UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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CAVIUM, INC.
Petitioner

v.

ALACRITECH INC.,
Patent Owner

_____

Case IPR2017-01707
Patent No. 7,673,072

_____

PATENT OWNER'S EXHIBIT 2001

DECLARATION OF PAUL PRUCNAL, PH.D.

1.   I have been retained on behalf of Alacritech, Inc. ("Alacritech" or

"Patent Owner") for the above-captioned *inter partes* review (IPR) proceeding. I

understand that this proceeding was filed by Cavium, Inc. ("Cavium") and involves

U.S. Patent No. 7,673,072 ("the '072 Patent"), titled "Fast-path apparatus for

transmitting data corresponding to a TCP connection." The '072 Patent is

currently assigned to Alacritech. I have been retained to provide my opinions in

support of Alacritech's Preliminary Response Pursuant to 35 U.S.C. § 313 and 37

C.F.R. § 42.107 pursuant to the legal standards set forth below. I am being

compensated for my time at the rate of $650 per hour. I have no interest in the

outcome of this proceeding.

2.   In preparing this declaration, I have reviewed and am familiar with the

following prior art references:

> ***Erickson*** (Ex. 1005) is U.S. Patent No. 5,768,618, which
> issued on June 16, 1998 and is assigned to NCR
> Corporation.

> ***Tanenbaum*** (Ex. 1006) is the 3rd edition of a textbook
> entitled *Computer Networks* by Andrew S. Tanenbaum.

3.   I have also considered all other materials cited and discussed herein,

including all other materials cited and discussed in Cavium's Petition for *Inter*

Partes Review of U.S. Patent No. 7,673,072 (Case IPR2017-01707).

4.   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.

II.   QUALIFICATIONS

5.   My qualifications can be found in my Curriculum Vitae, which includes a complete list of my publications. (Ex. 2010).

6.   I am a professor of Electrical Engineering at Princeton University, in Princeton, NJ. I received my undergraduate education at Bowdoin College, where I graduated *summa cum laude* in 1974 with an A.B. in Mathematics and Physics. I then graduated from Columbia University in 1976 with a M.S. in Electrical Engineering, and went on to receive an M.Phil. from Columbia University in 1978 in Electrical Engineering and a Ph.D. from Columbia University in 1979 in Electrical Engineering.

7.   Upon graduation from Columbia in 1979, I joined Columbia University as an Assistant Professor of Electrical Engineering, and in 1984 I was promoted to Associate Professor. In 1988, I joined the faculty of Princeton University as an Associate Professor of Electrical Engineering. My responsibilities included teaching and research. At that time, I also was the Founding Director of

the New Jersey Advanced Technology Center for Photonics and Optoelectronic

Materials. My responsibilities included leading a $10 million research center

involving approximately thirty faculty members.

8.   In 1990, I was promoted to the position of full Professor of Electrical

Engineering at Princeton University. My teaching responsibilities have included

courses in electronic circuits, signal processing, communications and fiber-optic

networks. My broad research interests have included communications networks

and switching, computer interconnects, and network security. I also head the

Lightwave Communications Research Laboratory and the Center for Network

Security and Access at Princeton University, through which much of my present

research is conducted.

9.   While at Princeton University, I received several awards and

recognitions, including: (a) becoming a Fellow of the Institute for Electrical and

Electronics Engineers (IEEE) where my fellow citation is, "For contributions to

photonic switching and fiber-optic networks;" (b) becoming a Fellow of the

Optical Society of America (OSA); (c) receiving the Rudolf Kingslake Medal and

Prize from the Society of Photo-Optical Instrumentation Engineers (SPIE) for the

most noteworthy original paper in Optical Engineering, titled, "Self-routing

photonic switching with optically processed control;" (d) receiving the

international Gold Medal Award from the Faculty of Mathematics, Physics, and

Informatics from Comenius University; (e) receiving the Princeton University Graduate Mentoring Award; (f) receiving the Lifetime Achievement Award for Excellence in Teaching from the Engineering Council at Princeton; (g) receiving the Walter Curtis Johnson Prize for Excellence in Teaching; (h) receiving the Princeton School of Engineering and Applied Science Distinguished Teacher Award; (i) receiving the President's Award for Distinguished Teaching at Princeton.

10.   I am the author of the books, "Optical Code Division Multiple Access: Fundamentals and Applications" (2005) and "Neuromorphic Photonics (2017), both of which relate to networking. I am a co-author or contributor to approximately thirty additional book chapters, as well as over 300 peer-reviewed publications in peer-reviewed journals and conference proceedings including papers in the area of communications networks and packet switching.

11.   In addition to the activities, education, and professional experience listed above, I have been involved in numerous research projects that contribute to my expertise relating to this report. My work in these projects have included, among other things, multiple access techniques for high-speed communication networks and fast packet switching techniques. More information on several of these research projects is provided below.

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