UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Apple Inc.
Petitioner,

v.

VirnetX, Inc. and Science Application International Corporation,
Patent Owner

Patent No. 6,502,135
Issued: Dec. 31, 2002
Filed: Nov. 29, 1999
Inventors: Edmund C. Munger, *et al*
Title: Agile Network Protocol For Secure Communications With Assured System Availability

---

Inter Partes Review No. 2013-00348

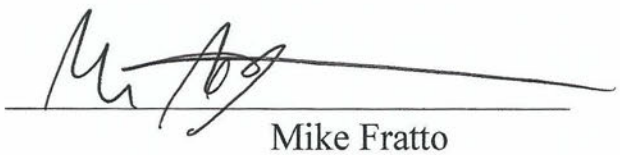
Declaration of Michael Fratto Regarding U.S. Patent No. 6,502,135

VIRNETX EXHIBIT 2017

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

I, Michael Fratto, do hereby declare and state, that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: June 12, 2013



Mike Fratto

DOCKET ALARM

Find authenticated court documents without watermarks at docketalarm.com.

TABLE OF CONTENTS

I. INTRODUCTION 1

A. Engagement 1

B. Background and Qualifications 1

C. Compensation and Prior Testimony 4

D. Information Considered 5

II. LEGAL STANDARDS FOR PATENTABILITY 5

A. Anticipation 7

B. Obviousness 8

III. THE '135 PATENT 14

A. Effective Filing Date of the '135 Patent 14

B. Prosecution History of The '135 Patent 17

C. The Person of Ordinary Skill in the Art 18

D. Overview of the Claims of the '135 Patent 19

E. Description of the Background Technology Relevant to the '135 Patent 19

1. The Open Internet 19

2. Domain Names and the Domain Name System (DNS) 21

a. The DNS System 22

b. Domain Names and URIs 24

c. Domain Name Resolution 26

3. Encryption, Tunnels, and Data Security 32

a. Encryption 33

b. Authentication 34

c. IPSec – RFC 2401 38

d. Tunneling 40

4. VPNs 43

IV. GENERAL ISSUES RELATED TO MY PATENTABILITY ANALYSIS 49

A. The Claims of the '135 Patent I Am Addressing in this Report 49

DOCKET ALARM

Find authenticated court documents without watermarks at docketalarm.com.

B. Interpretation of Certain Claim Terms 54
1. Virtual Private Network (VPN) 55
2. Virtual Private Link.....58
3. Domain Name 59
4. Domain Name Service 59
5. DNS Server 60
6. DNS Proxy Server.....63
7. Web Site 66
8. Secure Web Site / Secure Target Web Site.....66
9. Secure Web Computer 68
10. Target Computer 69
11. Between a Client Computer and [target computer/secure web computer] 70
C. Prior Art References 71
1. Exhibit 1007 – Aventail Connect v3.01/2.51 Administrator's Guide ("Aventail").....72
2. Exhibit 1008 - BinGO! User's Guide incorporating by reference BinGO! Extended Feature Reference (collectively, "BinGO"). ..73
3. Request for Comment (RFC) Publications 75
4. Exhibit 1014 – Reed et al., IEEE J. Sel. Areas Comm., 16(4): 482-494 (May 1998) ("Reed I").....77
5. Exhibit 1015 - Reed et al., "Proxies for Anonymous Routing," 12th Annual Computer Security Applications Conference, San Diego, CA (December 9-13, 1996) ("Reed II") 78
6. Exhibit 1022 – Aventail Connect v3.1/2.6 Administrator's Guide ("Aventail Connect v3.1") 80
7. Exhibit 1021 – Aventail AutoSOCKS v2.1 Administrator's Guide ("Aventail AutoSOCKS").....81
8. Exhibit 1024 – Ferguson, P. and Huston, G., "What Is a VPN", The Internet Protocol Journal, Vol 1., No. 2 (Sept. 1998) ("Ferguson") 81

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

V. PATENTABILITY ANALYSIS OF CLAIMS 1-10, 12-15 AND 18 OF THE '135 PATENT 82

A. Overview of Beser 82

B. Overview of RFC 2401 109

C. Overview of Hoke 123

D. Overview of Blum 130

E. Overview of Aventail 134

F. Beser Anticipates and/or Renders Obvious Claims 1-10, 12-15 and 18 of the '135 Patent 139

1. Claim 1 139
2. Claim 2 145
3. Claim 3 145
4. Claim 4 147
5. Claim 5 148
6. Claim 6 152
7. Claim 7 153
8. Claim 8 154
9. Claim 9 157
10. Claim 10 158
11. Claim 12 165
12. Claim 13 166
13. Claim 14 172
14. Claim 15 174
15. Claim 18 174

VI. CONCLUSION 184

VII. APPENDIX A 185

DOCKET ALARM

Find authenticated court documents without watermarks at docketalarm.com.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.