Paper 122 Entered: July 14, 2020

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

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

MELVIN, Administrative Patent Judge.

JUDGMENT

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

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.



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."). 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 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).

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



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 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*.

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



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).

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