Trials@uspto.gov
Tel: 571-272-7822

Paper 39
Entered: September 28, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.

Case IPR2015-00866
Patent 8,458,341 B2

Before KARL D. EASTHOM, JENNIFER S. BISK, and GREGG I. ANDERSON, *Administrative Patent Judges.*

BISK, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a)

INTRODUCTION

A. *Background*

Petitioner, Apple Inc., filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1–11, 14–25, and 28 (the "challenged claims") of U.S. Patent No. 8,458,341 B2 (Ex. 1001, "the '341 patent"). Patent Owner, VirnetX Inc., filed a Preliminary Response. Paper 6 ("Prelim. Resp."). We granted the Petition, instituting trial on whether claims 1–11, 14–25, and 28 are unpatentable as obvious over Beser[1] and RFC 2401.[2] Paper 8 ("Inst. Dec.").

During the trial, Patent Owner filed a Response (Paper 23, "PO Resp."), and Petitioner filed a Reply (Paper 26, "Reply"). Additionally, Patent Owner filed a Motion to Exclude evidence. Paper 30. A consolidated hearing for oral arguments in this *inter partes* review and Cases IPR2015-00868, IPR2015-00870, and IPR2015-00871 was held June 27, 2016. A transcript of the hearing appears in the record. Paper 38 ("Tr.").

This is a Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons set forth below, Petitioner has shown by a preponderance of the evidence that claims 1–11, 14–25, and 28 are unpatentable.

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[1] U.S. Patent No. 6,496,867 B1 (Ex. 1007) ("Beser").

[2] S. Kent and R. Atkinson, *Security Architecture for the Internet Protocol*, Request for Comments: 2401, BBN Corp., November 1998 (Ex. 1008) ("RFC 2401").

B. *The '341 Patent*

The '341 patent describes secure methods for communicating over the Internet. Ex. 1001, 10:9–11. Specifically, the '341 patent describes "the automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function." *Id.* at 39:24–26. This automatic process makes use of a modified Domain Name Server as opposed to a conventional Domain Name Server (DNS), which is described as follows:

> Conventional Domain Name Servers (DNSs) provide a look-up function that returns the IP address of a requested computer or host. For example, when a computer user types in the web name "Yahoo.com," the user's web browser transmits a request to a DNS, which converts the name into a four-part IP address that is returned to the user's browser and then used by the browser to contact the destination web site.

Id. at 39:27–33.

The modified DNS server may include both a conventional DNS and a DNS proxy. *Id.* at 40:20–22. The DNS proxy intercepts all DNS lookup requests, determines whether the user has requested access to a secure site (using, for example, a domain name extension or an internal table of secure sites) and if so, determines whether the user has sufficient security privileges to access the requested site. *Id.* at 40:26–32. If the user has requested access to a secure site to which it has insufficient security privileges, the DNS proxy returns a "host unknown" error to the user. *Id.* at 40:49–52. If the user has requested access to a secure site to which it has sufficient security privileges, the DNS proxy requests a gatekeeper create a VPN between the user's computer and the secure target site. *Id.* at 40:32–38. The DNS proxy then returns to the user the resolved address passed to it by the

gatekeeper, which need not be the actual address of the destination computer. *Id.* at 40:38–44.

The VPN is "preferably implemented using the IP address 'hopping' features" (changing IP addresses based upon an agreed upon algorithm), described elsewhere in the '009 patent, "such that the true identity of the two nodes cannot be determined even if packets during the communication are intercepted." *Id.* at 40:5–9.

C. *The Challenged Claims*

Claims 1 and 15 of the challenged claims are independent and similar in scope. Claims 2–11 and 14 depend either directly or indirectly from claim 1 and claims 16–25 and 28 depend either directly or indirectly from claim 15. Claim 1 is illustrative of the claimed subject matter and recites:

1. A network device, comprising:

a storage device storing an application program for a secure communications service; and

at least one processor configured to execute the application program for the secure communications service so as to enable the network device to:

send a request to look up an internet protocol (IP) address of a second network device based on a domain name associated with the second network device;

receive, following interception of the request and a determination that the second network device is available for the secure communications service an indication that the second network device is available for the secure communications service, the requested IP address of the second network device, and provisioning information for a virtual private network communication link;

connect to the second network device, using the received IP address of the second network device and the provisioning

information for the virtual private network_communication link; and

communicate with the second network device using the secure communications service via the virtual private network communication link.

Ex. 1001, 56:2–25.

CLAIM CONSTRUCTION

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the Specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016). We presume a claim term carries its "ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question" at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (citation and quotations omitted). The Board has construed claim terms similar to those at issue here in several other proceedings challenging patents related to the '341 patent. *See, e.g., Apple Inc. v. VirnetX Inc.*, IPR2014-00237 (PTAB May 11, 2015) (Paper No. 41) (final written decision "'237 FWD," or generally, "'237 IPR") (on appeal at the Federal Circuit); *Apple Inc. v. VirnetX Inc.*, IPR2015-00812 (PTAB Aug. 30, 2016) (Paper No. 43) (final written decision "'812 FWD," or generally, "'812 IPR"); *see also VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1317–19 (Fed. Cir. 2014) (addressing ancestor *VirnetX* patents having similar claim terms).

A. *Interception of the Request*

Petitioner proposes we construe the term "interception of a request" as including "receiving a request pertaining to a first entity at another entity." Pet. 9–10. In its Preliminary Response, Patent Owner argued that no

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