

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of: Baek et al.	§	Petition for <i>Inter Partes</i> Review
U.S. Patent No. 6,978,346	§	Attorney Docket No.: 50907.2
Issued: December 20, 2005	§	Customer No.: 112792
APPARATUS FOR	§	Real Parties in Interest:
REDUNDANT INTER-	§	Dell Inc., Hewlett-Packard Co., and
CONNECTION BETWEEN	§	NetApp, Inc.
MULTIPLE HOSTS AND RAID	§	
	§	
	§	
	§	

Declaration of Dr. M. Ray Mercer

Under 37 C.F.R. § 1.68

I, Dr. M. Ray Mercer, do hereby declare:

1. I am making this declaration at the request of Dell Inc., Hewlett-Packard Co., and NetApp, Inc. in the matter of the *Inter Partes* Review of U.S. Patent No 6,978,346 (“the ‘346 Patent”) to Baek et al.
2. I am being compensated for my work in this matter. My

compensation in no way depends upon the outcome of this proceeding.

3. In the preparation of this declaration, I have studied:

- (1) The '346 patent, DHPN-1001;
- (2) The prosecution history of the '346 patent, DHPN-1002;
- (3) TruCluster Server Hardware Configuration, April 2000 ("TruCluster"), DHPN-1003;
- (4) Sicola et al., U.S. Pat. No. 6,601,187 ("the '187 patent"), DHPN-1004; and
- (5) Guidelines for OpenVMS Cluster Configurations, January 1999 ("OpenVMS"), DHPN-1005.

4. In forming the opinions expressed below, I have considered:

- (1) The documents listed above,
- (2) The relevant legal standards, including the standard for obviousness provided in *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) and any additional authoritative documents as cited in the body of this declaration, and
- (3) My knowledge and experience based upon my work in this area as described below.

I. Qualifications and Professional Experience

5. My qualifications are set forth in my curriculum vitae, a copy of which is attached as Appendix 1. As set forth in my curriculum vitae, I have over 45 years of dual industrial and academic experience in Electrical Engineering and

Computer Engineering.

6. I received a B.S. in Electrical Engineering from Texas Tech University in 1968. From 1968 to 1973, I was a Research/Development Engineer at General Telephone and Electronics Sylvania in Mountain View, California, and I received an M.S. in Electrical Engineering from Stanford University in 1971. From 1973 to 1977, I was a Member of Technical Staff at Hewlett-Packard's Santa Clara Division and subsequently at Hewlett-Packard Laboratories in Palo Alto, California. From 1977 to 1980, I was a Lecturer in the Division of Mathematics, Statistics, and Computer Science at the University of Texas at San Antonio, and I received a Ph.D. in Electrical Engineering from the University of Texas at Austin in 1980. From 1980 to 1983, I was a Member of Technical Staff at Bell Laboratories in Murray Hill, New Jersey.

7. In 1983, I was appointed Assistant Professor of Electrical and Computer Engineering at the University of Texas at Austin. In 1987, I was promoted to Associate Professor and in 1991, Professor. In 1995, I was appointed Professor of Electrical and Computer Engineering, Leader of the Computer Engineering Group and Holder of the Computer Engineering Chair at Texas A&M University in College Station, Texas. My teaching, my research, my technical publications, and my supervision of graduate students during this period included the areas of computer clusters, redundant connections, and networking – key issues

in this proceeding.

8. In September 2005, I retired, and the Regents of the Texas A&M University System appointed me as Professor Emeritus of Electrical and Computer Engineering at Texas A&M University.

9. Since 1984, I have been an independent consultant and provided private consultation and advice in Electrical and Computer Engineering to numerous entities including IBM, Inc., Rockwell International, Motorola Semiconductor, AT&T, Inc. and SigmaTel. I also have been hired by numerous law firms to provide them and their clients with expert consultation and expert testimony – often in the areas of patent infringement litigation related to Electrical and Computer Engineering.

10. I was actively involved in numerous professional organizations including the Institute of Electrical and Electronics Engineers (“IEEE”), and I was recognized as an IEEE Fellow in 1994. I was the Program Chairman for the 1989 International Test Conference, which is an IEEE-sponsored annual conference with (at that time) more than one thousand attendees and over one hundred presented papers. I won the Best Paper Award at the 1982 International Test Conference. I also won a Best Paper Award at the 1991 Design Automation Conference, an annual conference with (at that time) more than ten thousand attendees and five hundred submitted papers, many of which related to the design of integrated circuit

based systems. The subject of this paper involved trade-offs between power consumption and processing speed in integrated circuits. I also won a Best Paper Award at the 1999 VLSI Test Symposium. I am the inventor on United States patents that relate to the design of integrated circuits. I was selected as a National Science Foundation Presidential Young Investigator in 1986.

11. I am familiar with the knowledge and capabilities one of ordinary skill in the networking and computing cluster arts in the period around 2000.

Specifically, my work with students, undergraduates as well as masters and Ph.D. candidates, with colleagues in academia, and with engineers practicing in industry allowed me to become personally familiar with the level of skill of individuals and the general state of the art. Unless otherwise stated, my testimony below refers to the knowledge of one of ordinary skill in the networking and computing cluster arts in the period around 2000 – the period that includes the filing date of the ‘346 patent.

II. Relevant Legal Standards

12. I have been asked to provide my opinions regarding whether the claims of the ‘346 patent would have been obvious to a person having ordinary skill in the art at the time of the alleged invention, in light of the prior art. It is my understanding that a claimed invention is unpatentable under 35 U.S.C. § 103 if the differences between the invention and the prior art are such that the subject matter

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