

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

VIRNETX INC.,
Patent Owner.

IPR2015-01046¹
Patent 6,502,135 B1

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

MELVIN, *Administrative Patent Judge*.

JUDGMENT

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

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

I. INTRODUCTION

A. BACKGROUND AND SUMMARY

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

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

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

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

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

IPR2015-01046
Patent 6,502,135 B1

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

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

B. RELATED MATTERS

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

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

Petitioner additionally describes a related matter as follows:

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

Paper 102, 1.

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

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

C. THE ’135 PATENT

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

D. ILLUSTRATIVE CLAIMS

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

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

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

Ex. 1001, 47:20–32.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts unpatentability on the following grounds:

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

Pet. 4.

F. CAFC REMAND

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

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

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

⁴ Mockapetris, P., RFC 1034, “Domain Names–Concepts and Facilities,” Nov. 1997 (Ex. 1005).

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