

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

VIRNETX INC.,
Patent Owner.

Case IPR2015-01046¹
Patent 6,502,135 B1

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

SIU, *Administrative Patent Judge*.

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

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

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

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.

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

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”).

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 “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.

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

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