

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SANDVINE CORPORATION AND SANDVINE INCORPORATED ULC,
Petitioners,

v.

PACKET INTELLIGENCE, LLC,
Patent Owner.

Case No. IPR2017-00450
U.S. Patent No. 6,771,646

DECLARATION OF BILL LIN, PH.D.

I, Bill Lin, hereby declare the following:

I. BACKGROUND AND EDUCATION

1. My name is Bill Lin, and I am a Professor of Electrical and Computer Engineering and an Adjunct Professor of Computer Science and Engineering at the University of California, San Diego.

2. I received a Bachelor of Science in Electrical Engineering and Computer Sciences from University of California, Berkeley in May 1985; a Masters of Science in Electrical Engineering and Computer Sciences from the University of California, Berkeley in May 1988; and a Ph.D. in Electrical Engineering and Computer Sciences from the University of California, Berkeley in May 1991. Although I discuss my expert qualifications in more detail below, I also attach as **Appendix A** a recent and complete curriculum vitae, which details my educational and professional background and includes a selected listing of my relevant publications.

3. I have been involved in research and technology in all aspects of computer networking and computer design problems, including the design of data networks, high-performance switches and routers, high-performance packet monitoring and measurements, many-core processors, and systems-on-chip designs.

4. I am a named inventor on five patents in the field of computer engineering, including several patents in the field of computer networking, and I have published over 170 journal articles and conference papers in top-tier venues and publications.

5. I have also served or am currently serving as Associate Editor or Guest Editor for 3 ACM or IEEE journals, as General Chair on 4 ACM or IEEE conferences, on the Organizing or Steering Committees for 6 ACM or IEEE conferences, and on the Technical Program Committees of over 44 ACM or IEEE conferences.

6. In summary, I have over 25 years of experience in research and development in the areas of computer networking and computer design.

7. I have been retained by Erise IP, PA on behalf of Sandvine Corporation and Sandvine Incorporated ULC and am submitting this declaration to offer my independent expert opinion concerning certain issues raised in the Petition for *inter partes* Review (“Petition”). My compensation is not based on the substance of the opinions rendered here. As part of my work in connection with this matter, I have studied U.S. Patent No. 6,771,646 (“the ‘646 patent”), including the respective written descriptions, figures, claims, in addition to the original file history. Moreover, I have reviewed the Petition for *Inter Partes* Review of the

'646 patent and I have also carefully considered the following references discussed in the Petition, in addition to all of the materials cited herein:

- U.S. Patent No. 6,115,393 to Engel et al. (“Engel”), entitled “Network Monitoring,” filed July 21, 1995 and issued September 5, 2000 [EX1007], including Engel’s Appendix VI (cited in Engel at 1:10-15, 6:1-3, 43:25-56) [EX1009]
- U.S. Patent No. 6,182,146 to Graham-Cumming, Jr. (“Graham-Cumming”), entitled “Automatic Identification of Application Protocols through Dynamic Mapping of Application-Port Associations,” filed June 27, 1997 and issued January 30, 2001 [EX1010]
- U.S. Patent No. 5,530,834 to Colloff et al. (“Colloff”), entitled “Set-Associative Cache Memory Having an Enhanced LRU Replacement Strategy,” filed March 3, 1994 and issued June 25, 1996 [EX1011]
- U.S. Patent No. 5,793,954 to Baker et al. (“Baker”), entitled “System and Method for General Purpose Network Analysis,” filed December 20, 1995 and issued August 11, 1998 [EX1012]

II. LEGAL FRAMEWORK

8. I have been informed by counsel and understand that the first step in an unpatentability analysis involves construing the claims, as necessary, to determine their scope. And, second, the construed claim language is then compared to the disclosure of the prior art. In proceedings before the United States Patent and Trademark Office, I have been informed that the claims of an unexpired patent are to be given their broadest reasonable interpretation in light of the specification from the perspective of a person of ordinary skill in the art at the time of the invention. I have been informed that the '646 Patent is unexpired.

9. In comparing the claims of the '646 Patent to the prior art, I have carefully considered the '646 Patent and its prosecution history based upon my experience and knowledge in the relevant field. In my opinion, the broadest reasonable interpretation of the claim terms of the '646 Patent is generally consistent with the ordinary and customary meaning of those terms, as one skilled in the relevant field would understand them at the time of the invention. For purposes of this proceeding, I have applied the claim constructions set forth in the claim construction section of the IPR Petition that this declaration accompanies when analyzing the prior art and the claims. For those terms that have not expressly been construed, I have applied the meaning of the claim terms of the '646 Patent that is generally consistent with the terms' ordinary and customary meaning, as a person of ordinary skill in the art would have understood them at the time of the invention.

10. I have been informed by counsel that there are two ways in which a prior art patent or printed publication can be used to invalidate a patent. First, the prior art can be shown to "anticipate" the claim. Second, the prior art can be shown to "render obvious" the claim. My understanding of the two legal standards is set forth below.

11. I have been informed by counsel that, in general, for a patent claim to be invalid as "anticipated" by the prior art, each and every feature of the claim

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