 (Exhibit 1014), and regarding Apple's "numerous accusations against Patent Owner." Paper 61, 1-3. Patent Owner's arguments are moot in view of the fact that we did not rely on these cited portions of Petitioner's Consolidated Reply Brief or the cited portion of Petitioner's separate reply brief filed by Apple, Inc.

MOTIONS TO EXCLUDE

Patent Owner filed a Motion to Exclude with respect to Exhibits 1010, 1012-1014, 1029, 1031-1034, 1037, 1039-

1042, and 1044. Paper 66. Petitioner filed a Motion to Exclude with respect to Exhibit 2050. Paper 64.

Exhibit 1010

Patent Owner argues that Exhibit 1010 “lack[s] relevance.” Paper 66, 8. Exhibit 1010 corresponds to RFC 2026, a document that Petitioner relies upon to demonstrate the general practice of publication of documents in the RFC series and Internet-drafts (in response to Patent Owner’s argument regarding the public availability of RFC 1034 and Rescorla). In view of Petitioner’s reliance on Exhibit 1010 in response to the issue of public availability of RFC 1034 and Rescorla, as raised by Patent Owner, we disagree with Patent Owner that this document lacks relevance. Patent Owner’s motion to exclude is denied with respect to Exhibit 1010.

Exhibits 1012-1014, 1029, 1031-1034, 1037, 1039-1042, 1044, 2050

Patent Owner moves to exclude Exhibits 1012-1014, 1029, 1031-1034, 1037, 1039-1042, and 1044. Petitioner moves to exclude Exhibit 2050. We either did not rely on the disputed exhibits (i.e., Exhibits 1012-1014, 1029, 1031-1034, 1037, 1039-1041, 1044, and 2050) or we do not identify the disputed exhibits in the record and, therefore, did not rely on the exhibits (i.e., Exhibit 1042). Patent Owner’s motion to exclude and Petitioner’s motion to exclude with respect to Exhibits 1012-1014, 1029, 1031-1034, 1037, 1039-1042, 1044, and 2050 are dismissed as moot.

MOTIONS TO SEAL

Patent Owner filed a Motion to Seal Exhibits 2042, 2058, and 2059, and the un-redacted version of Patent Owner’s response. Paper 47. Petitioner filed a Motion to Seal the un-redacted version of Petitioners’ Consolidated Reply Brief. Paper 57.

There is a strong public policy in favor of making information filed in an *inter partes* review open to the public, especially because the proceeding determines the patentability of claims in an issued patent and, therefore, affects the rights of the public. Under 35 U.S.C. §316(a)(1) and 37 C.F.R. §42.17, the default rule is that all papers filed in an *inter partes* review are open and available for access by the public; however, a party may file a concurrent motion to seal and the information at issue is sealed pending the outcome of the motion. It is only “confidential information” that is protected from disclosure. 35 U.S.C. §316(a)(7); *see* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,760 (Aug. 14, 2012). The standard for granting a motion to seal is “good cause.” 37 C.F.R. §42.54(a). The party moving to seal bears the burden of proof in showing entitlement to the requested relief, and must explain why the information sought to be sealed constitutes confidential information. 37 C.F.R. §42.20(c). As set forth in the Trial Practice Guide (77 Fed. Reg. at 48,761), there is an expectation that information will be made public if identified in this Final Written Decision.

We have reviewed Exhibits 2042, 2058, and 2059, the un-redacted versions of Patent Owner’s Response, and the un-redacted version of Petitioners’ Consolidated Reply Brief. We conclude that they contain confidential business information. None of the content of those documents that is asserted as constituting confidential business information has been identified in this Final Written Decision in reaching a determination in this proceeding with respect to the claims of the ’151 patent. We are persuaded that good cause exists to have those documents remain under seal.

The record will be maintained undisturbed pending the outcome of any appeal taken from this decision. At the conclusion of any appeal proceeding, or if no appeal is taken, the documents will be made public. *See* Trial Practice Guide, 77 Fed. Reg. at 48,706-61. Further, either party may file a motion to expunge the sealed documents from the record pursuant to 37 C.F.R. §42.56. Any such motion will be decided after the conclusion of any appeal proceeding or the expiration of the time period for appealing.

ORDERS

After due consideration of the record before us, it is:

ORDERED that claims 1, 2, 6-8, and 12-14 of the '151 patent are held unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibit 1010 is *denied*;

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibits 1012-1014, 1029, 1031-1034, 1037, 1039-1042, and 1044 is *dismissed*;

FURTHER ORDERED that Petitioner's Motion to Exclude is dismissed;

FURTHER ORDERED that Patent Owner's Motion to Seal (Paper 47) is granted;

FURTHER ORDERED that Petitioner's Motion to Seal (Paper 57) is granted; and

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

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APPENDIX L
UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

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

Petitioner,

v.

VIRNETX INC.,

Patent Owner.

Case IPR2015-01047¹
Patent 7,490,151 B2

DECISION
REQUEST FOR REHEARING
37 C.F.R. § 42.71(d)
PAPER 83

October 20, 2016

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

¹ Apple Inc. and Black Swamp IP, LLC, which filed petitioners in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in the instant proceeding.

SIU, *Administrative Patent Judge*.

VirnetX Inc. (“Patent Owner”), in its Request for Rehearing (“Req. Reh’g.” or “Request”), seeks reversal of the Board’s Decision (“Decision”) pertaining to Patent Owner’s arguments regarding Petitioner’s alleged failure to name all real parties in interest and disputes all references to Exhibit 1003 in the Decision. *See* Req. Reh’g. 1. For the reasons that follow, the Board denies the requested relief.

The applicable standard for a request for rehearing is set forth in 37 C.F.R. §42.71(d), which provides in relevant part:

A party dissatisfied with a decision may file a request for rehearing, without prior authorization from the Board. The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or a reply.

Patent Owner argues that The Mangrove Partners Master Fund, Ltd. failed to name all real parties in interest and that “[t]he Decision misapprehended or overlooked that a number of new arguments were presented in Patent Owner’s Response.” Paper 82, 7. In particular, Patent Owner argues that “the Decision misapprehended or overlooked [that]:

In a form filed with the SEC on March 17, 2016, Petitioner Mangrove admitted that the US Feeder and the Cayman Feeder are “controlling shareholders” of the Mangrove Petitioner and, because of this relationship, shares of RPX Corporation owned

by the Mangrove Petitioner “may be deemed to be beneficially owned by the US Feeder and the Cayman Feeder.” Ex. 2057 at 14; Response at 51-52.

Paper 82, 8.

We are not persuaded by Patent Owner’s argument. Even assuming that Petitioner, in fact, “admitted that the US Feeder and the Cayman Feeder are ‘controlling shareholders’ of the Mangrove Petitioner,” as Patent Owner asserts, Patent Owner does not demonstrate persuasively that Petitioner also “admitted” that the “US Feeder and the Cayman Feeder” exerted control over the filing or preparation of the Petition. Nor does Patent Owner provide sufficient evidence demonstrating such control.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

The SEC filing explained that by virtue of the relationship between Nathaniel August, the Mangrove Partners Hedge Fund, Mangrove Capital, and the Mangrove Petitioner, “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August may be deemed to beneficially own the Shares owned by the [Mangrove Petitioner].” Ex. 2057 at 14; Response at 52.

Paper 82, 8

We are not persuaded by Patent Owner’s argument. Even assuming that an SEC filing, in fact, states that “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August may be deemed to beneficially own the Shares owned by the [Mangrove Petitioner],” as Patent Owner asserts, Patent Owner does not demonstrate persuasively that the alleged SEC filing al-

so states that “each of [the] Mangrove Partners [Hedge Fund], Mangrove Capital, and Mr. August” exerted control over the filing or preparation of the Petition. Nor does Patent Owner provide sufficient evidence demonstrating such control.

Patent Owner also argues that we “misapprehended or overlooked” that Ward Dietrich (Chief Operating Officer of the Mangrove Partners Hedge Fund) allegedly reimbursed the filing fees for filing the Petition in accordance with a prior “agreement to reimburse such fees.” Paper 82, 8-9 (citing Ex. 2058, 24, 25, 29; Response 55; Paper No 56, 22). Patent Owner does not demonstrate sufficiently that a party honoring a prior agreement to reimburse fees to Petitioner constitutes sufficient control of the preparation or filing of the Petition. Therefore, we are not persuaded by Patent Owner’s argument.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

Nathaniel August, Ward Dietrich, and Jeff Kalicka (who, as discussed above, work for the Mangrove Partners Hedge Fund), also commented extensively on the petitions and expert declarations in IPR2015-01046 and IPR2015-01047, even asking for changes to be made after Petitioner Mangrove’s attorneys thought the papers “were ready to file.” Ex. 2058 at 12-18, 20-23, 28, 29; see also Ex. 2059 at 3 (“It is likely that Mr. Dietrich had one or more oral conversations that were not immediately reduced to writing with Nathaniel August and/or Jeff Kalicka pertaining to Mr. Dietrich’s involvement in the preparation and filing of the Petitions.”); Response at 55.

Paper 82, 9.

Upon review of the cited portions of Exhibit 2058, we note that the only suggestions provided are a “few small nits” and questioning the use of the term “see” with no subsequent use of the term “see also.” Exhibit 2058, 22, 28. While it is stated that suggestions are embedded in the draft, no other specific suggested modifications are noted, much less any indication that any alleged suggested modifications were actually adopted. In any event, we conclude that these suggestions (e.g., a “few small nits” and the use of the term “see”) are minor and do not rise to the level of exerting control over the filing or preparation of the Petition. Therefore, we are not persuaded by Patent Owner’s argument.

Patent Owner also argues that we “misapprehended or overlooked” the following argument that was allegedly previously presented:

Petitioner Mangrove and the Mangrove Partners Hedge Fund in fact had a pre-established plan as to the hiring of “intellectual property advisors and attorneys,” and fees that the Mangrove Partners Hedge Fund would receive based on the success of Petitioner Mangrove. Ex. 2042 at 9, 10; Response at 55-56.

Paper 82, 9.

We note that the cited portion of Exhibit 2042 states that “[t]he Master Fund” pays a “monthly management fee” to “the Investment Manager” and that “[t]he Funds . . . will reimburse the Investment Manager for . . . operating expenses of the Master Fund” that includes “legal and other costs.” Ex. 2042, 9, 10. In other words, Petitioner agrees to pay a management fee and reimburse legal costs to the Investment Manager. We do not identi-

fy, and Patent Owner does not indicate, where this agreement also mandates that the Investment Manager (or any specific entity other than Petitioner) controls the filing or preparation of the Petition. Therefore, we are not persuaded by Patent Owner's argument.

Patent Owner also argues that we "misapprehended or overlooked" the following argument that was allegedly previously presented:

An agreement between Mangrove Partners Hedge Fund and Petitioner Mangrove shows that the former, as investment manager in its "sole and absolute discretion," has the authority to "effect all necessary registrations, notices or other filings with governmental or similar agencies" (Ex. 2042 at 2-3), which would include the Patent Office. See also Ex. 2058 at 7 (providing Ward Dietrich with authorization to execute the power of attorney in this proceeding); Response at 56.

Paper 82, 9-10.

While Patent Owner asserts that a general agreement exists between Mangrove Partners Hedge Fund and Petitioner that Mangrove Partners Hedge Fund has "sole and absolute discretion" to "effect all necessary registrations," Patent Owner provides insufficient evidence to demonstrate that an agreement exists between Mangrove Partners Hedge Fund and Petitioner that Mangrove Partners Hedge Fund controls the filing or preparation of the Petition or that Mangrove Partners Hedge Fund, in fact, exerted control over the filing or preparation of the Petition. Therefore, we are unpersuaded by Patent Owner's argument.

Patent Owner also argues that "the Board should find that Exhibit 1003 is entitled to no weight and reverse its

findings of unpatentability that improperly rely on Exhibit 1003.” Paper 82, 14. Reference to Exhibit 1003 in the Decision was made in conjunction with the Petition in describing the Kiuchi disclosure with respect to claim features. Decision 5. We note that Exhibit 1003 merely confirms what is already apparent in the Petition and/or the Kiuchi reference itself (both of which are also relied upon in consideration of the Kiuchi reference with respect to claim features). Hence, to the extent that any modifications might have been made to the relevant portions of Exhibit 1003, we conclude that such alleged potential modifications (if any) are of insubstantial relevance in view of the fact that analysis of the Petition and the Kiuchi reference itself (without reliance on Exhibit 1003 in this regard) indicate that Petitioner has met its burden by a preponderance of the evidence that claims 1, 2, 6-8, and 12-14 of the ’151 patent are unpatentable, as indicated in the Decision. *See, e.g.*, Decision 1-4, 6-24, and 26-38.

Reference to Exhibit 1003 in the Decision was also made in the Petition as corroboration that RFC documents are “publications [that] are prepared and distributed,” “published and widely distributed” for “a period for others to provide comments on the document,” “can be obtained from a number of Internet hosts using . . . document-retrieval systems,” and contain a date “in the top right corner of the first page of the document.” Decision 25. Such testimony merely corroborates what is already clear on its face. For example, the fact that RFC documents are prepared and distributed, are for others to provide comments, are published on a specific date, and that the top right corner of such documents specify a date is clear on simple inspection of the RFC document itself. Therefore, we determine that the importance of

any alleged modifications to Dr. Guerin's testimony confirming what is already apparent on its face is of insubstantial importance. Also, Patent Owner does not demonstrate sufficiently that any modifications were, in fact, made to Dr. Guerin's testimony that RFC documents are published on a specific date and that the top right corner of such documents specify a date.

Patent Owner "suggests that an expanded panel that includes the Chief Judge consider this request for rehearing." Paper 82, 14. Discretion to expand a panel rests with the Chief Judge, who, on behalf of the Director, may act to expand a panel on a suggestion from a judge or panel. *AOL Inc. v. Coho Licensing LLC*, Case IPR2014-00771, slip op. at 2 (PTAB Mar. 24, 2015)(Paper 12)(informative). Patent Owner's suggestion was considered by the Chief Administrative Patent Judge, who declined to expand the panel.

ORDERS

After due consideration of the record before us, it is:

ORDERED that Patent Owner's Request for Rehearing is denied.

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APPENDIX M
UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

APPLE, INC.,
Petitioner,

v.

VIRNETX, INC.,
Patent Owner.

IPR2016-00063
Patent 7,490,151 B2

DECISION
INSTITUTION OF *INTER PARTES* REVIEW
37 C.F.R. §42.108
PAPER 13

January 25, 2015

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

I. INTRODUCTION

Apple, Inc. (“Petitioner”) filed a Petition (“Pet.”) on
October 26, 2015 (Paper 1) requesting *inter partes* review

of claims 1, 2, 6–8, and 12–14 of U.S. Patent No. 7,490,151 (“the ’151 Patent,” Ex. 1001). Along with the Petition, Petitioner filed a Motion for Joinder (Paper 2, “Mot.”) with IPR2015-01047, *The Mangrove Partners Master Fund, Ltd. v. VirnetX Inc.*, a pending *inter partes* review involving the ’151 patent.

VirnetX Inc. (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”) and an Opposition to the Motion for Joinder (Paper 9, “Opp.”) on January 8, 2016. Petitioner filed a Reply to Patent Owner’s Opposition to the Motion for Joinder on January 15, 2016 (Paper 12, “Reply”). For the reasons described below, we institute an *inter partes* review of all the challenged claims and grant Petitioner’s Motion for Joinder.

II. INSTITUTION OF *INTER PARTES* REVIEW

The Petition in this proceeding asserts the same grounds as those on which we instituted review in the IPR2015-01047. On October 7, 2015, we instituted a trial in the IPR2015-01047 matter on the following grounds:

Reference(s)	Basis	Claims challenged
Kiuchi ¹	§ 102	1, 2, 6–8, and 12–14
Kiuchi and RFC 1034 ²	§ 103	1, 2, 6–8, and 12–14

¹ Takahiro Kiuchi and Shigekoto Kaihara, C-HTTP – *The Development of a Secure, Closed HTTP-Based Network on the Internet*, PROCEEDINGS OF THE SYMPOSIUM ON NETWORK AND DISTRIBUTED SYSTEM SECURITY, IEEE 64–75 (1996) (Ex. 1002, “Kiuchi”).

² P. Mockapetris, *Domain Names – Concepts and Facilities*, Network Working Group, Request for Comments: 1034 (1987) (Ex. 1005, “RFC1034”).

Kiuchi and Rescorla ³	§103	1, 2, 6–8, and 12–14
Kiuchi and RFC 1034 and Rescorla	§103	1, 2, 6–8, and 12–14

The Mangrove Partners Master Fund, Ltd. v. VirnetX Inc., Case IPR2015-01047, slip. op. at 12 (PTAB October 7, 2015) (Paper 11) ('1047 Decision); *See also* IPR2015-01047, slip. op. at 1–2 (PTAB December 10, 2015) (Paper 24) ('1047 Errata).

In view of the identity of the challenge in the instant Petition and in the petition in IPR2015-01047, we institute an *inter partes* review in this proceeding on the same grounds as those on which we instituted *inter partes* review in IPR2015-01047.

III. GRANT OF MOTION FOR JOINDER

An *inter partes* review may be joined with another *inter partes* review, subject to the provisions of 35 U.S.C. §315(c), which governs joinder of inter partes review proceedings:

(c) JOINDER. – If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter partes review under section 314.

As the moving party, Petitioner bears the burden of proving that it is entitled to the requested relief. 37

³ E. Rescorla and A. Schiffman, *The Secure HyperText Transfer Protocol*, Internet Draft (Feb. 1996) (Ex. 1004, “Rescorla”).

C.F.R. §42.20(c). A motion for joinder should: (1) set for the reasons joinder is appropriate; (2) identify any new grounds of unpatentability asserted in the petition; and (3) explain what impact (if any) joinder would have on the trial schedule for the existing review.

The Petition in this proceeding has been accorded a filing date of October 26, 2015 (Paper 4), which satisfies the joinder requirement of being filed within one month of our instituting a trial in IPR2015-01047 (i.e., within one month of October 7, 2015). 37 C.F.R. §42.122.

Patent Owner argues that Petitioner's Motion for Joinder "is barred by 35 U.S.C. §315(b) . . . [b]ecause [Petitioner's] untimeliness precludes institution under §315(b) [and so] it also precludes joinder under §315(c)." Opp. 4. However, 35 U.S.C. §315(b) states that "[t]he time limit . . . shall not apply to a request for joinder." 35 U.S.C. §315(b). Hence, if a party filing a time-barred petition requests joinder, the one-year time bar "shall not apply." This is confirmed by the Board's rules, which provide that a petition requesting *inter partes* review may not be "filed more than one year after the date on which the petitioner, the petitioner's real party-in-interest, or a privy of the petitioner is served with a complaint alleging infringement of the patent," but the one-year time limit "shall not apply when the petition is accompanied by a request for joinder." 37 C.F.R. §§42.101(b), 42.122(b); *see also* IPR2013-00109, Paper 15 and IPR2013-00256, Paper 10 (permitting joinder of a party beyond the one-year window). The Board's rules do not conflict with the language of the statute as Patent Owner suggests.

We have considered Patent Owner's arguments regarding an alternate interpretation of the statute. *See, e.g.*, Opp. 4–8. However, we do not find these arguments

persuasive for at least the reasons set forth by Petitioner. *See, e.g.*, Reply 2–3.

Patent Owner also argues that “joining . . . will have an impact on the ’047 proceeding.” Opp. 8. In particular, Patent Owner argues that the “petition raises additional issues and evidence.” Opp. 8. Patent Owner does not provide details about any specific “additional issue” that is allegedly raised. However, Petitioner states that Petitioner has filed “additional evidence confirming that RFC 1034 and Rescorla are printed publications that were publicly available before the earliest effective filing date of the challenged claims.” Pet. 54. Hence, Patent Owner appears to argue that the Petition in this matter raises the “additional issue” of whether RFC 1034 or Rescorla is a printed publication that was publicly available before the earliest effective filing date of the challenged claims.

We note that Patent Owner previously argued that “the burden is on Petitioner to establish that RFC 1034 and Rescorla . . . were ‘sufficiently accessible to the public interested in the art’” but that Petitioner allegedly failed to do so. IPR2015-01047, Prelim. Resp. 18. In other words, the issue of whether RFC 1034 and Rescorla are printed publications that were publicly available before the earliest effective filing date of the challenged claims was previously raised by Patent Owner. Thus, this issue cannot be an “additional issue” raised subsequently by Petitioner. In any event, even assuming that this issue is an “additional issue” raised by Petitioner, Patent Owner does not explain sufficiently how this “additional issue” would impact this proceeding adversely or how an impact, if any, would preclude joinder.

Patent Owner requests that in the event that Petitioner’s Motion for Joinder is granted, the Scheduling Order in IPR2015-01047 should be adopted, that Mangrove “will

be responsible for the preparation and filing of any papers,” that “Mangrove will conduct the deposition of any VirnetX witness,” that “Mangrove will be responsible for any redirect of its expert,” and that “Mangrove will conduct all oral arguments.” Opp. 10.

As a Petitioner in IPR2015-01047, Apple, Inc. shall adhere to the existing schedule of IPR2015-01047. All filings by Apple, Inc. in IPR2015-01047 shall be consolidated with the filings of the other petitioner, unless the filing involves an issue unique to Apple, Inc. or states a point of disagreement related to the consolidated filing. In such circumstances, Apple, Inc. may make a separate filing of no more than five pages, without prior authorization of the Board. The page limits set forth in 37 C.F.R. §42.24 will apply to all consolidated filings.

Apple, Inc. is bound by any discovery agreements, including deposition arrangements, between Patent Owner and the IPR2015-01047 petitioner and shall not seek any discovery beyond that sought by the IPR2015-01047 petitioner. Patent Owner shall not be required to provide any additional discovery or deposition time as a result of joinder. The IPR2015-01047 petitioner shall designate attorneys to conduct the cross-examination of any witness produced by Patent Owner and the redirect examination of any other witness, within the timeframes set forth in 37 C.F.R. §42.53(c) or agreed to by Patent Owner and the IPR2015-01047 petitioner. No individual petitioner will receive any additional cross-examination or redirect examination time. Moreover, if an oral hearing is requested and scheduled, the IPR2015-01047 petitioner shall designate attorney(s) to present at the oral hearing in a consolidated argument.

The Board expects Apple, Inc. and Patent Owner to resolve any disputes between them and/or with the

IPR2015-01047 Petitioner and to contact the Board only if such matters cannot be resolved.

IV. ORDER

For the reasons given, it is

ORDERED that Petitioner's Motion for Joinder is granted;

FURTHER ORDERED that IPR2016-00063 is instituted and joined with IPR2015-01047;

FURTHER ORDERED that the grounds on which IPR2015-01047 was instituted are unchanged and no other grounds are included in the joined proceeding;

FURTHER ORDERED that the Scheduling Order entered in IPR2015-01047 (Paper 12) as modified by the Order changing due date 1 (Paper 20) remain unchanged and shall govern the schedule of the joined proceedings;

FURTHER ORDERED that, throughout the joined proceeding, Mangrove will file papers, except for motions that do not involve the other party, as a single, consolidated filing; that the filing party (Mangrove) will identify each such filing as a Consolidated Filing;

FURTHER ORDERED that any separate filing by Apple, Inc. in IPR2015-01047 must not exceed five pages, without prior authorization of the Board;

FURTHER ORDERED that Apple, Inc. is bound by any discovery agreements between Patent Owner and the other petitioner in IPR2015-01047 and that Apple, Inc. shall not seek any discovery beyond that sought by the other petitioner in IPR2015-01047;

FURTHER ORDERED that all petitioners in IPR2015-01047 shall collectively designate attorney(s) to conduct the cross-examination of any witness produced by Patent Owner and the redirect examination of any

other witness; within the timeframes set forth in 37 C.F.R. § 42.53(c) or agreed to by the parties;

FURTHER ORDERED that all petitioners in IPR2015-01047 shall collectively designate attorney(s) to present at the oral hearing, if requested and scheduled, in a consolidated argument;

FURTHER ORDERED that IPR2016-00063 is terminated under 37 C.F.R. § 42.72 and all further filings in the joined proceedings are to be made in IPR2015-01047;

FURTHER ORDERED that a copy of this Decision will be entered into the record of IPR2015-01047; and

FURTHER ORDERED that the case caption in IPR2015-01047 shall be changed to reflect joinder with this proceeding in accordance with the attached example.

For PETITIONER:

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Example Case Caption for Joined Proceeding

**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 IPR2015-01047⁴

Patent 7,490,151 B2

⁴ Apple, Inc., who filed a petition in IPR2016-00063, has been joined as a Petitioner in the instant proceeding.

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APPENDIX N
UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

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

Petitioner,

v.

VIRNETX INC.,

Patent Owner.

IPR2015-01047¹
Patent 7,490,151 B2

DECISION
REQUEST FOR REHEARING
37 C.F.R. §42.71(d)
PAPER 41

February 26, 2016

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

¹ Apple Inc. and Black Swamp IP, LLC, which filed petitions in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in the instant proceeding.

I. BACKGROUND

VirnetX Inc. (“Patent Owner”), in its Request for Rehearing, Paper 36 (“Req. Reh’g” or “Request”), seeks reversal of the Board’s Decision granting institution in IPR2016-00063 and joining IPR2016-00063 with IPR2015-01047. *See* Req. Reh’g 1. The Board denies the requested relief.

II. DISCUSSION

In the Decision dated January 25, 2016, Paper 29 (“Decision”), we granted institution of IPR2016-00063 (filed by Apple Inc.) and joined IPR2016-00063 with the instant matter (i.e., IPR2015-01047). Decision 7.

Patent Owner argues that we incorrectly granted institution of IPR2016-00062 under 35 U.S.C. §315(b). *See, e.g.*, Req. Reh’g 6-10. Contrary to Patent Owner’s contention, our granting of institution of IPR2016-00063 is in accordance with 35 U.S.C. §315(b) for at least the reasons previously discussed. Decision 4. Patent Owner reiterates that an alternative interpretation of 35 U.S.C. §315(b) should be adopted to permit denial of institution of IPR2016-00063. *See, e.g.*, Req. Reh’g 6-10. In support of this contention, Patent Owner continues to cite the dissent in *Target Corp. v. Destination Maternity Corp.*, Case IPR2014-00508, dissent slip op. at 18 (PTAB Feb. 12, 2015) (Fitzpatrick, Bisk, & Weatherly, A.P.JJ., dissenting) (Paper 28) but does not explain why a dissent in this cited matter should compel us to adopt an alternate interpretation of 35 U.S.C. §315(b). We therefore continue not to do so.

Patent Owner argues that “Apple’s past conduct and the numerous challenges to the ’151 patent nonetheless compel that the Petition be denied under §325(d).” Req. Reh’g 10. According to 35 U.S.C. §325(d), “the Director

may take into account whether, and reject the petition or request, because the same or substantially the same prior art or arguments previously were presented to the Office.” Having carefully considered Patent Owner’s arguments (Req. Reh’g 10-12), we decline to exercise our discretion to reject the petition or request because the same or substantially the same prior art or arguments previously were presented (allegedly) to the Office, even assuming that the same or substantially the same prior art or arguments were, in fact, previously presented to the Office.

Patent Owner requests rehearing by an expanded panel that includes the Chief Judge. *Id.* at 12-14. Discretion to expand a panel rests with the Chief Judge, who, on behalf of the Director, may act to expand a panel on a suggestion from a judge or panel. *AOL Inc. v. Coho Sicensing LLC*, Case IPR2014-00771, slip op. at 2 (PTAB Mar. 24, 2015)(Paper 12)(informative). Patent Owner’s suggestion was considered by the Acting Chief Administrative Patent Judge, who declined to expand the panel.

We have considered Patent Owner’s arguments in the Request but find them unpersuasive to demonstrate that we misapprehended or overlooked any points.

III. CONCLUSION

Based on the foregoing discussion, Patent Owner’s Request is granted to the extent that the Board has reconsidered its Decision, but Patent Owner’s requested relief for a reversal of the Decision is denied because Patent Owner has not shown that the Decision overlooks or misapprehends a material point.

IV. ORDER

For the reasons given, it is

ORDERED that the Request for Rehearing is denied.

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APPENDIX O
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2016-119

IN RE: VIRNETX INC.,
Petitioner.

On Petition for Writ of Mandamus to the
United States Patent and Trademark Office
in Nos. IPR2015-01046, IPR2015-01047.

ON PETITION

March 18, 2016

Before LOURIE, BRYSON, AND MOORE, *Circuit Judges*.
MOORE, *Circuit Judge*.

ORDER

At Mangrove Partners Master Fund, Ltd.'s requests, the Patent Trial and Appeal Board instituted *inter partes* review of two patents owned by VirnetX Inc. The Board subsequently granted Apple Inc.'s requests to institute review of the same patents and join them with the Mangrove proceedings. VirnetX Inc. seeks a writ of mandamus directing the Board to revoke its joinder decisions. VirnetX also asks this court to stay proceedings before the Board pending resolution of its petition. Apple, Mangrove, and the Director of the United States Patent

and Trademark Office all oppose. Having considered the papers, we deny the petition without prejudice to VirnetX raising its arguments on appeal after the Board issues its final written decision.

Accordingly,

IT IS ORDERED THAT:

- (1) The petition for a writ of mandamus is denied.
- (2) The court's temporary stay is lifted. The motion for a stay of proceedings is denied.

FOR THE COURT

/s/ Daniel E. O'Toole
Daniel E. O'Toole
Clerk of Court

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APPENDIX P

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

No. 2020-2271

VIRNETX INC.,

Appellant,

v.

MANGROVE PARTNERS MASTER FUND, LTD.,

APPLE INC.,

Appellees,

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

Intervenor.

Appeal from the United States Patent
and Trademark Office, Patent Trial and Appeal
Board in Nos. IPR2015-01046 and IPR2016-00062.

No. 2020-2272

VIRNETX INC.,

Appellant,

v.

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

Appellees,

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

Intervenor.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in Nos. IPR2015-
01047, IPR2016-00063, and IPR2016-00167.

No. 2021-1672

VIRNETX INC., LEIDOS, INC., FKA SCIENCE
APPLICATIONS INTERNATIONAL CORPORATION,

Plaintiffs-Appellees,

v.

APPLE INC.,

Defendant-Appellant,

Appeal from the United States District Court for the
Eastern District of Texas in No. 6:12-cv-00855-RWS,
Judge Robert Schroeder III.

On Motion

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August 19, 2021

Before LOURIE, BRYSON, and TARANTO,
Circuit Judges.

PER CURIAM.

ORDER

The parties respond to the court's June 23, 2021 order indicating how the parties believe Appeal Nos. 2020-2271, -2272 should proceed in light of *United States v. Arthrex, Inc.*, 141 S. Ct. 1970 (2021). VirnetX Inc. also moves with opposition to have Appeal No. 2021-1672 de-companioned from Appeal Nos. 2020-2271, -2272.

Upon consideration thereof,

IT IS ORDERED THAT:

- 1) VirnetX's motion is granted. Appeal No. 2021-1672 will proceed in the normal course.
- 2) Appeal Nos. 2020-2271, -2272 are remanded for the limited purpose of allowing VirnetX the opportunity to request Director rehearing of the final written decisions.
- 3) VirnetX must file the request for rehearing within 30 days from the date of this order.
- 4) This court retains jurisdiction over Appeal Nos. 2020-2271, -2272.
- 5) VirnetX shall inform this court within 14 days of any decision denying rehearing. The Clerk of Court shall reactivate Appeal Nos. 2020-2271, -2272 upon receipt of that notice.
- 6) Within 14 days of a decision granting rehearing, intervenor shall inform the court of that decision and make any request to remand Appeal Nos. 2020-2271, -2272 in full or

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continue the stay of proceedings. The intervenor's request shall include a statement of consent or opposition.

FOR THE COURT

August 19, 2021

Date

/s/ Peter R. Marksteiner

Peter R. Marksteiner

Clerk of Court

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APPENDIX Q
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2019-1050

VIRNETX INC., LEIDOS, INC., FKA SCIENCE
APPLICATIONS INTERNATIONAL CORPORATION,
Plaintiffs-Appellees,

v.

APPLE INC.,
Defendant-Appellant.

VIRNETX INC.,
Plaintiff-Appellee,

v.

APPLE INC.,
Defendant-Appellant.

Appeal from the United States District Court for the
Eastern District of Texas in Nos. 6:11-cv-00563-RWS,
6:12-cv-00855-RWS, Judge Robert Schroeder, III.

November 22, 2019

JEFFREY A. LAMKEN, MoloLamken LLP, Washing-
ton, DC, argued for all plaintiffs-appellees. Plaintiff-
appellee VirnetX Inc. also represented by JAMES A.
BARTA, MICHAEL GREGORY PATILLO, JR., LUCAS M.
WALKER, RAYINER HASHEM; ALLISON MILEO GORSUCH,

Chicago, IL; LAUREN F. DAYTON, JENNIFER ELIZABETH FISCHHELL, New York, NY; BRADLEY WAYNE CALDWELL, JASON DODD CASSADY, JOHN AUSTIN CURRY, Caldwell Cassady & Curry, Dallas, TX.

DONALD SANTOS URRABAZO, Urrabazo Law, P.C., Los Angeles, CA, for plaintiff-appellee Leidos, Inc.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for defendant-appellant. Also represented by MARK CHRISTOPHER FLEMING, LAUREN B. FLETCHER; THOMAS GREGORY SPRANKLING, Palo Alto, CA; BRITTANY BLUEITT AMADI, Washington, DC.

Before LOURIE, MAYER, and TARANTO,
Circuit Judges.

TARANTO, *Circuit Judge.*

VirnetX Inc. and Leidos, Inc. (together, VirnetX) brought this case against Apple Inc., alleging that Apple infringed four VirnetX patents. The district court entered summary judgment for VirnetX on invalidity, determining that Apple was precluded from pressing its proposed invalidity challenges because of previous litigation between the parties. A jury found for VirnetX on infringement and awarded roughly \$503 million as a reasonable royalty, equal to a rate of \$1.20 for each device whose sale by Apple infringed. The district court denied Apple's post-trial motion for judgment as a matter of law and entered a final judgment for VirnetX.

Apple appeals. We affirm the district court's determination that Apple is precluded by the prior litigation from pressing its proposed invalidity challenges. We affirm the judgment of infringement as to two of the patents but reverse as to two others. In light of our partial reversal

on infringement, we vacate the damages award and remand for the district court to consider whether it can and should enter a revised award without conducting a new trial and, if not, to hold a new trial limited to damages.

I

A

VirnetX owns U.S. Patent Nos. 6,502,135, 7,418,504, 7,490,151, and 7,921,211, the patents asserted in this case. Those patents are related to and claim improvements over VirnetX's U.S. Patent No. 7,010,604, which is not at issue in this appeal. The '604 patent describes Virtual Private Network (VPN) techniques for securely and privately transmitting communications over public networks. In particular, it describes a method in which a data packet is sent through a randomized series of servers before reaching its final destination. '604 patent, col. 3, lines 3-12. An intermediate server in the series may send the packet to its final destination or to another randomly selected server, subject to the constraint that each packet must stop at a minimum number of intermediate servers before being sent to its final destination. *Id.*, col. 3, lines 29-37. The recipient's identity is thereby obscured, enhancing privacy.

The '135, '151, '504, and '211 patents claim improvements of existing VPN methods, such as the '604 patent's method. The parties group the '135 and '151 patents together and the '504 and '211 patents together.

The '135 patent teaches a method of automatically establishing a VPN in response to a domain name inquiry. '135 patent, col. 47, lines 20-32. Claim 1 is representative of the asserted claims of the '135 patent:

1. A method of transparently creating a virtual private network (VPN) between a client com-

puter and a target computer, comprising the steps of:

- (1) generating from the client computer a Domain Name Service (DNS) request that requests an IP [internet protocol] 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 website; 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.

Id.; see also '151 patent, col. 48, lines 18-29 (claim 13). The '151 patent issued from a divisional of the '135 patent's application, so the two patents share a specification. Whereas the '135 patent recites a method claim, the '151 patent recites a "computer readable medium" capable of executing a set of instructions. '151 patent, col. 48, lines 18-29. Claim 13 is the only asserted claim of the '151 patent:

13. A computer readable medium storing a domain name server (DNS) module comprised of computer readable instructions that, when executed, cause a data processing device to perform the steps of:

- (i) determining whether a DNS request sent by a client corresponds to a secure server;
- (ii) when the DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns

an IP address of a nonsecure computer; and
(iii) when the intercepted DNS request corresponds to a secure server, automatically creating a secure channel between the client and the secure server.

Id.

The '504 patent and the '211 patent make up the second group of patents at issue in this case. The '504 patent, which issued from a continuation-in-part of the '135 patent's application, describes certain logistical aspects of a secure communication link between computer nodes, including a repository of names and network addresses. '504 patent, col. 55, lines 49-56. Claim 1 is representative of the asserted claims of the '504 patent:

1. A system for providing a domain name service for establishing a secure communication link, the system comprising:

A domain name service system configured to be connected to a communication network, to store a plurality of domain names and corresponding network addresses, to receive a query for a network address, and to comprise an indication that the domain name service system supports establishing a secure communication link.

Id.; *see also* '211 patent, col. 57, lines 38-46 (claim 36). The '211 patent issued from a continuation of the '504 patent's application, so the two patents share a specification. Whereas the '504 patent recites a system claim, the '211 patent claims a "machine-readable medium" comprising instructions for establishing the system. '211 patent, col. 57, lines 38-46.

B

Apple designs and sells mobile devices. Over time, various such devices have used different versions of Apple's iOS operating system. Many of the devices at issue here included a VPN on Demand application. All the devices at issue included a FaceTime application.

VPN on Demand allows an Apple device to communicate with a secure website, generally one hosted by a private server and protected by a firewall, by establishing a VPN between the device and the private server. Before Apple released iOS 7, VPN on Demand had two modes of operation: "Always" and "If Needed." For both modes, a user created a list of websites, indicated by domain names, that the user wanted to be able to access, at least some of the time, through a VPN. If the user selected "Always" mode, VPN on Demand established a VPN connection any time the user requested access to a domain name on the list. By contrast, if the user selected "If Needed" mode, VPN on Demand first attempted to connect to any requested website, including one on the list, without a VPN; only if the request failed—commonly, because a firewall stopped the request—did VPN on Demand establish a VPN.

FaceTime allows Apple devices to have secure audio and video communication sessions (calls) between devices in which the FaceTime application is installed. Before Apple released iOS 7, a user (the caller) initiated a FaceTime call by selecting another user (the receiver) from the caller's list of contacts. The calling device constructed a message—containing the calling device's IP address and certificate, the receiving device's Apple ID, and a push token—and sent that message to a dedicated FaceTime server. When the FaceTime server received the message, it used the calling device's certificate to con-

firm that the calling device was registered with FaceTime and used the receiving device's Apple ID to obtain the receiving device's IP address. Then, the server constructed a message with information about the calling device—its IP address and a session token—and sent that message to the receiving device. If the receiver accepted the call, the receiving device constructed a new message containing information about itself—its IP address, its certificate, a push token, and a session token—and sent that message back to the FaceTime server. Finally, the FaceTime server sent the receiving device's IP address and certificate to the calling device, which allowed the two devices to establish a secure communication.

C

In 2010, VirnetX sued Apple for patent infringement based on Apple's use and sale of mobile devices running on iOS (the "417" litigation, reflecting the district court's docket number). VirnetX relied on the "Always" mode of VPN on Demand to allege that Apple infringed the '135 and '151 patents and on FaceTime to allege that Apple infringed the '504 and '211 patents. Apple counterclaimed that each asserted claim was invalid. The case proceeded toward trial and in September 2012, VirnetX and Apple submitted a proposed joint final pretrial order. In that order, Apple indicated that it intended to press several invalidity theories at trial: anticipation, obviousness, written description, enablement, derivation, double patenting, and non-joinder of an alleged co-inventor. Apple submitted numerous prior-art references and extensive expert reports on invalidity. On October 22, 2012, the district court granted VirnetX partial summary judgment rejecting the derivation and non-joinder challenges. J.A. 25476, 25486.

On October 25, 2012, a week before trial was set to begin, Apple filed a motion to voluntarily dismiss the remainder of its invalidity counterclaims. J.A. 25487-90. The district court denied Apple's motion. *See* J.A. 25591-92. Then, at trial, Apple informed the court that it would present only one invalidity challenge—an anticipation challenge based on a 1996 article by Takahiro Kiuchi and Shigekoto Kaihara (Kiuchi). Thereafter, the court entered judgment as a matter of law rejecting all of Apple's other invalidity counterclaims.

On November 6, 2012, a jury found that Apple had infringed all asserted claims. The jury also found that Apple had failed to establish by clear and convincing evidence that the claims were anticipated by Kiuchi. Based on VirnetX's evidence at trial, the jury awarded VirnetX \$368,160,000 as a reasonable royalty for Apple's use of VirnetX's inventions.

D

On the day the jury returned a verdict in the 417 litigation, VirnetX filed the present infringement action against Apple. This case (the “855” litigation, again reflecting the district court's docket number) involves redesigned versions of VPN on Demand and FaceTime.

The redesigned version of VPN on Demand, found in iOS 7 and later versions of iOS, replaced the “Always” and “If Needed” modes with different sets of rules defining options for the user. One of the new features, “EvaluateConnection,” is similar to the “Always” mode. To operate “EvaluateConnection,” a user puts into the “Domains” list websites for which the user desires a secure connection. Later, when the user enters a domain name in a standard web browser, VPN on Demand checks whether the name is on the “Domains” list. Whereas the “Always” mode would have established a VPN connection

at this step, “Evaluate Connection” causes the redesigned version to go through additional steps. Before establishing a VPN, the redesigned version sends a domain name request to the local domain name server on the network to which the device is connected. If this request fails, and the user has enabled the “ConnectIfNeeded” option—one of the choices within the “EvaluateConnection” feature—VPN on Demand establishes a VPN. But if the request succeeds, VPN on Demand does not establish a VPN. Evidence at trial explained the logic: whether a VPN is necessary for a secure connection turns on the user device’s “location” *vis-à-vis* a private network. In particular, a failed request for the IP address of a server hosted on a private network indicates that the user device is outside that private network, so a VPN is required for secure, private communications; in contrast, a successful request for such a server’s IP address indicates that the user device is inside the private network and thus does not need a VPN for secure, private communications.

The redesigned version of FaceTime operates in largely the same way as the earlier version already found to infringe, but with one change that Apple contends is significant to the question of infringement of the ’504 and ’211 patents. In the redesigned version, the final message from the FaceTime server to the calling device does not include the receiving device’s IP address. Because the receiving device knows the address of the calling device but not vice versa, the receiving device must initiate the communication through what Apple calls the “ICE protocol.” The receiving device sends encrypted data packets to the calling device, and those data packets include the receiving device’s IP address. Once the calling

device decrypts the data packets, the two devices can establish a secure communication.

In the 855 litigation before us, Apple again counterclaimed that the asserted patents are invalid under 35 U.S.C. §§ 101, 102, 103, and 112. In August 2014, the district court granted VirnetX's motion for summary judgment on Apple's invalidity counterclaims. J.A. 5-9. The district court held that issue preclusion prevented Apple from pursuing its invalidity challenges because Apple had already lost on the invalidity challenges in the 417 litigation. The only invalidity challenges Apple places in issue on appeal are obviousness and non-joinder of an alleged coinventor. Brief for Appellant at 58; Reply Brief at 25.

In April 2018, a jury found that Apple's redesigned version of VPN on Demand infringed all asserted claims of the '135 and '151 patents and that Apple's redesigned version of FaceTime infringed all asserted claims of the '504 and '211 patents. Based on VirnetX's evidence at trial, the jury awarded VirnetX \$502,567,709 as a reasonable royalty for Apple's use and sale of VirnetX's inventions. Apple filed a motion for judgment as a matter of law, and the district court denied the motion and entered judgment for VirnetX.

Apple timely appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

II

We review the district court's ruling on issue preclusion de novo, following the Fifth Circuit. *Wills v. Arizona Structures Worldwide, LLC*, 824 F.3d 541, 545 (5th Cir. 2016); *Voter Verified, Inc. v. Election Systems & Software LLC*, 887 F.3d 1376, 1382 (Fed. Cir. 2018) (applying regional circuit law). We review the grant of summary

judgment de novo and apply the “same criteria employed by the district court.” *Waste Mgmt. of Louisiana, L.L.C. v. River Birch, Inc.*, 920 F.3d 958, 964 (5th Cir. 2019); *Eli Lilly & Co. v. Hospira, Inc.*, 933 F.3d 1320, 1327 (Fed. Cir. 2019) (applying regional circuit law). We review the denial of a motion for judgment as a matter of law de novo and ask whether the underlying jury findings were supported by substantial evidence. See *Apache Deepwater, L.L.C. v. W&T Offshore, Inc.*, 930 F.3d 647, 652-53 (5th Cir. 2019); *Elbit Systems Land & C4I Ltd. v. Hughes Network Systems, LLC*, 927 F.3d 1292, 1296 (Fed. Cir. 2019) (following Fifth Circuit law). We review a claim construction de novo and any underlying factual findings based on extrinsic evidence for clear error. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

A

We begin with Apple’s challenge to the district court’s conclusion that, because of what transpired in the earlier 417 litigation, issue preclusion bars Apple from presenting the invalidity challenges it raised in this litigation—specifically, an obviousness challenge and a non-joinder challenger. We agree with the district court. We follow regional circuit law on the non-patent-specific matter of whether issue preclusion’s requirement of “actual litigation” is satisfied when, in an earlier case, the party has taken a vigorously contested claim through extensive discovery all the way to trial, then lost on the issue after choosing not to present evidence on it. See *Voter Verified*, 887 F.3d at 1382-83 (applying regional circuit’s law to nonpatent-specific aspect of preclusion law).

The doctrine of issue preclusion prevents “successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment, whether or not the issue arises on the

same or a different claim.” *New Hampshire v. Maine*, 532 U.S. 742, 748-49 (2001). Only the requirement of actual litigation and resolution is contested here. We conclude that each of the invalidity challenges Apple now asserts was actually litigated and resolved in the 417 litigation. We therefore affirm the district court’s determination that Apple is precluded from raising these invalidity challenges in the present case.

In the 417 litigation, Apple asserted that VirnetX’s four patents are invalid based on 35 U.S.C. §§ 101, 102, 103, and 112. *See, e.g.*, Apple’s Answer, Affirmative Defenses, and Counterclaims to Plaintiff’s Third Amended Complaint at 9, Dkt. #257 (Apr. 16, 2012). Just a month before trial, moreover, after extensive discovery and the submission of expert reports, the parties jointly submitted a pretrial order. Apple there continued to assert invalidity challenges based on anticipation, obviousness, written description, enablement, double patenting, derivation, and non-joinder. J.A. 25452-53 (pretrial order).

The district court granted summary judgment rejecting Apple’s non-joinder challenge (along with its derivation challenge). J.A. 25476, 25486. Although Apple then tried to voluntarily dismiss the remaining invalidity challenges without prejudice on the eve of trial, the district court denied the request, telling Apple that it could dismiss those challenges only *with* prejudice. J.A. 25591-92. Apple declined to do so, and the invalidity challenges (besides nonjoinder and derivation) were still alive when trial began. J.A. 25592. At trial, Apple informed the district court and VirnetX that it intended to present only an anticipation claim based on the Kiuchi reference. J.A. 25980. When the district court asked Apple if this decision meant that Apple was “dismissing” the rest of its invalidity claims, VirnetX interjected and reminded the

district court that Apple's decision not to pursue the other claims at trial did not mean that Apple could dismiss those claims. J.A. 25981. VirnetX informed the court that it would be "filing a JMOL on any theory that [Apple was] not going forward with." J.A. 25981-82. At the close of trial and after VirnetX formally submitted a motion for judgment as a matter of law, the court entered "judgment as a matter of law on theories of invalidity, other than anticipation over the Kiuchi references as to the asserted claims of the VirnetX patents." J.A. 26113.

The record just recited is one of actual litigation of the invalidity issues Apple now wants to raise. Apple contends otherwise, asserting that it did not "actually litigate" any invalidity challenge except anticipation by Kiuchi simply because it chose to present to the jury no evidence on any other invalidity issue. We disagree.

A leading treatise states that, as a general rule, "preclusion applies to any issue framed by the pleadings and not withdrawn, even though it has not been raised at trial in any way." 18A CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 4419 (3d ed.) (Wright and Miller). The Fifth Circuit has concluded that an issue is "actually litigated" when the "issue is raised and the party who has the burden fails in his proof and the issue is decided against him." *Santopadre v. Pelican Homestead & Sav. Ass'n*, 937 F.2d 268, 274 (5th Cir. 1991) (citing *United States v. Silliman*, 167 F.2d 607, 617 (3d Cir. 1948)). Here, in the 417 litigation, Apple asserted invalidity under 35 U.S.C. §§ 101, 102, 103, and 112 from the outset, and the issues were extensively developed in discovery. Apple expressly included a host of invalidity issues, as enumerated above, in the pretrial order, which "supersede[d] all prior pleadings" and governed the proceedings to come. *Meaux Surface Protec-*

tion, Inc. v. Fogleman, 607 F.3d 161, 167 (5th Cir. 2010); see *In re Pirani*, 824 F.3d 483, 493 n.1 (5th Cir. 2016). That framing of the issues in the trial-governing pleadings, together with full pretrial engagement on the issues and the eventual judicial rulings resolving the issues based on evidentiary insufficiency, is enough to constitute actual litigation.

Preclusion in this scenario serves important interests protected by preclusion principles. One is the judicial system's interest in avoiding duplication caused by an earlier bypassing of a present and adequate opportunity for conclusive resolution after fully prepared development of the issue. Another is the related reliance interest of the opposing party: "once an issue has been framed, the opposing party has a right to rely on the expectation that it will be resolved conclusively in that action." Wright and Miller §4419. When the adversarial litigation of the issue has proceeded as far as it did in the 417 matter, preclusion serves the interests in "conserving judicial resources" and "avoiding oppression or harassment of the adverse party." Restatement (Second) of Judgments §27 comment e.

Here, VirnetX expended "considerable effort . . . in preparing to meet a case that [was] never made" when the time came for presentation of evidence. Wright and Miller §4419. VirnetX prevailed by summary judgment on two of the invalidity issues, including non-joinder. Then, only one week before trial, Apple informed the district court and VirnetX, in an "Emergency Motion to Dismiss," that it would prefer not to pursue the remaining invalidity challenges, but it proposed to dismiss them only if it could save them, unimpaired, for future litigation. J.A. 25487. In response, VirnetX explained to the court:

VirnetX has spent well over a million dollars in this case defending the validity of the patents. There were more than 100 references asserted by Apple in this case in their invalidity contentions. We had to deal with all of those.

We have had extensive motion practice in this Court on invalidity issues. We filed expert reports in this Court. We have taken depositions in this Court directed to invalidity.

J.A. 25585-86. When the district court denied the motion to dismiss, Apple knew that the issues remained in the case. But Apple bypassed the opportunity to try the issues then and there, choosing to present no evidence on those issues. Judgment as a matter of law for failure of proof followed. Apple's choice to present no evidence does not change the character of the judgment as a resolution of issues actually litigated.

Apple relies for its contrary position on our decision in *Voter Verified*, but that decision did not hold that there is no actual litigation in a situation involving adversarial engagement on an issue as extensive in scope and duration, in a costly course of litigation, as the validity dispute in the 417 matter. In *Voter Verified*, there had been an earlier case in which Voter Verified, Inc. sued Election Systems & Software LLC for patent infringement and Election Systems counterclaimed that the asserted claims were invalid under §§101, 102, 103, and 112. 887 F.3d at 1379. But that was all Election Systems did in pressing the §101 counterclaim. Indeed, when Voter Verified moved for summary judgment, "Election Systems failed to present any arguments or evidence regarding invalidity of these claims." *Id.* In that circumstance, when Voter Verified sued Election Systems a second time, we applied Eleventh Circuit preclusion law to reject

issue preclusion of a § 101 challenge. In addition to concluding that Voter Verified had not shown that the § 101 ruling in the first case was necessary to the judgment in that case, we concluded that invalidity under § 101 was not “actually litigated” in the first case because the “district court disposed of the § 101 issue when Election Systems chose not to respond.” *Id.* at 1383.

Voter Verified thus involved such a “feeble effort” at presenting an issue that the case could be characterized as not involving actual litigation of the issue. Wright and Miller § 4419 n.11; *see id.* (calling *Voter Verified* a “close call”). How much litigation is enough to constitute actual litigation for preclusion purposes requires some judgment calls, but *Voter Verified* occupies a place on the spectrum far from a true adversarial contest and only a step away from bare pleading followed by consensual resolution, which is distinguished from actual litigation. *See* Restatement (Second) of Judgments § 27 Comment e. In the circumstances of *Voter Verified*, moreover, preclusion was not meaningfully supported by the policies of protecting the judicial system and opposing parties that weigh so heavily here.

Apple also contends that the district court in the 417 litigation never actually entered judgment on the invalidity defenses that Apple did not present to the jury. We disagree. Apple relies on the fact that, after the verdict in the 417 litigation, VirnetX moved for “judgment against Apple on Apple’s late-abandoned counterclaims and defenses, including all of Apple’s alleged prior art references,” 417 litigation, Dkt. 625, and the district court, in denying the motion, said:

The Court cannot and will not enter judgment upon claims and defenses that were not presented for consideration to the jury. There is no ba-

sis to enter such a judgment, no more than there is a basis to enter judgment of non-infringement for Apple as to VirnetX's unasserted claims.

J.A. 22396. Apple effectively reads “defenses” as independent from “claims” in relying on this passage to support its contention. We reject Apple's argument.

During the trial, as we have noted, the court had already formally granted judgment on the invalidity defenses other than anticipation based on Kiuchi. *See* J.A. 25523 (“Court granted” “Plaintiff's JMOL on invalidity other than anticipation regarding Kiuchi”). The court did so after VirnetX succeeded in persuading the district court not to permit Apple to dismiss its invalidity challenges voluntarily without prejudice, which would free Apple to reassert those challenges in future litigation. It is unreasonable to understand the district court as having suddenly reversed itself on those decisions. In any event, the mid-trial JMOL, together with the pretrial partial summary judgment, stand as judgments on the challenges now at issue. The refusal to enter a further judgment does not undo those already entered judgments.

In context, the reference to “claims and defenses” must be understood as referring to the defenses Apple asserted against the patent claims that VirnetX ultimately excluded from its infringement assertions. Indeed, in responding to VirnetX's motion, Apple noted that it was “not requesting to dismiss its invalidity claim in its entirety,” stating: “Apple only seeks to dismiss those claims as to which VirnetX has not asserted infringement.” J.A. 25552 n.18. Moreover, during the trial, after the district court had entered JMOL, Apple pointed out that VirnetX had initially “only asserted a subset of the claims,” had subsequently “limited those asserted claims to 18 claims,” and then had finally narrowed those claims even

further at trial. J.A. 26122. The district court, in response, noted that it “ha[d] already granted [VirnetX’s] motion as to the asserted claims” but would “make note of [Apple’s] motion as to the unasserted claims and all of the patents” and would “take that under advisement.” J.A. 26122. The post-trial ruling that Apple now quotes is where the court addressed the unasserted claims.

For the foregoing reasons, we affirm the district court’s determination that Apple is precluded from pressing the invalidity challenges it proposed to press in this case.

B

We next address Apple’s appeal of the finding of infringement of the ’151 and ’135 patents based on the redesigned VPN on Demand software in the mobile devices Apple sold. The jury found that Apple infringed the method claims of the ’135 patent and the computer readable medium claim of the ’151 patent by developing, testing, and selling to its customers—with detailed instructions about how to perform the method—mobile devices with VPN on Demand installed. We reject Apple’s challenges, conclude that the jury had substantial evidence to support its verdict, and affirm the judgment of infringement.

1

We affirm the judgment of infringement of the asserted claims of the ’135 patent.

The record contains substantial evidence that the redesigned version of VPN on Demand performs every step of the methods claimed in the asserted claims of the ’135 patent. *See* J.A. 10079, 10114-21 (Apple’s guide for configuring VPN on Demand); J.A. 1328-52 (VirnetX’s expert testimony); J.A. 2343-47 (Apple’s expert testimo-

ny). VirnetX used Apple's configuration guide to show that the "EvaluateConnection" mode begins to operate when a user enters a domain name and, in response, the Apple device requests an IP address corresponding to that domain name. J.A. 10118-19; J.A. 1335. VPN on Demand "compares the requested domain against the domains listed in the Domains array," thereby determining whether the request was for a secure website. J.A. 10118, 10120; *see also* J.A. 1335; J.A. 2345. If VPN on Demand finds that the requested domain is listed in the Domains array, it checks, by sending a request to a local DNS server, whether the user device is connected to the private network that hosts the requested website. J.A. 10121; J.A. 1335; J.A. 2344. If VPN on Demand determines that the user device is not connected to the private network, it automatically sets up a VPN between the user device and the website. J.A. 10121; J.A. 1335; J.A. 2344-45. Therefore, substantial evidence supports the jury's determination that VPN on Demand practices each limitation of the asserted claims.

Apple argues that use of its VPN on Demand software does not infringe the asserted claims of the '135 patent because the "location check"—the DNS request that determines whether the user device is connected to the private network—does not correspond to a step in the claimed method and sometimes prevents VPN on Demand from establishing a VPN. Apple does not dispute that, as a general matter, an additional step does not defeat an infringement finding for a "comprising" claim because "[i]nfringement arises when all of the steps of a claimed method are performed, whether or not the infringer also performs additional steps." *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1311 (Fed. Cir.

2001). But Apple nevertheless argues that the claims at issue here exclude VPN on Demand.

In particular, Apple argues that the “automatically initiating” limitation adds the following two requirements: (1) that there are no intervening steps between the “determining” step and the “initiating” step and (2) that a VPN must be initiated every time the requested domain name corresponds to a secure website. The first requirement excludes VPN on Demand, Apple says, because after VPN on Demand determines whether the requested domain name is listed in the Domains array, it performs the “location check” before initiating a VPN connection. The second requirement excludes VPN on Demand, Apple says, because the “location check” often prevents VPN on Demand from initiating a VPN, even when the requested domain name is listed in the Domains array: if VPN on Demand determines that the device is connected to the private network that hosts the website, it does not initiate a VPN.

We reject Apple’s argument in light of the agreed-on claim construction of “automatically initiating the VPN” as meaning, simply, “initiating the VPN without involvement of a user.” J.A. 15046. Under that construction, the “automatically initiating” limitation does not exclude a method just because, after determining that the domain request corresponds to a secure website, it performs extra steps before establishing a VPN and sometimes does not establish a VPN at all. The limitation precludes post-determination further *user action* to initiate the VPN, but the operation of VPN on Demand accused of infringing does not involve such action.

The presumption of claim differentiation and the specification’s description of a particular embodiment bolster this conclusion. Contrary to Apple’s suggestion that

claim 1 forbids any steps between determining that a request is for a secure website and initiating the VPN, claims dependent on claim 1—which must be consistent with claim 1—involve such intermediate steps. For example, claim 4 adds the step of “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.” *Id.*, col. 47, lines 42-45. Similarly, claim 5 adds the step of “prior to automatically initiating the VPN between the client computer and the target computer, determining whether the client computer is authorized to resolve addresses of non secure target computers.” ’135 patent, col. 47, lines 48-51. Furthermore, the specification provides that in one embodiment, “if access to a secure host was requested, then . . . a further check is made to determine whether the user is authorized to connect to the secure host.” *Id.*, col. 39, lines 7-9. Apple has not provided any reason that we should read these claims or this embodiment out of the patent.

Having concluded that the devices at issue perform the claimed steps, we also conclude that substantial evidence supports a finding that Apple infringed the asserted method claims of the ’135 patent both directly through testing and indirectly by inducing users to perform the methods. As to the former, there was sufficient evidence of a test plan that the jury could infer was carried out. As to the latter, there was sufficient evidence for the jury to find, for example, that the method covered by those claims, as embodied in the redesigned VPN on Demand, was important to customers generally as a replacement for the earlier version’s Always mode, that Apple provided instructions to customers for how to use the function-

ality in the redesigned VPN on Demand, and that Apple intended such use.

2

We also affirm the judgment of infringement of the asserted claim of the '151 patent.

The jury had sufficient evidence to conclude that Apple's sale of mobile devices constituted direct infringement of claim 13 of the '151 patent, which is directed to a computer readable medium capable of executing the steps required to set up a VPN. That claim includes the "automatically creating" language that Apple treats as indistinguishable from the "automatically initiating" language of the '135 patent claims. Having rejected Apple argument for the '135 patent's language, we reject the argument for the '151 patent's language as well. But Apple has an additional challenge to the infringement finding for claim 13 of the '151 patent. We also reject this separate challenge.

Claim 13 requires a computer readable medium, not the underlying process itself, so infringement "do[es] not require the performance of any method steps." *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204 (Fed. Cir. 2010). When it is "undisputed that software for performing the claimed functions existed in the products when sold," infringement occurs when the party sells those products. *Id.* at 1205. Accordingly, VirnetX was not required to prove that Apple or its customers actually executed VPN on Demand, just that Apple sold devices with VPN on Demand installed. There is no dispute that Apple did so.

Apple nevertheless contends that the devices with VPN on Demand installed could not reasonably be found to come within claim 13—specifically, its requirement

that the “computer readable instructions, when executed, cause a data processing device” to perform the specified steps—because too much alteration is needed for the instructions to run to perform those steps. We disagree.

The “when executed” language does not preclude the need for any activation action to enable the execution, any more than the language in *Finjan*—*i.e.*, “storage medium storing program code for causing” performance of specified steps—required that the relevant code be “active” without the need for any user action to activate it. See *Finjan*, 626 F.3d at 1205 (concluding that such language “does not require that the program code be ‘active,’ only that it be written ‘for causing’” a computer to “perform certain steps”). We have held, moreover, that “an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of noninfringing modes of operations,” *id.* at 1204-05, and that a device sold in a noninfringing mode of operation may still be found to infringe if the mode that infringes can be enabled “without significant alterations,” *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1217 (Fed. Cir. 2014). More specifically, we have upheld a finding of infringement based on a company’s provision of instructions to users on how to operate the company’s product in the infringing mode. See, *e.g.*, *Versata Software, Inc. v. SAP America, Inc.*, 717 F.3d 1255, 1262-63 (Fed. Cir. 2013) (“Versata’s expert did not alter or modify SAP’s code in order to achieve the claimed functionality. Rather, he followed SAP’s own directions on how to implement pricing functionality in its software and activated functions already present in the software.”); *Ericsson*, 773 F.3d at 1217 (“In *Versata*, we found that the patentee presented evidence that, if a user followed the accused infringer’s own

instructions, the system would operate in an infringing manner.”).

The jury could find those standards met in this case. VirnetX used publicly available Apple documents—specifically, the “Configuration Profile Reference”—to show that a user could reasonably follow the directions contained in those documents to enable “EvaluateConnection.” J.A. 10118-21 (instructions); J.A. 1332-33 (VirnetX’s expert explaining instructions). There is no evidence that customers would need to “modify the underlying code to unlock” the infringing mode. *Finjan*, 626 F.3d at 1205. And the jury did not have to find it significant that an “IT person,” and not the user, would perform the configuration. J.A. 2218. In *Finjan*, we considered whether certain products infringed the asserted claims where the infringing software modules were “‘locked’ when the [products] [we]re sold, requiring a customer to purchase a separate key to activate each individual module.” *Finjan*, 626 F.3d at 1202. We explained that the “fact that users needed to ‘activate the functions programmed’ by purchasing keys does not detract from or somehow nullify the existence of the claimed structure in the accused software.” *Id.* at 1205. The need for help from an “IT person,” who did not need to rewrite underlying code, could reasonably be treated the same as the need to secure a key in *Finjan*.

C

We now address Apple’s appeals of the verdict of infringement of the system claims of the ’504 patent and the computer readable medium claims of the ’211 patent based on Apple’s sale of mobile devices with FaceTime installed. We agree with Apple that the claim term “domain name service system” in all the asserted claims at issue, when properly construed, requires that the system

include what a “domain name service” requires under *its* construction (not challenged on appeal). That is, we conclude that the district court erred as a matter of law in ruling that “the construction of ‘domain name service system’ does not incorporate the construction of ‘domain name service.’” J.A. 26684. Because no reasonable jury could find infringement under the correct construction, we hold that Apple is entitled to judgment as a matter of law of non-infringement as to those two patents.¹

1

In the 417 litigation, the district court construed the term “domain name service” as “a lookup service that returns an IP address for a requested domain name to the requester.” J.A. 22214. The parties “provided no reason to modify” that construction in the present litigation—they incorporated by reference their arguments from the 417 litigation. J.A. 15064. And the construction of “domain name service” is not in dispute before us.

For the claim phrase “domain name service system,” the district court ruled, in the 417 litigation, that the phrase required no construction because the “claim language itself provides a description of the domain name service system.” J.A. 22219. VirnetX had proposed that no construction was necessary but argued that if the

¹ For ease of reference, we again quote claim 1 of the ’504 patent, which is representative:

1. A system for providing a domain name service for establishing a secure communication link, the system comprising:

A domain name service system configured to be connected to a communication network, to store a plurality of domain names and corresponding network addresses, to receive a query for a network address, and to comprise an indication that the domain name service system supports establishing a secure communication link.

court were inclined to construe it, the phrase should be construed as “a computer system that includes a domain name service (DNS).” J.A. 22218. For its part, Apple proposed that the phrase should be construed as “*a DNS* that is capable of differentiating between, and responding to, both standard and secure top-level domain names.” J.A. 21303 (emphasis added). Thus, both parties proposed that a “domain name service system” includes a “DNS.” The district court rejected Apple’s proposal for adding a specific capability of “handl[ing] both secure and non-secure domain names.” J.A. 22219. But the court left “domain name service system” without a claim construction.

Before trial in the present case, VirnetX filed an “Emergency Motion to Clarify” in response to a claim construction argument that Apple had made in a motion to exclude certain expert testimony. Specifically, VirnetX asked the court to confirm that “domain name service” and “domain name service system” are separate terms with separate definitions. At the pre-trial conference, the court agreed with VirnetX’s argument and determined that “domain name service” and “domain name service system” are “two different terms used in different context[s].” J.A. 26684. The district court explained that it is “not a tenet of patent law that similar terms necessarily incorporate the constructions of one another.” *Id.* On that basis the court concluded that “the construction of ‘domain name service system’ does not incorporate the construction of ‘domain name service.’” *Id.*

That conclusion, we hold, is legally incorrect. The phrase “domain name service system” consists of a noun modified by the adjectival phrase, “domain name service.” The ordinary meaning of such a phrase is that the noun is characterized by the adjectival phrase—here,

that the system includes a “domain name service” according to that term’s unchallenged meaning. *See, e.g., Shire Development, LLC v. Watson Pharms., Inc.*, 787 F.3d 1359, 1365 (Fed. Cir. 2015) (regarding the phrase “inner lipophilic matrix,” the court held: “‘lipophilic’ is an adjective that modifies matrix. The parties stipulated that ‘lipophilic’ means ‘poor affinity towards aqueous fluids.’[] Thus, the *matrix*—not just an excipient within the matrix—must exhibit the stipulated-to lipophilic characteristic.”) (internal citations omitted). Indeed, as already noted, in the 417 litigation, VirnetX agreed that a domain name service system “includes a domain name service (DNS).” J.A. 22218; *see also* J.A. 20024.

Although a single claim term sometimes can bear different meanings when used in different contexts, we generally presume that a “word or phrase used consistently throughout a claim should be interpreted consistently.” *Phonometrics, Inc. v. N. Telecom Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998). Here, there is no inconsistency between the use of the phrase “domain name service” when standing alone (in the preamble of claim 1) and when embedded in the phrase “domain name service system” (in the body of claim 1). The strong inference, supported as well by the natural meaning of the language itself, is that “domain name service system” requires a “domain name service” as defined by its unchallenged claim construction.

VirnetX argues that incorporating the construction of “domain name service” would render the rest of the claim language surplusage. But VirnetX has not shown surplusage. The term “domain name service” requires simply that the system return an IP address to a requester. It does not dictate how the system communicates with the requester, how the system obtains the IP address, or

what the system sends to the requester other than an IP address. According to the district court's construction of the "indicate" limitation, the indication must be something "other than the mere returning of requested DNS records, such as an IP address or key certificate." J.A. 15052. The phrase "domain name service" specifies that the system must return an IP address, and the "indicate" limitation specifies that the system must return something more. That the claim provides additional specific requirements says nothing to negate the core requirement of the phrase "domain name service": the return of an IP address to the requester.

To the extent that VirnetX's argument is that "domain name service" has a different meaning as an adjective than as a noun, the argument is unpersuasive. While there are situations in which adjectives do not "reflect the meaning of corresponding nouns," this situation is not one of them. *FCC v. AT&T Inc.*, 562 U.S. 397, 402 (2011). For example, "[t]he noun 'crab' refers variously to a crustacean and a type of apple, while the related adjective 'crabbed' can refer to handwriting that is 'difficult to read.'" *Id.* (citing Webster's Third New International dictionary 527 (2002)). Here, however, VirnetX does not point to any difference between the contexts in which "domain name service" is used as a noun and as an adjective, much less a difference pointing away from simple incorporation of the noun's meaning when used to modify "system." VirnetX in fact fails to provide any alternative definition for the adjectival version of "domain name service," let alone one that removes the characteristic of "returning an IP address."

VirnetX's position goes beyond departing from the ordinary role of the adjectival phrase as meaning the same thing as when that phrase is used as a noun. VirnetX's

position reduces the adjectival version of “domain name service” to a nullity. Under VirnetX’s approach, the phrase does not modify “system” in any meaningful way, because in VirnetX’s view the “system” is defined entirely by the subsequent listed functions. An interpretation that renders language superfluous is strongly disfavored. *See, e.g., Becton, Dickinson and Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010); *Elekta Instrument S.A. v. O.U.R. Scientific Int’l, Inc.*, 214 F.3d 1302, 1305-07 (Fed. Cir. 2000). Nothing about the particular phrase at issue here suggests an exception to that important principle—suggests, in other words, that the words that provide essentially all the substantive content of the phrase “domain name service system” should be treated as a nullity.

The specification provides no support for VirnetX’s nullifying construction. To the contrary, the specification describes the invention as a system that includes a “domain name service.” ’504 patent, col. 7, lines 27-29; *id.*, col. 49, lines 1-2. There is no indication of some special meaning of “domain name service” when that service is part of the system.

VirnetX points to portions of the specification that differentiate between a “secure domain name service” (an “SDNS”) and a “standard domain name service” (an “STD DNS”). ’504 patent, col. 50, lines 40-44; *id.*, col. 50, lines 48-51. One embodiment requires a “secure network” that “includes an internal router 3312, a secure domain name service (SDNS) 3313, a VPN gatekeeper 3314 and a secure proxy 3315.” *Id.*, col. 50, lines 45-48. The secure network can also include “other network services, such as e-mail 3316, a plurality of chatrooms . . . and a standard domain name service (STD DNS) 3318.” *Id.*, col. 50, lines 48-51. VirnetX contends that because

the specification refers to an STD DNS as an optional feature, it is not automatically covered by claim 1's "domain name service system." But the STD DNS discussion does not suggest that the domain name service system of claim 1 fails to return an IP address. Nothing in the specification indicates that the difference between an SDNS and a STD DNS is related to the IP address function; indeed, the specification describes the secure DNS as "built on top of the existing Internet protocol (IP)." *Id.*, col. 6, lines 21-24. The distinction on which VirnetX focuses therefore cannot support VirnetX's position on the point at issue.

What remains is VirnetX's brief claim-differentiation argument. VirnetX points to claims 14, 15, and 35 of the '504 patent, which depend on claim 1, and argues that they suggest, by what they add to claim 1, that "domain name service system" in claim 1 cannot by itself require a "domain name service" according to that phrase's unchallenged claim construction. VirnetX does not suggest that claim 14, 15, or 35 requires something inconsistent with the construction of "domain name service," only that each adds requirements that already appear in that construction, suggesting a redundancy disfavored in claim construction. We are not persuaded. VirnetX, in its largely unelaborated argument on this point, has not established a clear redundancy, if a redundancy at all, in claim 14's requirement of configuring the system to respond to an address inquiry, claim 15's requirement of a certain source of the network address information, or claim 35's requirement of a domain name database. In any event, in the circumstances of this case, we conclude, the bases for the claim construction we have set forth are so strong that the thin case for claim differentiation does not support a different result. *See, e.g., Wi-LAN USA, Inc. v.*

Apple Inc., 830 F.3d 1374, 1391-92 (Fed. Cir. 2016); *American Calcar, Inc. v. American Honda Motor Co.*, 651 F.3d 1318, 1337 (Fed. Cir. 2011); *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991).

2

VirnetX does not dispute that the redesigned version of FaceTime does not return an IP address to the caller device. At trial, VirnetX's expert, testifying about the operation of FaceTime, agreed that when the FaceTime server creates the final message, it excludes the receiving phone's IP address from that message. J.A. 1362. The message contains a push token, a certificate, and a session token, but it does not include an IP address. *Id.*

Thus, under the proper claim construction, a reasonable jury could not conclude that redesigned FaceTime is a "domain name service system." We hold that Apple is entitled to judgment as a matter of law of noninfringement of the asserted claims of the '504 and '211 patents. We reverse the district court's contrary ruling.

D

The jury's verdict provided that VirnetX was entitled to a damages award of \$502,567,709.00 but did not indicate which portions of the award were allocated to which patents. We have affirmed the judgment of infringement by VPN on Demand but reversed the judgment of infringement by FaceTime. Those rulings raise the question of whether a new trial must or should be held because of the reduced basis of liability. We see no difficulty with limiting any such trial to damages, but there is a question whether a limited retrial need or should be held at all.

We will not decide that question. We have said that "where the jury rendered a single verdict on damages,

without breaking down the damages attributable to each patent, the normal rule would require a new trial as to damages.” *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1310 (Fed. Cir. 2007); *see also Memphis Cmty. Sch. Dist. v. Stachura*, 477 U.S. 299, 312 (1986) (“When damages instructions are faulty and the verdict does not reveal the means by which the jury calculated damages, the error in the charge is difficult, if not impossible, to correct without retrial, in light of the jury’s general verdict.”); *WesternGeco L.L.C. v. ION Geophysical Corp.*, 913 F.3d 1067, 1074 (Fed. Cir. 2019) (invalidating all but one asserted claim and determining that “the award can be sustained if there was undisputed evidence that the technology covered by [the remaining claim] was necessary to perform the [infringing method]”). We have not received full briefing on the issue of whether, despite the normal rule, this is a case in which a new trial on damages is unnecessary.

It appears to be undisputed that the jury used a per-unit royalty of \$1.20 and adopted the calculation of VirnetX’s expert to reach its damages figure—\$1.20 per unit, with over 384 million units having both FaceTime and VPN on Demand and over 34 million units having only FaceTime. J.A. 1811-12; J.A. 1852-53; J.A. 2571-73. It appears, therefore, that the jury found that FaceTime by itself was worth \$1.20 per unit. But because the jury found infringement by FaceTime as well as VPN on Demand, and Facetime was installed on all units, the jury did not have to decide whether the \$1.20-per-unit figure would be correct if only VPN on Demand infringed. VirnetX’s expert did assert that the same figure would apply, J.A. 1854-55 (explaining calculation based on licensing), but the jury did not have to decide that issue. Apple’s expert, for his part, asserted that VPN on Demand

was vastly more valuable than FaceTime, J.A. 2569-73 (testifying that VPN on Demand was worth about 6 cents per unit, FaceTime about 1 cent per unit), but neither Apple nor VirnetX has suggested to us that the jury accepted that testimony.

We do not go further in exploring the law, the facts, and any admissions that might be relevant to an inquiry into the need for a new damages trial. We remand for further proceedings in the district court. We leave it to the parties and the district court to consider in the first instance relevant aspects of whether to hold a limited damages-only retrial given the reduced basis of liability, including what discretion there might be to hold such a retrial without conclusively determining whether one is needed, especially if doubt remains as to the application of the above-quoted standards to this case. We do not prejudge these issues.

III

We affirm the district court's judgments that Apple is precluded from making certain invalidity arguments and that Apple infringed the '135 and '151 patents. We reverse the district court's judgment that Apple infringed the '504 and '211 patents. We remand the case for proceedings on damages consistent with this opinion.

The parties shall bear their own costs.

**AFFIRMED IN PART, REVERSED IN PART, AND
REMANDED**

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APPENDIX R
IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

CIVIL ACTION No. 6:12-cv-00855-RWS

VIRNETX INC., *et al.*,
Plaintiffs,

v.

APPLE INC.,
Defendant.

VERDICT FORM

October 30, 2020

In answering these questions, you are to follow all of the instructions provided by the Court during the Court's jury instructions. You must answer each question, and your answer to each question must be unanimous.

1. What royalty rate, expressed as a dollar amount per device, do you find, by a preponderance of the evidence, would fairly and reasonably compensate VirnetX for Apple's infringement?

\$0.84 per device

2. VirnetX and Apple have stipulated that the total number of infringing units is

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598,629,580. Multiplying the per-device royalty rate in Question 1 by this total number of units, what total royalty do you find, by a preponderance of the evidence, would fairly and reasonably compensate VirnetX for Apple's infringement?

\$502,848,847.20

Date: 30 Oct. 2020

/s/ [Redacted]
JURY FOREPERSON

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APPENDIX S
IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

CIVIL ACTION No. 6:12-cv-00855-RWS

VIRNETX INC., *et al.*,
Plaintiffs,

v.

APPLE INC.,
Defendant.

ORDER

January 6, 2021

On this date, the Court entered its memorandum opinion and order denying Defendant Apple Inc.'s Omnibus Motion for Judgment as a Matter of Law under Rule 50(b) and for a New Trial (Docket No. 1012) and granting-as-modified VirnetX's Motion for Entry of Judgment and for Equitable and Statutory Relief (Docket No. 1013).

A decision having been duly rendered as to all claims and consistent with the Court's order, the Court hereby enters **FINAL JUDGMENT**.

The Clerk of the Court is directed to close this case.

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**So ORDERED and SIGNED this 6th day of
January, 2021.**

/s/ Robert W. Schroeder III _____
ROBERT W. SCHROEDER III
UNITED STATES
DISTRICT JUDGE

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APPENDIX T

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

No. 2020-2271

VIRNETX INC.,

Appellant,

v.

MANGROVE PARTNERS MASTER FUND, LTD.,

APPLE INC.,

Appellees,

KATHERINE K. VIDAL, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,

Intervenor.

Appeal from the United States Patent and
Trademark Office, Patent Trial and Appeal
Board in Nos. IPR2015-01046, IPR2016-00062.

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NO. 2020-2272

VIRNETX INC.,

Appellant,

v.

MANGROVE PARTNERS MASTER FUND, LTD.,

APPLE INC., BLACK SWAMP IP, LLC,

Appellees,

KATHERINE K. VIDAL, UNDER SECRETARY OF
COMMERCE FOR INTELLECTUAL PROPERTY
AND DIRECTOR OF THE UNITED STATES
PATENT AND TRADEMARK OFFICE,

Intervenor.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in Nos. IPR2015-
01047, IPR2016-00063, IPR2016-00167.

ON PETITION FOR PANEL REHEARING

June 22, 2023

Before MOORE, *Chief Judge*, HUGHES, and STARK,
Circuit Judges.

PER CURIAM.

ORDER

VirnetX Inc. filed a petition for panel rehearing.

Upon consideration thereof,

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IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The mandate of the court will issue June 29, 2023.

FOR THE COURT

June 22, 2023

Date

/s/ Jarrett B. Perlow

Jarrett B. Perlow

Acting Clerk of Court

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APPENDIX U
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2021-1672

VIRNETX INC., LEIDOS, INC., FKA SCIENCE
APPLICATIONS INTERNATIONAL CORPORATION,
Plaintiffs-Appellees,

v.

APPLE INC.,
Defendant-Appellant.

Appeal from the United States District Court for the
Eastern District of Texas in No. 6:12-cv-00855-RWS,
Judge Robert Schroeder, III.

ON MOTION

May 5, 2023

Before MOORE, *Chief Judge*, HUGHES and STARK,
Circuit Judges.

PER CURIAM.

ORDER

VirnetX Inc. and Leidos, Inc. moved for an extension of time to file a petition for rehearing until June 5 [ECF No. 77] and subsequently filed a petition for panel rehearing, which the court construes as including a motion to stay the above-captioned appeal pending resolution of

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any petition for rehearing filed in Appeal No. 2020-2271, *VirnetX Inc. v. Mangrove Partners Master Fund* [ECF No. 80].

Upon consideration thereof,

IT IS ORDERED THAT:

(1) The motion for extension of time is denied as moot.

(2) The motion to stay the above-captioned appeal pending resolution of any petition for rehearing filed in Appeal No. 2020-2271, *VirnetX Inc. v. Mangrove Partners Master Fund* is granted.

FOR THE COURT

May 5, 2023

Date

/s/ Peter R. Marksteiner

Peter R. Marksteiner

Clerk of Court

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APPENDIX V
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2021-1672

VIRNETX INC., LEIDOS, INC., FKA SCIENCE
APPLICATIONS INTERNATIONAL CORPORATION,
Plaintiffs-Appellees,

v.

APPLE INC.,
Defendant-Appellant.

Appeal from the United States District Court for the
Eastern District of Texas in No. 6:12-cv-00855-RWS,
Judge Robert Schroeder III.

SUA SPONTE AND ON PETITION FOR
PANEL REHEARING

June 27, 2023

Before MOORE, *Chief Judge*, HUGHES and STARK,
Circuit Judges.

PER CURIAM.

ORDER

On May 1, 2023, Leidos, Inc. and VirnetX Inc. filed a
petition for panel rehearing.

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On May 5, 2023, the above-captioned appeal was stayed pending resolution of any petition for rehearing filed in Appeal No. 2020-2271, *VirnetX Inc. v. Mangrove Partners Master Fund*. The petition for rehearing in Appeal No. 2020-2271 was denied on June 22, 2023.

Upon consideration thereof,

IT IS ORDERED THAT:

- (1) The stay of the above-captioned appeal is lifted.
- (2) The petition for panel rehearing is denied.
- (3) The mandate of the court will issue June 30, 2023.

FOR THE COURT

June 27, 2023

Date

/s/ Jarrett B. Perlow

Jarrett B. Perlow

Acting Clerk of Court

APPENDIX W

**RELEVANT CONSTITUTIONAL,
STATUTORY, AND REGULATORY PROVISIONS**

1. The United States Constitution provides in relevant part as follows:

Article II, §2

* * * * *

[The President] shall nominate, and by and with the Advice and Consent of the Senate, shall appoint Ambassadors, other public Ministers and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose Appointments are not herein otherwise provided for, and which shall be established by Law: but the Congress may by Law vest the Appointment of such inferior Officers, as they think proper, in the President alone, in the Courts of Law, or in the Heads of Departments.

* * * * *

2. The Federal Vacancies Reform Act of 1998, 5 U.S.C. §§ 3345-3349d, provides as follows:

§ 3345. Acting officer

(a) If an officer of an Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) whose appointment to office is required to be made by the President, by and with the advice and consent of the Senate, dies, resigns, or is otherwise unable to perform the functions and duties of the office—

(1) the first assistant to the office of such officer shall perform the functions and duties of the office temporarily in an acting capacity subject to the time limitations of section 3346;

(2) notwithstanding paragraph (1), the President (and only the President) may direct a person who serves in an office for which appointment is required to be made by the President, by and with the advice and consent of the Senate, to perform the functions and duties of the vacant office temporarily in an acting capacity subject to the time limitations of section 3346; or

(3) notwithstanding paragraph (1), the President (and only the President) may direct an officer or employee of such Executive agency to perform the functions and duties of the vacant office temporarily in an acting capacity, subject to the time limitations of section 3346, if—

(A) during the 365-day period preceding the date of death, resignation, or beginning of inability to serve of the applicable officer, the officer or employee served in a position in such agency for not less than 90 days; and

(B) the rate of pay for the position described under subparagraph (A) is equal to or greater than the minimum rate of pay payable for a position at GS-15 of the General Schedule.

(b)(1) Notwithstanding subsection (a)(1), a person may not serve as an acting officer for an office under this section, if—

(A) during the 365-day period preceding the date of the death, resignation, or beginning of inability to serve, such person—

(i) did not serve in the position of first assistant to the office of such officer; or

(ii) served in the position of first assistant to the office of such officer for less than 90 days; and

(B) the President submits a nomination of such person to the Senate for appointment to such office.

(2) Paragraph (1) shall not apply to any person if—

(A) such person is serving as the first assistant to the office of an officer described under subsection (a);

(B) the office of such first assistant is an office for which appointment is required to be made by the President, by and with the advice and consent of the Senate; and

(C) the Senate has approved the appointment of such person to such office.

(c)(1) Notwithstanding subsection (a)(1), the President (and only the President) may direct an officer who is nominated by the President for reappointment for an additional term to the same office in an Executive department without a break in service, to continue to serve in that office subject to the time limitations in

section 3346, until such time as the Senate has acted to confirm or reject the nomination, notwithstanding adjournment sine die.

(2) For purposes of this section and sections 3346, 3347, 3348, 3349, 3349a, and 3349d, the expiration of a term of office is an inability to perform the functions and duties of such office.

§ 3346. Time limitation

(a) Except in the case of a vacancy caused by sickness, the person serving as an acting officer as described under section 3345 may serve in the office—

(1) for no longer than 210 days beginning on the date the vacancy occurs; or

(2) subject to subsection (b), once a first or second nomination for the office is submitted to the Senate, from the date of such nomination for the period that the nomination is pending in the Senate.

(b)(1) If the first nomination for the office is rejected by the Senate, withdrawn, or returned to the President by the Senate, the person may continue to serve as the acting officer for no more than 210 days after the date of such rejection, withdrawal, or return.

(2) Notwithstanding paragraph (1), if a second nomination for the office is submitted to the Senate after the rejection, withdrawal, or return of the first nomination, the person serving as the acting officer may continue to serve—

(A) until the second nomination is confirmed; or

(B) for no more than 210 days after the second nomination is rejected, withdrawn, or returned.

(c) If a vacancy occurs during an adjournment of the Congress sine die, the 210-day period under subsection (a) shall begin on the date that the Senate first reconvenes.

§ 3347. Exclusivity

(a) Sections 3345 and 3346 are the exclusive means for temporarily authorizing an acting official to perform the functions and duties of any office of an Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) for which appointment is required to be made by the President, by and with the advice and consent of the Senate, unless—

(1) a statutory provision expressly—

(A) authorizes the President, a court, or the head of an Executive department, to designate an officer or employee to perform the functions and duties of a specified office temporarily in an acting capacity; or

(B) designates an officer or employee to perform the functions and duties of a specified office temporarily in an acting capacity; or

(2) the President makes an appointment to fill a vacancy in such office during the recess of the Senate pursuant to clause 3 of section 2 of article II of the United States Constitution.

(b) Any statutory provision providing general authority to the head of an Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) to delegate duties statutorily vested in that agency head to, or to reassign duties among, officers or employees of such Executive agency, is not a statutory provision to which subsection (a)(1) applies.

§ 3348. Vacant office

(a) In this section—

(1) the term “action” includes any agency action as defined under section 551(13); and

(2) the term “function or duty” means any function or duty of the applicable office that—

(A)(i) is established by statute; and

(ii) is required by statute to be performed by the applicable officer (and only that officer); or

(B)(i)(I) is established by regulation; and

(II) is required by such regulation to be performed by the applicable officer (and only that officer); and

(ii) includes a function or duty to which clause (i)(I) and (II) applies, and the applicable regulation is in effect at any time during the 180-day period preceding the date on which the vacancy occurs.

(b) Unless an officer or employee is performing the functions and duties in accordance with sections 3345, 3346, and 3347, if an officer of an Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) whose appointment to office is required to be made by the President, by and with the advice and consent of the Senate, dies, resigns, or is otherwise unable to perform the functions and duties of the office—

(1) the office shall remain vacant; and

(2) in the case of an office other than the office of the head of an Executive agency (including the Executive Office of the President, and other than the Government

Accountability Office), only the head of such Executive agency may perform any function or duty of such office.

(c) If the last day of any 210-day period under section 3346 is a day on which the Senate is not in session, the second day the Senate is next in session and receiving nominations shall be deemed to be the last day of such period.

(d)(1) An action taken by any person who is not acting under section 3345, 3346, or 3347, or as provided by subsection (b), in the performance of any function or duty of a vacant office to which this section and sections 3346, 3347, 3349, 3349a, 3349b, and 3349c apply shall have no force or effect.

(2) An action that has no force or effect under paragraph (1) may not be ratified.

(e) This section shall not apply to—

(1) the General Counsel of the National Labor Relations Board;

(2) the General Counsel of the Federal Labor Relations Authority;

(3) any Inspector General appointed by the President, by and with the advice and consent of the Senate;

(4) any Chief Financial Officer appointed by the President, by and with the advice and consent of the Senate; or

(5) an office of an Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) if a statutory provision expressly prohibits the head of the Executive agency from performing the functions and duties of such office.

§ 3349. Reporting of vacancies

(a) The head of each Executive agency (including the Executive Office of the President, and other than the Government Accountability Office) shall submit to the Comptroller General of the United States and to each House of Congress—

(1) notification of a vacancy in an office to which this section and sections 3345, 3346, 3347, 3348, 3349a, 3349b, 3349c, and 3349d apply and the date such vacancy occurred immediately upon the occurrence of the vacancy;

(2) the name of any person serving in an acting capacity and the date such service began immediately upon the designation;

(3) the name of any person nominated to the Senate to fill the vacancy and the date such nomination is submitted immediately upon the submission of the nomination; and

(4) the date of a rejection, withdrawal, or return of any nomination immediately upon such rejection, withdrawal, or return.

(b) If the Comptroller General of the United States makes a determination that an officer is serving longer than the 210-day period including the applicable exceptions to such period under section 3346 or section 3349a, the Comptroller General shall report such determination immediately to—

(1) the Committee on Governmental Affairs of the Senate;

(2) the Committee on Government Reform and Oversight of the House of Representatives;

(3) the Committees on Appropriations of the Senate and House of Representatives;

(4) the appropriate committees of jurisdiction of the Senate and House of Representatives;

(5) the President; and

(6) the Office of Personnel Management.

§ 3349a. Presidential inaugural transitions

(a) In this section, the term “transitional inauguration day” means the date on which any person swears or affirms the oath of office as President, if such person is not the President on the date preceding the date of swearing or affirming such oath of office.

(b) With respect to any vacancy that exists during the 60-day period beginning on a transitional inauguration day, the 210-day period under section 3346 or 3348 shall be deemed to begin on the later of the date occurring—

(1) 90 days after such transitional inauguration day;

or

(2) 90 days after the date on which the vacancy occurs.

§ 3349b. Holdover provisions

Sections 3345 through 3349a shall not be construed to affect any statute that authorizes a person to continue to serve in any office—

(1) after the expiration of the term for which such person is appointed; and

(2) until a successor is appointed or a specified period of time has expired.

§ 3349c. Exclusion of certain officers

Sections 3345 through 3349b shall not apply to—

(1) any member who is appointed by the President, by and with the advice and consent of the Senate to any board, commission, or similar entity that—

(A) is composed of multiple members; and

(B) governs an independent establishment or Government corporation;

(2) any commissioner of the Federal Energy Regulatory Commission;

(3) any member of the Surface Transportation Board; or

(4) any judge appointed by the President, by and with the advice and consent of the Senate, to a court constituted under article I of the United States Constitution.

§ 3349d. Notification of intent to nominate during certain recesses or adjournments

(a) The submission to the Senate, during a recess or adjournment of the Senate in excess of 15 days, of a written notification by the President of the President's intention to submit a nomination after the recess or adjournment shall be considered a nomination for purposes of sections 3345 through 3349c if such notification contains the name of the proposed nominee and the office for which the person is nominated.

(b) If the President does not submit a nomination of the person named under subsection (a) within 2 days after the end of such recess or adjournment, effective after such second day the notification considered a nomination under subsection (a) shall be treated as a withdrawn nomination for purposes of sections 3345 through 3349c.

3. The U.S. Patent and Trademark Office's Agency Organization Order 45-1 (Nov. 7, 2016) provides in relevant part as follows:

II. Appointment and General Authority of Under Secretary and Commissioners

A. On November 29, 1999, the President signed into law the Patent and Trademark Office Efficiency Act (PTOEA), which establishes the USPTO as an agency of the United States, within the Department of Commerce (DOC).

Under Secretary and Deputy Under Secretary

B. The Under Secretary is appointed by the President, by and with the advice and consent of the Senate, and reports to the Secretary of Commerce (Secretary) with respect to policy matters. The Under Secretary, as established by 35 U.S.C. §3, is responsible for providing policy direction and management supervision for the USPTO and the issuance of patents and registration of trademarks, and for consulting with the Patent Public Advisory Committee and the Trademark Public Advisory Committee.

C. The Under Secretary will be assisted by the Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the United States Patent and Trademark Office (Deputy Under Secretary) who will act in the capacity of the Under Secretary in the event of the absence or incapacity of the Under Secretary. The Deputy Under Secretary is appointed by the Secretary upon consideration of individuals nominated by the Under Secretary.

D. The Deputy Under Secretary shall serve as Acting Under Secretary during any period in which the Under Secretary has died, resigned, or otherwise become unable

to perform the functions and duties of the office, subject to the limitations set forth in the Federal Vacancies Reform Act of 1998, as amended, 5 U.S.C. § 3345 et seq. The Deputy Under Secretary shall perform the non-exclusive functions and duties of the Under Secretary when the Under Secretary dies, resigns, or is otherwise unable to perform the functions and duties of the Under Secretary, and when there is no Acting Under Secretary. If both the Under Secretary and the Deputy Under Secretary positions are vacant, the Commissioner for Patents and the Commissioner for Trademarks, in that order, will perform the non-exclusive functions and duties of the Under Secretary. In the event there is no Commissioner appointed under 35 U.S.C. § 3(b)(2), the Chief Policy Officer and Director for International Affairs, the Chief Financial Officer, the Chief Administrative Officer, or the General Counsel of the USPTO, in order of length of service in those positions, shall perform the non-exclusive functions and duties of the Under Secretary.

E. In the event of the absence or incapacity of the Under Secretary and Deputy Under Secretary, the following officials may be designated by the Under Secretary or Deputy Under Secretary, as appropriate, to perform the non-exclusive functions and duties of the Under Secretary: the Commissioner for Patents, the Commissioner for Trademarks, the Chief Policy Officer and Director for International Affairs, the Chief Financial Officer, the Chief Administrative Officer, or the General Counsel for USPTO.

F. A Commissioner performing the functions and duties of the Under Secretary will not assist the Secretary in evaluating the performance of the Commissioners.

Commissioners

G. The Secretary will appoint a Commissioner for Patents and a Commissioner for Trademarks, each of whom will serve for a five-year term. The Secretary may reappoint a Commissioner to subsequent five-year terms in accordance with PTOEA.

H. The Under Secretary will appoint such other officers, employees and agents of the Office as deemed necessary to carry out the functions of USPTO, consistent with Title 35, U.S.C.

I. In accordance with PTOEA and Title 35, U.S.C., in carrying out its functions, USPTO will be subject to the policy direction of the Secretary, but otherwise will retain responsibility for decisions regarding the management and administration of its operations and will exercise independent control of its budget allocations and expenditures, personnel decisions and processes, procurements, and other administrative and management functions, in accordance with applicable provisions of the law.

Public Advisory Committees

J. USPTO will have a Patent Public Advisory Committee and a Trademark Public Advisory Committee. The Secretary will appoint nine members to each committee who will serve at the pleasure of the Secretary. The Secretary will designate a chair of each Advisory Committee, each of whom will serve for a three-year term. In addition to the voting members, each Advisory Committee will include a representative of each labor organization recognized by USPTO.

K. The Under Secretary will consult with the Patent Public Advisory Committee on a regular basis on matters relating to the patent operations of USPTO, will consult with the Trademark Public Advisory Committee on a

regular basis on matters relating to the trademark operations of USPTO, and will consult with the respective Public Advisory Committee before submitting budgetary proposals to the Office of Management and Budget (OMB) or changing or proposing to change patent or trademark user fees or patent or trademark regulations that are subject to the requirement to provide notice and opportunity for public comment under Title 5, U.S.C. §553, as the case may be.

Administrative Patent Judges and Administrative Trademark Judges

L. The Patent Trial and Appeal Board shall include the Under Secretary, the Deputy Under Secretary, the Commissioner for Patents, the Commissioner for Trademarks, and the administrative patent judges.

M. The Trademark Trial and Appeal Board shall include the Under Secretary, the Deputy Under Secretary, the Commissioner for Patents, the Commissioner for Trademarks, and the administrative trademark judges.

N. Administrative patent judges and administrative trademark judges are appointed by the Secretary, in consultation with the Under Secretary.

* * * * *

4. Title 35 of the United States Code provides in relevant part as follows:

§ 3. Officers and employees

(a) UNDER SECRETARY AND DIRECTOR.—

(1) IN GENERAL.—The powers and duties of the United States Patent and Trademark Office shall be vested in an Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (in this title referred to as the “Director”), who shall be a citizen of the United States and who shall be appointed by the President, by and with the advice and consent of the Senate. The Director shall be a person who has a professional background and experience in patent or trademark law.

(2) DUTIES.—

(A) IN GENERAL.—The Director shall be responsible for providing policy direction and management supervision for the Office and for the issuance of patents and the registration of trademarks. The Director shall perform these duties in a fair, impartial, and equitable manner.

(B) CONSULTING WITH THE PUBLIC ADVISORY COMMITTEES.—The Director shall consult with the Patent Public Advisory Committee established in section 5 on a regular basis on matters relating to the patent operations of the Office, shall consult with the Trademark Public Advisory Committee established in section 5 on a regular basis on matters relating to the trademark operations of the Office, and shall consult with the respective Public Advisory Committee before submitting budgetary proposals to the Office of Management and Budget or changing or proposing to change patent or trademark user fees or

patent or trademark regulations which are subject to the requirement to provide notice and opportunity for public comment under section 553 of title 5, as the case may be.

(3) OATH.— The Director shall, before taking office, take an oath to discharge faithfully the duties of the Office.

(4) REMOVAL.— The Director may be removed from office by the President. The President shall provide notification of any such removal to both Houses of Congress.

(b) OFFICERS AND EMPLOYEES OF THE OFFICE.—

(1) DEPUTY UNDER SECRETARY AND DEPUTY DIRECTOR.— The Secretary of Commerce, upon nomination by the Director, shall appoint a Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the United States Patent and Trademark Office who shall be vested with the authority to act in the capacity of the Director in the event of the absence or incapacity of the Director. The Deputy Director shall be a citizen of the United States who has a professional background and experience in patent or trademark law.

(2) COMMISSIONERS.—

(A) APPOINTMENT AND DUTIES.—The Secretary of Commerce shall appoint a Commissioner for Patents and a Commissioner for Trademarks, without regard to chapter 33, 51, or 53 of title 5. The Commissioner for Patents shall be a citizen of the United States with demonstrated management ability and professional background and experience in patent law and serve for a term of 5 years. The Commissioner for Trademarks shall be a citizen of the

United States with demonstrated management ability and professional background and experience in trademark law and serve for a term of 5 years. The Commissioner for Patents and the Commissioner for Trademarks shall serve as the chief operating officers for the operations of the Office relating to patents and trademarks, respectively, and shall be responsible for the management and direction of all aspects of the activities of the Office that affect the administration of patent and trademark operations, respectively. The Secretary may reappoint a Commissioner to subsequent terms of 5 years as long as the performance of the Commissioner as set forth in the performance agreement in subparagraph (B) is satisfactory.

(B) SALARY AND PERFORMANCE AGREEMENT.— The Commissioners shall be paid an annual rate of basic pay not to exceed the maximum rate of basic pay for the Senior Executive Service established under section 5382 of title 5, including any applicable locality-based comparability payment that may be authorized under section 5304(h)(2)(C) of title 5. The compensation of the Commissioners shall be considered, for purposes of section 207(c)(2)(A) of title 18, to be the equivalent of that described under clause (ii) of section 207(c)(2)(A) of title 18. In addition, the Commissioners may receive a bonus in an amount of up to, but not in excess of, 50 percent of the Commissioners' annual rate of basic pay, based upon an evaluation by the Secretary of Commerce, acting through the Director, of the Commissioners' performance as defined in an annual performance agreement between the Commissioners and the Secretary. The annual performance agreements shall

incorporate measurable organization and individual goals in key operational areas as delineated in an annual performance plan agreed to by the Commissioners and the Secretary. Payment of a bonus under this subparagraph may be made to the Commissioners only to the extent that such payment does not cause the Commissioners' total aggregate compensation in a calendar year to equal or exceed the amount of the salary of the Vice President under section 104 of title 3.

(C) REMOVAL.—The Commissioners may be removed from office by the Secretary for misconduct or nonsatisfactory performance under the performance agreement described in subparagraph (B), without regard to the provisions of title 5. The Secretary shall provide notification of any such removal to both Houses of Congress.

(3) OTHER OFFICERS AND EMPLOYEES.— The Director shall.—

(A) appoint such officers, employees (including attorneys), and agents of the Office as the Director considers necessary to carry out the functions of the Office; and

(B) define the title, authority, and duties of such officers and employees and delegate to them such of the powers vested in the Office as the Director may determine.

The Office shall not be subject to any administratively or statutorily imposed limitation on positions or personnel, and no positions or personnel of the Office shall be taken into account for purposes of applying any such limitation.

(4) TRAINING OF EXAMINERS.—The Office shall submit to the Congress a proposal to provide an incentive program to retain as employees patent and trademark examiners of the primary examiner grade or higher who are eligible for retirement, for the sole purpose of training patent and trademark examiners.

(5) NATIONAL SECURITY POSITIONS.—The director, in consultation with the Director of the Office of Personnel Management, shall maintain a program for identifying national security positions and providing for appropriate security clearances, in order to maintain the secrecy of certain inventions, as described in section 181, and to prevent disclosure of sensitive and strategic information in the interest of national security.

(6) ADMINISTRATIVE PATENT JUDGES AND ADMINISTRATIVE TRADEMARK JUDGES.—The Director may fix the rate of basic pay for the administrative patent judges appointed pursuant to section 6 and the administrative trademark judges appointed pursuant to section 17 of the Trademark Act of 1946 (15 U.S.C. 1067) at not greater than the rate of basic pay payable for level III of the Executive Schedule under section 5314 of title 5. The payment of a rate of basic pay under this paragraph shall not be subject to the pay limitation under section 5306(e) or 5373 of title 5.

(c) CONTINUED APPLICABILITY OF TITLE 5.—Officers and employees of the Office shall be subject to the provisions of title 5, relating to Federal employees.

(d) ADOPTION OF EXISTING LABOR AGREEMENTS.—The office shall adopt all labor agreements which are in effect, as of the day before the effective date of the Patent and Trademark Office Efficiency Act, with respect to such Office (as then in effect).

(e) CARRYOVER OF PERSONNEL.—

(1) FROM PTO.—Effective as of the effective date of the Patent and Trademark Office Efficiency Act, all officers and employees of the Patent and Trademark Office on the day before such effective date shall become officers and employees of the Office, without a break in service.

(2) OTHER PERSONNEL.— Any individual who, on the day before the effective date of the Patent and Trademark Office Efficiency Act, is an officer or employee of the Department of Commerce (other than an officer or employee under paragraph (1)) shall be transferred to the Office, as necessary to carry out the purposes of that Act, if—

(A) such individual serves in a position for which a major function is the performance of work reimbursed by the Patent and Trademark Office, as determined by the Secretary of Commerce;

(B) such individual serves in a position that performed work in support of the Patent and Trademark Office during at least half of the incumbent's work time, as determined by the Secretary of Commerce; or

(C) such transfer would be in the interest of the Office, as determined by the Secretary of Commerce in consultation with the Director.

Any transfer under this paragraph shall be effective as of the same effective date as referred to in paragraph (1), and shall be made without a break in service.

(f) TRANSITION PROVISIONS.—

(1) INTERIM APPOINTMENT OF DIRECTOR.—On or after the effective date of the Patent and Trademark

Office Efficiency Act, the President shall appoint an individual to serve as the Director until the date on which a Director qualifies under subsection (a). The President shall not make more than one such appointment under this subsection.

(2) CONTINUATION IN OFFICE OF CERTAIN OFFICERS.—The individual serving as the Assistant Commissioner for Patents on the day before the effective date of the Patent and Trademark Office Efficiency Act may serve as the Commissioner for Patents until the date on which a Commissioner for Patents is appointed under subsection (b).

(B) The individual serving as the Assistant Commissioner for Trademarks on the day before the effective date of the Patent and Trademark Office Efficiency Act may serve as the Commissioner for Trademarks until the date on which a Commissioner for Trademarks is appointed under subsection (b).

§ 6. Patent Trial and Appeal Board

(a) IN GENERAL.—There shall be in the Office a Patent Trial and Appeal Board. The Director, the Deputy Director, the Commissioner for Patents, the Commissioner for Trademarks, and the administrative patent judges shall constitute the Patent Trial and Appeal Board. The administrative patent judges shall be persons of competent legal knowledge and scientific ability who are appointed by the Secretary, in consultation with the Director. Any reference in any Federal law, Executive order, rule, regulation, or delegation of authority, or any document of or pertaining to the Board of Patent Appeals and Interferences is deemed to refer to the Patent Trial and Appeal Board.

(b) DUTIES.—The Patent Trial and Appeal Board shall—

(1) on written appeal of an applicant, review adverse decisions of examiners upon applications for patents pursuant to section 134(a);

(2) review appeals of reexaminations pursuant to section 134(b)

(3) conduct derivation proceedings pursuant to section 135; and

(4) conduct inter partes reviews and post-grant reviews pursuant to chapters 31 and 32.

(c) 3-MEMBER PANELS.—Each appeal, derivation proceeding, post-grant review, and inter partes review shall be heard by at least 3 members of the Patent Trial and Appeal Board, who shall be designated by the Director. Only the Patent Trial and Appeal Board may grant rehearings.

(d) TREATMENT OF PRIOR APPOINTMENTS.—The Secretary of Commerce may, in the Secretary's discretion, deem the appointment of an administrative patent judge who, before the date of the enactment of this subsection, held office pursuant to an appointment by the Director to take effect on the date on which the Director initially appointed the administrative patent judge. It shall be a defense to a challenge to the appointment of an administrative patent judge on the basis of the judge's having been originally appointed by the Director that the administrative patent judge so appointed was acting as a de facto officer.

§ 311. Inter partes review

(a) IN GENERAL.—Subject to the provisions of this chapter, a person who is not the owner of a patent may

file with the Office a petition to institute an inter partes review of the patent. The Director shall establish, by regulation, fees to be paid by the person requesting the review, in such amounts as the Director determines to be reasonable, considering the aggregate costs of the review.

(b) SCOPE.—A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.

(c) FILING DEADLINE.—A petition for inter partes review shall be filed after the later of either—

(1) the date that is 9 months after the grant of a patent; or

(2) if a post-grant review is instituted under chapter 32, the date of the termination of such post-grant review.

§ 314. Institution of inter partes review

(a) THRESHOLD.—The Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.

(b) TIMING.—The Director shall determine whether to institute an inter partes review under this chapter pursuant to a petition filed under section 311 within 3 months after—

(1) receiving a preliminary response to the petition under section 313; or

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(2) if no such preliminary response is filed, the last date on which such response may be filed.

(c) NOTICE.—The Director shall notify the petitioner and patent owner, in writing, of the Director’s determination under subsection (a), and shall make such notice available to the public as soon as is practicable. Such notice shall include the date on which the review shall commence.

(d) NO APPEAL.—The determination by the Director whether to institute an inter partes review under this section shall be final and non-appealable.

§ 315. Relation to other proceedings or actions

(a) INFRINGER’S CIVIL ACTION.—

(1) INTER PARTES REVIEW BARRED BY CIVIL ACTION.—An inter partes review may not be instituted if, before the date on which the petition for such a review is filed, the petitioner or real party in interest filed a civil action challenging the validity of a claim of the patent.

(2) STAY OF CIVIL ACTION.—If the petitioner or real party in interest files a civil action challenging the validity of a claim of the patent on or after the date on which the petitioner files a petition for inter partes review of the patent, that civil action shall be automatically stayed until either—

(A) the patent owner moves the court to lift the stay;

(B) the patent owner files a civil action or counterclaim alleging that the petitioner or real party in interest has infringed the patent; or

(C) the petitioner or real party in interest moves the court to dismiss the civil action

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(3) TREATMENT OF COUNTERCLAIM.—A counterclaim challenging the validity of a claim of a patent does not constitute a civil action challenging the validity of a claim of a patent for purposes of this subsection.

(b) PATENT OWNER'S ACTION.—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. The time limitation set forth in the preceding sentence shall not apply to a request for joinder under subsection (c).

(c) JOINDER.—If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter partes review under section 314.

(d) MULTIPLE PROCEEDINGS.—Notwithstanding sections 135(a), 251, and 252, and chapter 30, during the pendency of an inter partes review, if another proceeding or matter involving the patent is before the Office, the Director may determine the manner in which the inter partes review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, or termination of any such matter or proceeding.

(e) ESTOPPEL.—

(1) PROCEEDINGS BEFORE THE OFFICE.—The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written

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decision under section 318(a), or the real party in interest or privy of the petitioner, may not request or maintain a proceeding before the Office with respect to that claim on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

(2) CIVIL ACTIONS AND OTHER PROCEEDINGS.—

The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under section 318(a), or the real party in interest or privy of the petitioner, may not assert either in a civil action arising in whole or in part under section 1338 of title 28 or in a proceeding before the International Trade Commission under section 337 of the Tariff Act of 1930 that the claim is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

5. The Code of Federal Regulations provides in relevant part as follows:

§ 42.122 Multiple proceedings and joinder

- (a) *Multiple proceedings.* Where another matter involving the patent is before the Office, the Board may during the pendency of the *inter partes* review enter any appropriate order regarding the additional matter including providing for the stay, transfer, consolidation, or termination of any such matter.
- (b) *Request for Joinder.* Joinder may be requested by a patent owner or petitioner. Any request for joinder must be filed, as a motion under § 42.22, no later than one month after the institution date of any *inter partes* review for which joinder is requested. The time period set forth in § 42.101(b) shall not apply when the petition is accompanied by a request for joinder.