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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., and
BLACK SWAMP IP, LLC,
Petitioner

v.

VIRNETX INC.
Patent Owner

Case IPR2015-01047¹
Patent 7,490,151

Declaration of Fabian Monrose, Ph.D.

¹ Apple Inc. and Black Swamp IP, LLC, who filed petitions in IPR2016-00063 and IPR2016-00167, respectively, have been joined as a Petitioner in the instant proceeding.

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C. Claims 7 and 1329

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I, FABIAN MONROSE, declare as follows:

I. Introduction

1. I have been retained by VirnetX Inc. (“VirnetX”) for this *inter partes* review proceeding. I understand that this proceeding involves U.S. Patent No. 7,490,151 (“the ’151 patent”). I understand the ’151 patent is assigned to VirnetX and that it is part of a family of patents that stems from U.S. provisional application nos. 60/106,261 (“the ’261 application”), filed on October 30, 1998, and 60/137,704 (“the ’704 application”), filed on June 7, 1999. I understand that the ’151 patent is a division of U.S. application no. 09/504,783, filed February 15, 2000 (now U.S. Patent No. 6,502,135), which is a continuation-in-part of U.S. application no. 09/429,643 filed October 29, 1999 (now U.S. Patent No. 7,010,604), which claims priority to the ’261 and ’704 applications.

II. Resources Consulted

2. I have reviewed the ’151 patent, including claims 1-16. I have also reviewed the decisions to institute *inter partes* review (“IPR”) in IPR2015-01047 (Paper No. 11, the “Decision”), in IPR2016-00063 (Paper No. 29, the “00063 Decision”), and in IPR2016-00167 (Paper No. 12 in IPR2016-00167, the “00167 Decision”); and the petitions for IPR filed by The Mangrove Partners Master Fund, Ltd. in IPR2015-01047 (the “Petition”), by Apple Inc. in IPR2016-00063 (the

“Apple Petition”), and by Black Swamp IP, LLC in IPR2016-00167 (the “Black Swamp Petition”).

3. I understand that in this proceeding the Board instituted review of the '151 patent on four grounds: (1) anticipation of claims 1, 2, 6-8, and 12-14 over Kiuchi; (2) obviousness of claims 1, 2, 6-8, and 12-14 over Kiuchi and RFC 1034; (3) obviousness of claims 1, 2, 6-8, and 12-14 over Kiuchi and Rescorla; and (4) obviousness of claims 1, 2, 6-8, and 12-14 over Kiuchi, RFC 1034, and Rescorla. I have reviewed the exhibits and other documentation supporting the Petition that are relevant to the Decision and the instituted grounds, and any other material that I reference in this declaration.

III. Background and Qualifications

4. I have a great deal of experience and familiarity with computer and network security, and have been working in this field since 1993 when I entered the Ph.D. program at New York University.

5. I am currently a Professor of Computer Science at the University of North Carolina at Chapel Hill. I also hold an appointment as the Director of Computer and Information Security at the Renaissance Computing Institute (RENCI). RENCi develops and deploys advanced technologies to facilitate research discoveries and practical innovations. To that end, RENCi partners with researchers, policy makers, and technology leaders to solve the challenging

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