IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re *Inter Partes* Reexamination of U.S. Patent No. 7,921,211 Larson et al. Issued: April 5, 2011 For: AGILE NETWORK PROTOCOL FOR SECURE COMMUNICATIONS USING SECURE DOMAIN NAMES	Control No.: 95/001,789 Group Art Unit: 3992 Examiner: Roland Foster Confirmation No.: 6053

DECLARATION OF MICHAEL ALLYN FRATTO UNDER 37 C.F.R. § 1.132

I, MICHAEL ALLYN FRATTO, declare that the following statements are true to the best of my knowledge, information, and belief, formed after reasonable inquiry under the circumstances.

I. Background and Expertise

1. I have been retained by Apple Inc. ("Apple") to provide my opinions on topics raised in the above-referenced reexamination proceeding (the '789 reexamination). I am a citizen of the United States, and reside in Syracuse, New York. My c.v. is attached as Exhibit A. I am being compensated for my time at a rate of $250.00 per hour.

2. I am presently Editor of the Network Computing magazine and website. In that position, I review and evaluate networking products, including network security products, and report on industry developments in the field of networking and network security. I also write articles about network infrastructure, data center, and network access control items which are published on the Network Computing website. I also presently serve as an adjunct faculty member of School of Information Studies at Syracuse University.

3. I understand that the '789 reexamination involves U.S. Patent No. 7,921,211 (the "211 patent"), and that VirnetX Inc. owns the 211 patent ("Patent Owner"). I have reviewed the 211 patent as well as the materials listed in Exhibit B.

4. I understand that the Requestor explained that the earliest date that any of the claims of the 211 patent were entitled to benefit was February 15, 2000. I did not see any argument in the Response from the Patent Owner disputing this. Accordingly, I have used this date to make my assessments of what was known to a person of ordinary skill in the art.

5. I am personally familiar with what a person of ordinary skill in the art would have known in February of 2000 about the field of the 211 patent. I believe a person of ordinary skill in the art would have had a master's degree in computer science or computer engineering and approximately two years of experience in computer networking and computer network security.

6. Since before 1999, I have had an extensive background and experience in network security systems, software and related technologies. In my position on the staff of Network Computing, I conducted and wrote comparative product reviews of networking and security

products. I also interviewed IT administrators and executives about networking and security issues to understand their needs and the ability of products to address those needs.

7. By February of 2000, I had personally evaluated, tested and reviewed hundreds of products and technologies related to networking. During the course of a typical review, I would first define the set of problems the product was attempting to solve. This required me to understand the technologies and standards related to that problem set, and to create a set of comparative measures by which to assess the product, its performance and its functionality. When I performed a review, I would set up a test network with the product, verify its operation, conduct the tests, and ensure the results were accurate. During the period 1997 to 2000, my particular focus was on remote networking products including modems, ISDN, and virtual private networking products, development of secure and insecure networking standards, and network and host-based firewall products.

II. *Solana* and *Reed* Are Printed Publications That Were Available Well Before February of 2000

8. I understand that the Patent Owner is challenging that the *Solana* and *Reed* papers were publicly distributed. I have been told that in order to qualify as a printed publication within the meaning of §102, a reference "must have been sufficiently accessible to the public interested in the art" prior to the filing date of the patent.

9. From my personal experiences, I am aware that research topics developed by academic researchers are often presented at industry conferences. To present a topic at a conference, a researcher typically has to submit a written paper summarizing the topic and his or her research for review by the conference representatives, often well before the conference was held. The conference organizers select only some of these papers for presentation at the conference. The papers selected for presentation are usually distributed before, but no later than during the conference, which allows attendees to read them and discuss their findings with the presenting researcher. The presented papers are typically then published as a compendium, made available for sale, and distributed to research institutions, libraries, and on-line reference databases normally available to researchers. The works in these compendia can be found and retrieved via a variety of sources such as on-line indexes, library card catalogs, and via citations in other publications.

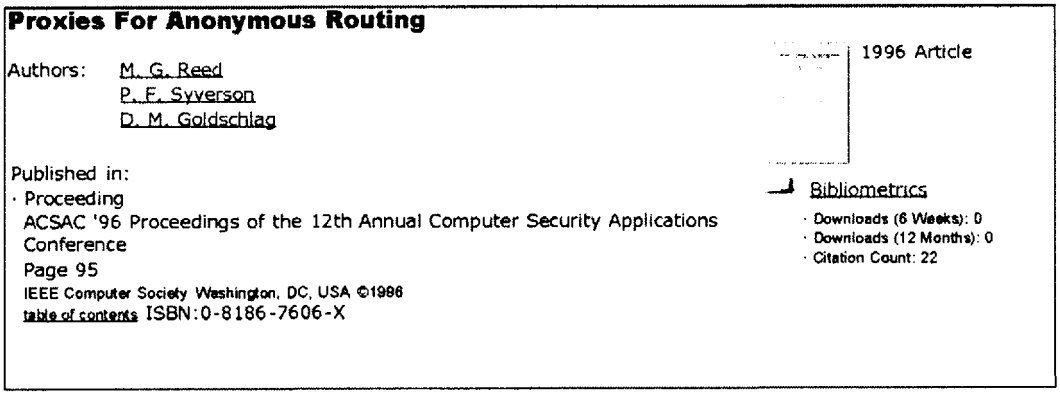
10. *Solana* is a printed publication that was publicly distributed and published via this conventional process. In particular, *Solana* was publicly distributed as part of a compendium published by Springer-Verlag in 1998 called "Lecture Notes in Computer Science" ("LNCS"), specifically at Volume 1361, pages 37-51. I am aware of publications on the Internet that identify the publication date of *Solana* as occurring in 1997. For example, a thesis by Mr. Solana entitled "Collaborative domain in internet environments" cites the *Solana* paper in its Bibliography as follows:

> [119] Solana, E. and Harms, J. *Flexible Internet Secure Transactions Based on Collaborative Domains*. Proceedings of the 5th Security Protocols International Workshop. Paris 7th - 9th April 1997. Springer-Verlag Lecture notes in computer science; Vol. 1361.

11. As the Springer-Verlag website (www.springer.com) explains, the LNCS series "has established itself as a medium for the publication of new developments in computer science and information technology research and teaching - quickly, informally, and at a high level." It

further explains that "LNCS has always enjoyed close cooperation with the computer science R&D community, with numerous renowned academics, and with prestigious institutes and learned societies. Our mission is to serve this community by providing a most valuable publication service." According to the publisher's website, the book in which *Solana* was published "constitutes the strictly refereed post-workshop proceedings of the 5th International Workshop on Security Protocols, held in Paris, France, in April 1997." Moreover, the publisher's website indicates that the papers in the compendium were presented at the workshop. In particular, it notes: "The 17 revised full papers presented address all current aspects of security protocols." Thus, as is customary, the papers of this compendium were distributed to the conference attendees and then collected, edited, and published. In short, *Solana* was formally published and publicly available as of the conference date in 1997, and no later than 1998 when Volume 1361 of Lecture Notes in Computer Science was formally published. Either way, the publication and public dissemination of *Solana* occurred well before the February 2000 date by which the 211 is to be evaluated. *See* Exhibit C.

12. *Reed* is a printed publication that was distributed as part of the published proceedings of the 12th Annual Computer Security Applications Conference that occurred in 1996. The Association of Computing Machinery (ACM) website lists the publication date of *Reed* as follows:



Proxies For Anonymous Routing

Authors: M. G. Reed
P. F. Syverson
D. M. Goldschlag

1996 Article

Published in:
· Proceeding
ACSAC '96 Proceedings of the 12th Annual Computer Security Applications Conference
Page 95
IEEE Computer Society Washington, DC, USA ©1996
table of contents ISBN:0-8186-7606-X

Bibliometrics
· Downloads (6 Weeks): 0
· Downloads (12 Months): 0
· Citation Count: 22

13. As its citation indicates, the *Reed* publication was publicly distributed during the 12th Annual Computer Security Applications Conference held in 1996, a fact that is noted on page 1 of the publication. The IEEE website confirms that the 12th Annual Computer Security Applications Conference was held between December 9-13, 1996. The ACSAC website also indicates in program materials for this Conference that Mr. Reed's paper was presented and made available to attendees in the session between 3:30 and 5:30 on Wednesday December 11, 1996 in the Track B session of the conference. http://www.acsac.org/pastconf/1996/wed.html. The program materials note that "Paper sessions include refereed papers that describe the latest in implementations and applications-oriented research." *See id.*

14. *Reed* also was distributed to the public in 1996 as part of a formally published treatise published by the IEEE Computer Society entitled "ACSAC '96 Proceedings of the 12th Annual Computer Security Applications Conference" (ISBN:0-8186-7606-X). The IEEE Computer Society is a well-known and highly regarded publisher of technical papers in the field of computers and computer networking. As the IEEE website explains, in the Computer Society subsection, it "has been providing conferences and workshops with professional publishing

services for over 35 years." *See*, http://www.ieee.org/publications_standards/publications/authors/conference_proceedings.html. The IEEE Computer Society's website also confirms that its post-conference treaties compiling papers presented at its conferences are made publicly available. *See Id.* at http://www.computer.org/portal/web/cscps/faq. The IEEE website also notes that "Proceedings published by CPS are submitted for professional indexing." *Id.* at http://www.computer.org/portal/web/cscps/faq.

15. Thus, the *Reed* printed publication was published and publically available as of the conference date and at least by December 31, 1996 when the ACSAC '96 Proceedings treaties was published. Either way, the *Reed* publication was publicly disseminated well before February 15, 2000.

III. The Request For Comments ("RFCs") Documents are Printed Publications

16. On pages 8-9, of the Response, the Patent Owner contends that there is no evidence that several of the RFC documents cited in the Request and the Office Action were published on the dates indicated on each of the RFC documents. I disagree.

17. The Internet Engineering Task Force (IETF) is responsible for the standardization process and governance of Internet protocols and processes. The IETF uses several types of documents to publish the work within the IETF and uses an established publication procedure. An RFC is a "Request for Comments" publication. The RFC series publication began in 1969. http://www.rfc-editor.org/RFCoverview.html. The RFC series is the publication vehicle for technical specifications as well as policy documents produced by the IETF, and also the IAB (Internet Architecture Board), and the IRTF (Internet Research Task Force). http://www.rfc-editor.org/RFCoverview.html. As the IETF website explains, the RFC series "[c]ontains technical and organizational documents about the Internet, including the technical specifications and policy documents produced by the Internet Engineering Task Force." http://www.rfc-editor.org/RFC Editor home page. The RFC editor publishes RFCs online. *Id.*

18. The specific process for publication of RFCs as of October 1996 was set forth in Best Current Practice 9 (BCP 9). That document explains that RFC's are "published through the RFC mechanism." BCP 9 at 7, available at http://tools.ietf.org/html/bcp9. According to that mechanism "Each distinct version of an Internet standards-related specification is published as part of the 'Request for Comments' (RFC) document series. This archival series is the official publication channel for Internet standards documents and other publications of the IESG, IAB, and Internet community." *Id.* at 5. As further explained, "RFCs can be obtained from a number of Internet hosts using anonymous FTP, gopher, World Wide Web, and other Internet document-retrieval systems." *Id.*

19. The IETF website also explains that "Historically, all RFCs were labeled Network Working Group. 'Network Working Group' refers to the original version of today's IETF when people from the original set of ARPANET sites and whomever else was interested -- the meetings were open -- got together to discuss, design, and document proposed protocols [RFC0003]." Section 3.1 of RFC 5741 at 3 available at (http://www.rfc-editor.org/rfc/rfc5741.txt).[1] As further

[1] The top most left line in each RFC identifies the working group within which the RFC was discussed, e.g., Internet Engineering Task Force (IETF), Internet Architecture Board (IAB), Internet Research Task Force (IRTF), and Independent Submission. *Id.* at 3-4.

explained, the right column of each RFC publication contains the name of the author and his or her affiliation, as well as month and year in which that the RFC was published and made publicly available. *Id.* at 3. The RFC number is the number "assigned by the RFC Editor upon publication of the document." *Id.* at 4.

20. As further explained by the IETF website "When an RFC is published, an announcement is sent to ietf-announce and rfc-dist mailing lists. The canonical URI is of the form: http://www.rfc-editor.org/rfc/rfcXXXX.txt." See http://www.rfc-editor.org/pubprocess.html.

21. The IETF maintains historical archives of all RFCs that have been published through its transparent procedures. The month and year of the announcement of each RFC corresponds to the publication date reported on each RFC. In my experience, announcements include a hyperlink to allow viewers of the announcement to jump directly to the RFC document.

22. As further noted on the IETF website "Published RFCs never change." http://www.ietf.org/rfc.html. "When an RFC is updated, it gets a new number." http://www.ietf.org/newcomers.html. Thus, if a topic addressed in an RFC results in a new version of that standard, protocol or topic, the new version will be published with a different RFC number and in a document reflecting the new date of distribution of that document.

23. The IETF's process is fully transparent and anyone can join and participate via email lists (where the bulk of the work is done) free of charge. Individuals working in the field of computer networking in February of 2000 would be very familiar with the RFC publication procedures administered by the IETF, and would know that RFCs are indexed, organized by subject matter, published in a regular and transparent manner, and distributed via numerous pathways. Indeed, an essential feature of the IETF process is that it is a public and wholly transparent process.

24. Thus, the RFC documents cited in the Request and in the Office action would each have been published during the month and year that is listed in the heading of the RFC in accordance with IETF BCP 9. Each of these RFCs also would have been publicly distributed by the IETF and announced via their mailing list during the month and year listed in the heading of the RFC, and thus would have been publicly available without restriction as of the date noted on the document.

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