

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.
Petitioner,

v.

UNIVERSAL SECURE REGISTRY LLC
Patent Owner

Case CBM-00024
U.S. Patent No. 8,577,813

PATENT OWNER'S EXHIBIT 2004
DECLARATION OF ALLAN M. SCHIFFMAN IN SUPPORT
OF PATENT OWNER'S PRELIMINARY RESPONSE

USR Exhibit 2004

1. I have been retained on behalf of Universal Secure Registry LLC (“Patent Owner”) in connection with the above-captioned covered business method review (CBM). I have been retained to provide my opinions in support of USR’s Preliminary Response. I am being compensated for my time at the rate of \$475 per hour. I have no interest in the outcome of this proceeding.

2. In preparing this declaration, I have reviewed the Petition for Covered Business Method Review, CBM2018-00024, U.S. Patent No. 8,577,813 and its file history, the declaration of Dr. Victor Shoup, and the materials cited herein.

3. The statements made herein are based on my own knowledge and opinion. This Declaration represents only the opinions I have formed to date. I may consider additional documents as they become available or other documents that are necessary to form my opinions. I reserve the right to revise, supplement, or amend my opinions based on new information and on my continuing analysis.

I. QUALIFICATIONS

4. My qualifications can be found in my Curriculum Vitae, which includes my detailed employment background, professional experience, and list of technical publications and patents. Ex. 2005.

5. I am a principal at CommerceNet, a non-profit organization with the mission of supporting innovation, standards-setting, and entrepreneurship in applying the Internet to public benefit. My current work primarily involves

advising new companies on product development. I am President of CommerceNet, and I have held that position since 2005.

6. I received a Master of Science degree in Computer Science from Stanford University in 1986.

7. In my early career (through 1991), I held a variety of hardware and software engineering positions, eventually leading to Vice-President of Technology at ParcPlace Systems, a company specializing in software development tools, which ultimately became a successful public company.

8. In early 1991, I co-founded Enterprise Integration Technologies (EIT) and served as Chief Technical Officer. I continued as CTO through mid-1995 when EIT was acquired by Verifone, then (and now) the global market leader in point-of-sales payment systems. At EIT I led projects in secure distributed network computer systems, focusing on the then-novel web. Many of those projects involved the design and development of new network security protocols as well as analysis and application of existing protocols. This work had a common theme of applying cryptography to the problems of identification, authentication, confidentiality, non-repudiability, and privacy in Internet electronic commerce.

9. In 1994, EIT chartered the non-profit organization CommerceNet to create Internet electronic commerce standards, receiving a Federal research award from the Technology Reinvestment Program; I served as Principal Investigator.

Our accomplishments included the first secure Internet credit-card transactions and use of XML-based messaging.

10. From 1993 through 1998, I was an active participant in multiple standards bodies beyond CommerceNet, including the World-Wide Web Consortium (W3C) and the Internet Engineering Task Force (IETF).

11. I was a member of the team that designed the *Secure Electronic Transactions* payment card protocol commissioned by MasterCard and Visa. This protocol included novelties such as dual signatures, use of OAEP, in-band certificate revocation and employment of ASN.1v3 certificate attributes.

12. In 1995, I founded Terisa Systems and served as CTO and acting CEO, with backing from Verifone, RSA Data Security, Netscape, IBM and AOL. Terisa's mission was to standardize Internet communications security protocols and provide implementations of these. Our products included officially-commissioned "reference" implementations of the SSL and SET protocols. Terisa was acquired by SpyruS, Inc. in 1997.

13. In 2007, I co-founded Usable Security Systems as CTO to provide "plug-in" multi-factor authentication system for the web. In the process of product development I investigated and experimented with the integration of hardware for user authentication (such as fingerprint readers) into our product. Usable was acquired by Webroot, Inc. in 2010.

14. In addition to the standardization activities already mentioned, I have served as a member on several security-oriented committees: the W3C Security Advisory Board, Netscape's Security Advisory Board, and the National Research Council Committee on Information Systems Trustworthiness.

15. I have authored six peer-reviewed papers, I am a named inventor on two US patents, and a co-author of two IETF RFCs.

16. I have over twenty-five years of research and development experience in the areas of secure distributed systems, secure network protocols, application of cryptography/encryption, authentication, electronic commerce transactions, and online payment systems.

II. LEGAL UNDERSTANDING

A. The Person of Ordinary Skill in the Art

17. I understand that a person of ordinary skill in the relevant art (also referred to herein as "POSITA") is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity—not an automaton.

18. I understand that it is Patent Owner's position that a person of ordinary skill in the art ("POSITA") relevant to the '813 patent at the time of the invention would have a Bachelor of Science degree in electrical engineering, computer science or computer engineering, and three years of work or research

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