

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EBAY INC., EXPEDIA, INC., HOMEAWAY.COM, INC., SQUARESPACE,
INC., WIX.COM, LTD., AND WIX.COM, INC.,
Petitioner

v.

EXPRESS MOBILE INC.,
Patent Owner

U.S. Patent No. 7,594,168 B2
Issue Date: September 22, 2009

Title: Browser Based Web Site Generation Tool and Run Time Engine

DECLARATION OF KEVIN JEFFAY, PH.D.

IPR Trial No. IPR2022-00572

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I, Kevin Jeffay, Ph.D., declare as follows:

I. INTRODUCTION

1. I have been retained by counsel for Petitioners eBay Inc., Expedia, Inc., Homeaway.com, Inc., Squarespace, Inc., Wix.com, Ltd., and Wix.com, Inc. (collectively “Petitioners”) to provide my opinion about the patentability of claims 1–4, and 6 of U.S. Patent No. 7,594,168 (the “Challenged Claims” of the “’168 patent,” EX1001), which I understand is assigned to Express Mobile, Inc. (“Patent Owner”). I further understand that Petitioners are seeking to join a prior proceeding brought by Facebook, Inc. (“Facebook”). I understand that Petitioners, like Facebook, are requesting that the United States Patent and Trademark Office cancel claims 1–4, and 6. I submit this declaration in support of Petitioners’ petition for *inter partes* review.

2. I am being compensated for my time at a rate of \$750 per hour, and understand that I will be reimbursed for any reasonable expenses I incur while performing this work. I have no financial or other personal interest in the ’168 patent, and my compensation is not contingent on the outcome of this matter or the specifics of my testimony.

II. QUALIFICATIONS

3. I am a tenured professor in the Department of Computer Science at the University of North Carolina at Chapel Hill (“UNC”) where I currently hold the

position of Gillian T. Cell Distinguished Professor of Computer Science. I also currently serve as the Chairman of the Department. I have been a faculty member at UNC since 1989.

4. I received a Ph.D. in computer science from the University of Washington in 1989. Before that, I received a M.Sc. degree in computer science from the University of Toronto in 1984, and a B.S. degree with Highest Distinction in mathematics from the University of Illinois at Urbana-Champaign in 1982.

5. I have been involved in the research and development of computing systems for nearly 40 years. I have been a faculty member at the University of North Carolina since 1989, where I perform research and teach in the areas of computer networks, distributed systems, real-time systems, operating systems, multimedia networking, network management, and performance evaluation, among others. A major theme of my research has been the development of technology to improve the performance of data transfers on the Internet. My research has examined problems ranging from network support for real-time multimedia applications such as audio and video streaming, voice-over-Internet protocol (“VoIP”) and Internet videoconferencing, the design of congestion control mechanisms in network routers, network security, and measurements and analysis of network traffic to passively assess, and improve the performance of servers on the Internet. In addition, I have also explored problems in the design and

implementation of operating systems and hypertext/hypermedia systems such as the web.

6. Much of my research has been performed jointly with industry. For example, starting in 1991, in collaboration with IBM and Intel, my research group constructed and operated one of the first Internet videoconferencing systems. We also developed a data conferencing “shared window system” that was functionally and visually equivalent to today’s Cisco’s WebEx and Zoom’s videoconferencing and screen sharing products and services. One system that we built, called “XTV,” was based on the X Window System and was operational by 1991. The source code for XTV was made freely available and by 1993 had been downloaded by over 600 users and institutions. This system supported a client/server model of application execution and allowed users to disconnect from an application session running on a server and rejoin the session at a later time, as well as rejoin from a different client device. Clients and servers could exist on any computer on the network and a directory listed application sessions that were available on the network for users to join.

7. Beyond IBM and Intel, I have also had collaborations with Digital Equipment Corporation, Hewlett Packard, Sun Microsystems, Lucent Bell Laboratories, Cisco, Cabletron/Aprisma, and CloudShield, among others.

8. In much of my research, I regularly build and use clusters of computers interconnected by network switches, bridges, and routers to form and evaluate experimental and production networks. For example, in the late 1990s and early 2000s, my research evolved to consider router-based mechanisms for controlling the performance of network traffic. In much of this research, my students and I built and instrumented network routers and performed large scale experiments with this equipment. Based on these experiments, in 2003, my group at UNC won the most prestigious research award for original research in computer networking.

9. This project, and others, took place in a networking lab my students and I constructed at UNC over a number of years. The lab consists of several hundred computers and networking devices. Managing this lab required establishing and configuring firewalls and other security appliances to isolate the lab from the campus network (and vice versa).

10. I have authored or co-authored over 100 articles in peer-reviewed journals, conference proceedings, texts, and monographs in the aforementioned areas of computer science and others. I have previously served as Editor-in-Chief for the journal Multimedia Systems and Associate Editor for the journal Real-Time Systems. In addition, I have edited and co-edited numerous published proceedings of technical conferences and have edited a book of readings in multimedia

computing and networking (with Hong-Jiang Zhang) published by Morgan Kaufman. I am a co-author (with Long Le and F. Donelson Smith) of a monograph related to computer network protocols, and a co-author (with Jay Aikat and F. Donelson Smith) of a second monograph related to experimental computer networking.

11. I have served on numerous research proposal review panels for the National Science Foundation and other international funding agencies in the aforementioned areas of computer science. I have served as a program chair or member of the technical program committee for over 100 professional, international, and technical conferences, workshops, and symposia.

12. I am a named inventor on four U.S. Patents. These patents are generally related to computer networking and the delivery of services over networks.

13. I have developed and taught a wide variety of courses related to distributed systems, computer networking, the world-wide web, multimedia networking, operating systems and file systems, and computer security.

14. I have served as an expert witness and technical consultant in litigation and *inter partes* review matters concerning computer networks, multimedia networking, cellular and wireline telephony, VoIP telephony, the world-wide web and web services, content distribution networks, datacenter networking,

distributed systems, operating systems, embedded systems and embedded software, and real-time systems, among others. I have testified in several trials, arbitrations, and claim construction hearings as an expert witness.

15. I understand my curriculum vitae (“CV”) is being submitted as EX1029. My CV includes a more detailed list of my qualifications. My CV also contains a list of all other cases in which, during the previous four years, I testified as an expert at trial or by deposition.

III. RELEVANT LEGAL PRINCIPLES

16. I am not an attorney, but counsel has explained to me the following legal principles, which I applied in conducting the analyses expressed in this declaration.

17. I understand that patent claims may be invalid as “anticipated” in view of a single prior art reference, or “obvious” in view of one or more prior art references. Counsel has informed me that a patent claim is “anticipated” by the prior art if each and every element of the claim is express or inherently disclosed in a single prior art reference.

18. I understand that a patent claim may be invalid for obviousness, even though each and every element of the claim is not disclosed in a single prior art reference. It has been explained to me that an invention may be obvious if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art (a “POSA”) to which the subject matter pertains.

19. It is my understanding that obviousness may be shown by one or more items of prior art including combinations of prior art references. It is also my understanding that the relevant inquiry into obviousness requires consideration of four factors: (a) the scope and content of the prior art; (b) the differences between the prior art and the claims at issue; (c) the knowledge of one of ordinary skill in the pertinent art; and (d) objective factors relating to obviousness, which are also referred to as secondary considerations.

20. It is my understanding that these objective factors relating to obviousness may include: (a) commercial success of products covered by the patent claims; (b) the taking of licenses under the patent by others; (c) a long-felt but unmet need for the invention; (d) failed attempts by others to make the invention; (e) praise by others (particularly following initial skepticism); (f) copying of the invention by others in the field; (g) unexpected results achieved by the claimed invention; and (h) the patentee’s approach being contrary to the accepted wisdom of the prior art. I also have been informed by counsel that there must be a nexus between any such alleged objective factor and the claimed invention; if an objective factor actually results from something other than what is

claimed and novel in the claim, there is no nexus between the objective factor and the claimed invention.

21. It has been explained to me that obviousness can be established by a single prior art reference, if it would have been obvious to a POSA to modify the disclosures in that reference to arrive at the claimed invention.

22. It has also been explained to me that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. I understand that when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of that work, either in the same field or a different one. If a POSA can implement a predictable variation, that change would have been considered obvious. For example, a predictable variation of prior art would be obvious if the claimed structure in a patent only substitutes one element for another element that is known in the field, unless the result is unexpected.

23. Counsel has also explained to me that if a technique has been used to improve one device or method, and a POSA would have recognized that it would improve similar devices or methods in the same way, using that technique to improve the other device or method would have been obvious, unless its actual application yields unexpected results or challenges in implementation.

24. I understand that the obviousness analysis does not require precise teachings directed to the specific subject matter of the claim or claims at issue, but also can take account of ordinary development, that does no more than yield predictable results, and is based on inferences and creative steps that a POSA would normally employ.

25. It is my understanding that one can consider factors such as interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a POSA to determine whether there was an apparent reason to have combined the known elements in the fashion claimed by the patent at issue. It is my understanding that a reason that would have been known to a POSA, including common sense, or derived from the nature of the problem to be solved, is sufficient to explain why prior art references would have been combined.

26. Furthermore, it has been explained to me that common sense may be relied upon to teach that familiar items may have obvious uses beyond the particular application being described in a reference. The prior art considered can be directed to any need or problem known in the field of endeavor at the time of the invention, and can provide a reason for combining the elements of the prior art in the manner claimed in the patent.

27. Additionally, when there is a design need or market pressure to solve a problem, and there are a finite number of identified, predictable solutions, a POSA would have had good reason to pursue the known options within their technical grasp. If this leads to the anticipated success, it is likely the product of ordinary skill and common sense. I understand that the fact that a particular combination of prior art elements was obvious to try may indicate that the combination was obvious even if no one attempted the combination.

IV. MATERIALS CONSIDERED

28. In forming my opinions, I relied on my experience, education, and training, as well as my detailed review of the Declaration of Vijay K. Madiseti, in Support of Facebook's Petition for *Inter Partes* Review of U.S. Patent No. 7,594,168 (the "Madiseti Declaration," EX1002), including all materials referenced therein.

V. OPINIONS REGARDING THE '168 PATENT

29. I have reviewed the Madiseti Declaration, submitted in connection with Facebook's petition for *inter partes* review of the '168 patent (IPR2021-01226), including materials and exhibits cited therein. I fully agree with, and hereby adopt, the opinions set forth in the Madiseti Declaration.

VI. CONCLUSION

30. I hereby declare 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 18 U.S.C. § 1001.

Dated: February 9, 2022



Kevin Jeffay, Ph.D.