

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Larson et al.
Application Serial No.: 11/839,987
Filing Date: August 16, 2007
Title: METHOD FOR ESTABLISHING SECURE COMMUNICATION
LINK BETWEEN COMPUTERS OF VIRTUAL PRIVATE
NETWORK
Examiner: Lim, Krisna
Art Unit: 2453
Confirmation No.: 9470
Atty. Docket No.: 077580-0066 (VRNK-1CP2DVCN2)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

In response to the non-final Office Action mailed July 8, 2010 (“the Office Action”),
please amend the above-identified application as follows:

Remarks, beginning on page 2 of this paper.

Remarks

Applicant appreciates the Examiner's examination of the subject application. Claims 1-18 are currently pending.

In the Office Action, the Examiner has rejected Claims 1-18 under 35 U.S.C. § 103(a), as being unpatentable over VPN Overview and Aventail Connect v 3.1/v2.6 Administrator's Guide ("Aventail"). The Examiner rejected claims 1-18 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-23 of co-pending Application No. 11/679,416.

Applicant respectfully traverses the outstanding objection and rejections and requests reconsideration of the subject application in light of the foregoing amendments and the following remarks.

Patentability under 35 U.S.C. § 103

The Examiner has rejected Claims 1-18 under 35 U.S.C. § 103(a), as being unpatentable over VPN Overview and Aventail. These rejections are respectfully traversed, and reconsideration and withdrawal of these rejections are respectfully requested.

Independent claim 1 recites the following:

A method of accessing a secure network address, comprising:

sending a query message from a first network device to **a secure domain service**, the query message requesting from the secure domain service **a secure network address** for a second network device;

receiving at the first network device a response message from the secure domain name service containing the secure network address for the second network device; and

sending an access request message from the first network device to the secure network address using a **virtual private network communication link**.

(emphasis added).

As a preliminary matter, neither Aventail nor VPN Overview have been shown to be prior art to all claims in the present application, including claim 1. Aventail is not prior art because the present application claims priority to U.S. Patent Nos. 6,502,135 (hereinafter “the ‘135 patent”) and 7,188,180 (hereinafter “the ‘180 patent”). The ‘135 and ‘180 Patents have been subject to an inter partes reexamination proceedings, Control Nos. 95/001,269 (hereinafter “the ‘269 Reexam”) and 95/001,270 (hereinafter “the ‘270 Reexam”), respectively. In both Reexams, the USPTO determined that “Aventail cannot be relied upon as prior art to the [patents].” *See* Reexamination Control No. 95/001,269, Action Closing Prosecution, June 16, 2010, attached as Exhibit A, and Reexamination Control No. 95/001,270, Action Closing Prosecution, June 16, 2010, attached as Exhibit B. This determination was soundly based on the fact that no evidence was found that established Aventail’s publication date.

Indeed, Aventail’s identification of a copyright date range of 1996 – 1999 is not equivalent to a publication date. The distinction between a publication date and a copyright date is critical. To establish a date of publication, the reference must be shown to have “been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *In re Wyre*, 655 F.2d 221 (C.C.P.A. 1981). Aventail, on its face, provides “© 1996-1999 Aventail Corporation.” The copyright date does not meet this standard. Unlike a publication date, a copyright date merely establishes “the date that the document was created or printed.” *Hilgraeve, Inc. v. Symantec Corp.*, 271 F. Supp. 2d 964, 975 (E.D. Mich. 2003).

Presuming the author of the document accurately represented the date the document was created, this creation date is not evidence of any sort of publication or dissemination. Without

more, this bald assertion of the creation of the document does not meet the “publication” standard required for a document to be relied upon as prior art.

Further exacerbating matters is the filing date of the ‘135 Patent: February 15, 2000. Suppose the relied upon sections of the Aventail reference were created on December 31, 1999, and the copyright date range were accordingly amended to read “1996-1999.” Under these circumstances, it is possible that the document, although created, was not made publicly available until after the filing date of the ‘135 Patent, six weeks after creation. Under these circumstances, Aventail clearly would not be eligible to be relied upon as prior art to the ‘135 Patent.

As an aside, the Applicant notes that the present assignee (VirnetX Inc.) and its prosecution counsel have been accused of inequitable conduct during the ‘269 Reexam in a litigation proceeding, *VirnetX Inc. v. Cisco Systems, Inc., et al.*, United States District Court for the Eastern District of Texas, Tyler Division, Case No. 6:10-cv-417. Exhibits C-E. In its Original Answer, Affirmative Defenses, and Counterclaims to the Virnetx’s Original Complaint, the Defendant Apple Inc. (“Apple”) alleges that evidence of Aventail’s publication as early as June 1999 was presented in a different trial involving Microsoft Corporation. Exhibit C at ¶ 23 (p. 14). Apple further alleges that “VirnetX was aware that the Aventail reference may have been published at least as early as June 1999.” Exhibit C at ¶ 23. Defendants Aastra Technologies Limited and Aastra USA Inc. (“Aastra”) have made similar allegations in their responsive pleadings. Exhibit D at ¶ 86 (p. 19); Exhibit E at ¶ 86 (p. 19). To the contrary, the applicants are unaware of evidence establishing Aventail’s publication date, and specifically are unaware of the June 1999 publication date alleged by Apple and Aastra in their pleadings. The trial transcript from the Microsoft trial does not discuss anything about a publication date for the

Aventail reference. Exhibit F. While the trial transcript references the Aventail product, it does not mention anything about a publication date. *See e.g.* Exhibit F-2, pp. 112, 146; Exhibit F-3, pp. 115, 119-20; Exhibit F-10 pp. 21-40; Exhibit F-11, pp. 21-32, 120-150. The deposition of Gary Tomlinson (former employee of Aventail) taken during discovery prior to the Microsoft trial is inconclusive, at best. Exhibit H at pp. 33-36. Thus, although an allegation of knowledge has been made by a third party, the applicants, the assignee and applicants' prosecution counsel have not had and do not have such knowledge. To be sure, the applicants will notify the USPTO immediately if it becomes aware of evidence of Aventail's publication date.

VPN Overview has also not been shown to be prior art. On its face, VPN Overview only provides that it was copyrighted in 1998. VPN Overview at 2. Further, the reference identifies itself as being nothing more than a draft. VPN Overview at 1 (Stating the following: "White Paper – DRAFT"). The lack of a publication date in conjunction with the document's status as a draft fail to evidence that VPN Overview is prior art to the present application.

Assuming *arguendo*, that both of these references are prior art to the present application, neither VPN Overview nor Aventail, alone or in combination, are understood to disclose or suggest the features of claim 1, particularly with respect to at least the features of "a **virtual private network** communication link," "a **secure** domain name service" and a "**secure** computer network address."

Aventail's and VPN Overview's disclosures were summarized in the Declaration of Professor Jason Nieh in support of the '270 Reexam. Reexamination Control No. 95/001,270, *Declaration of Jason Nieh, Ph.D., Pursuant to 37 C.F.R. § 1.132*, April 19, 2010, attached as Exhibit G (hereinafter "Nieh Decl."). The Nieh Decl. is cited herein to characterize the cited references and their deficiencies.

Aventail discloses a system and architecture for transmitting data between two computers using the SOCKS protocol. Nieh Decl. at ¶ 14. The system routes certain, predefined network traffic from a WinSock (Windows sockets) application to an extranet (SOCKS) server, possibly through successive servers. Aventail at 7; Nieh Decl. at ¶ 14. Upon receipt of the network traffic, the SOCKS server then transmits the network traffic to the Internet or external network. Aventail at 7; Nieh Decl. at ¶ 14. Aventail's disclosure is limited to connections created at the socket layer of the network architecture. Nieh Decl. at ¶ 14.

In operation, a component of the Aventail Connect software described in the reference resides between WinSock and the underlying TCP/IP stack. *See* Aventail at 9; Nieh Decl. at ¶ 15. The Aventail Connect software intercepts all connection requests from the user, and determines whether each request matches local, preset criteria for redirection to a SOCKS server. *See* Aventail at 10; Nieh Decl. at ¶ 15. If redirection is appropriate, then Aventail Connect creates a false DNS entry to return to the requesting application. *See* Aventail at 12; Nieh Decl. at ¶ 16. Aventail discloses that Aventail Connect then forwards the destination hostname to the extranet SOCK server over a SOCKS connection. *See* Aventail at 12; Nieh Decl. at ¶ 16. The SOCKS server performs the hostname resolution. Aventail at 12; Nieh Decl. at ¶ 17. Once the hostname is resolved, the user can transmit data over a SOCKS connection to the SOCKS server. Nieh Decl. at ¶ 17. The SOCKS server, then, separately relays that transmitted data to the target. Nieh Decl. at ¶ 17.

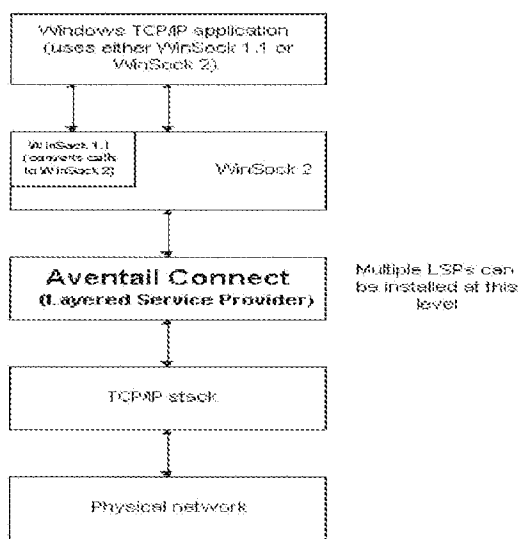
Aventail does not teach a VPN. In fact, the system disclosed in Aventail is incompatible with a VPN, and one skilled in the art would be unable to combine the two. These assertions are true for at least three reasons. First, Aventail has not been shown to demonstrate that computers connected via the Aventail system are able to communicate with each other as though they were

on the same network. *Id.* at ¶ 25. Aventail discloses establishing point-to-point SOCKS connections between a client computer and a SOCKS server. *Id.* The SOCKS server then relays data received to the intended target. *Id.* Aventail does not disclose a VPN, where data can be addressed to one or more different computers across the network, regardless of the location of the computer. *Id.*

For example, suppose two computers, A and B, reside on a public network. *Id.* at ¶ 26. Further, suppose two computers, X and Y, reside on a private network. *Id.* If A establishes a VPN connection with X and Y's network to address data to X, and B separately establishes a VPN connection with X and Y's network to address data to Y, then A would nevertheless be able to address data to B, X, and Y without additional set up. *Id.* This is true because A, B, X, and Y would all be a part of the same VPN. *Id.*

In contrast, suppose, according to Aventail, which only discloses communications at the socket layer, A establishes a SOCKS connection with a SOCKS server for relaying data to X, and B separately establishes a SOCKS connection with the SOCKS server for relaying data to Y. *Id.* at ¶ 27. In this situation, not only would A be unable to address data to Y without establishing a separate SOCKS connection (*i.e.* a VPN according to the Office Action), but A would be unable to address data to B over a secure connection. *Id.* This is one example of how the cited portions of Aventail fail to disclose a VPN. *Id.*

Second, according to Aventail, Aventail Connect's fundamental operation is incompatible with users transmitting data that are sensitive to network information. *Id.* at ¶ 28. As stated above, Aventail discloses that Aventail Connect operates between the WinSock and TCP/IP layers, as depicted on page 9:



Aventail at 9; *id.* Because Aventail discloses that Aventail Connect operates between these layers, it can intercept DNS requests. Nieh Dec. at ¶ 28. Aventail discloses that Aventail Connect intercepts certain DNS requests, and returns a false DNS response to the user if the requested hostname matches a hostname on a user-defined list. *Id.* Accordingly, Aventail discloses that the user will receive false network information from Aventail Connect for these hostnames. *Id.* If the client computer hopes to transfer to the target data that is sensitive to network information, Aventail Connect's falsification of the network information would prevent the correct transfer of data. *Id.* Aventail has not been shown to disclose a VPN.

Third, Aventail has not been shown to disclose a VPN because computers connected according to Aventail do not communicate directly with each other. *Id.* at ¶ 29. 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. *Id.* The SOCKS server then relays that data to a target computer on a private network on which the SOCKS server also resides. *Id.* All communications between the client and target stop and start

at the intermediate SOCKS server. *Id.* The client cannot open a connection with the target itself. Therefore, one skilled in the art would not have considered the client and target to be virtually on the same private network. *Id.* Instead, the client computer and target computer are deliberately separated by the intermediate SOCKS server. *Id.* For these reasons, Aventail not only fails to disclose a VPN, but it discloses a system that is inherently incompatible with a VPN.

Dr. Nieh also summarized VPN Overview in his declaration. VPN Overview provides an overview of VPNs, describing their basic requirements, and some of the key technologies that permit private networking over public networks. *See*, VPN Overview at Abstract; Nieh Dec. at ¶¶ 30. As described above, Aventail is inherently incompatible with a VPN. Thus, one skilled in the art would be unable to implement the system disclosed in VPN Overview on the system disclosed in Aventail. The two references cannot be combined in the manner suggested in the Office Action of June 9, 2010, even if the references were prior art to the present application. Accordingly, VPN Overview and Aventail, either alone or in combination, are not understood to disclose, teach, or suggest the features of independent claim 1.

Moreover, neither Aventail nor VPN Overview teach or disclose “a secure domain name service” and a “secure computer network address.” Both Aventail and VPN Overview disclose conventional domain name services and computer network addresses, but not “a secure domain name” or “a secure computer network address.” *See* Office Action at 3. Indeed, in reexamination of a patent to which the current application claims priority, the Patent Office found that neither Aventail nor VPN Overview teach or disclose “a secure domain name service.” Reexamination Control No. 95/001,270, Action Closing Prosecution, June 16, 2010, attached as Exhibit B, at ¶¶ 6-7 and 9-10. (“Aventail does not teach the claimed . . . secure domain name service . . . as being a part of a non-conventional domain name system;” “VPN

Overview [does not] teach the claimed . . . secure domain name service . . . as being a part of a non-conventional domain name system.” Paragraphs [0303] – [0306] of the application also support the distinction that “a secure domain name” and “a secure computer network address” are not conventional domain name services and computer network addresses. *See also* Nieh Dec. at ¶¶ 10-13.

For all these reasons, Applicant respectfully submits that neither Aventail nor VPN Overview teach or disclose the elements of independent claim 1. Applicant respectfully submits that claim 1 is in condition for allowance. Reconsideration and withdrawal of the rejection of independent claim 1 is respectfully requested.

The other claims currently under consideration in the application are dependent from their respective independent claims discussed above and therefore are believed to be allowable over the applied references for at least the reasons provided above for their respective independent claims. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested. Reconsideration and withdrawal of the rejections of the dependent claims are respectfully requested.

The absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be other reasons for patentability of any or all claims that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede, or an actual concession of, any issue with regard to any claim, or any cited art, except as specifically stated in this paper, and the amendment or cancellation of any

claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation.

Non-statutory Double Patenting Rejection

Examiner has rejected claims 1-18 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-23 of co-pending Application No. 11/679,416. Accordingly, Applicant submits herewith a terminal disclaimer. Applicant respectfully submits that this rejection has been overcome and requests withdrawal of this rejection.

CONCLUSION

In light of the Amendments and Remarks herein, the Applicant submits that the pending claims, claims 1-19, are in condition for allowance and respectfully requests a notice to this effect. Should the Examiner have any questions, please call the undersigned at the phone number listed below.

To the extent necessary, a petition for an extension of time (3 months) under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 501133 and please credit any excess fees to such deposit account.

Respectfully submitted,

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