IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:	James J. Fallon, et al.	
U.S. Patent No.:	8,880,862	Attorney Docket No.: 39521-0025IP2
Issue Date:	November 4, 2014	
Appl. Serial No.:	13/118,122	
Filing Date:	May 27, 2011	
Title:	SYSTEMS AND METHODS FOR ACCELERATED LOADING OF OPERATING SYSTEMS AND APPLICATION PROGRAMS	

DECLARATION OF DR. CHARLES J. NEUHAUSER

I. Introduction

1. My name is Dr. Charles J. Neuhauser. I understand that I am submitting a declaration in connection with an *Inter Partes* review ("IPR") proceeding before the United States Patent and Trademark Office for U.S. Patent No. 8,880,862 ("the '862 Patent").

2. I have been retained on behalf of Apple Inc. to offer technical opinions with respect to the '862 Patent and the prior art references cited in this IPR. My compensation is not based on the outcome of this matter.

3. I am not a lawyer. However, counsel has advised me of legal concepts that are relevant to IPR proceedings and to the opinions that I offer in this declaration. I understand that, during IPR, claims of the subject patent are given a broadest reasonable interpretation. Counsel has advised me that the broadest reasonable

interpretation must be consistent with the specification, and that claim language should be read in light of the specification and teachings in the underlying patent.

4. I have reviewed the '862 Patent, including the claims of the patent in view of the specification, and I have reviewed the '862 Patent's prosecution history. In addition, I have reviewed the following documents: U.S. Patent No. 6,374,353 ("Settsu"), U.S. Patent No. 6,145,069 ("Dye"), U.S. Patent No. 7,190,284 ("Dye '284"), Burrows et al., "On-line Data Compression in a Log-structured File System" (1992) ("Burrows"), U.S. Patent No. 6,317,818 ("Zwiegincew"), Jeff Prosise, DOS 6 – The Ultimate Software Bundle?, PC Magazine, Apr. 13, 1993 ("Prosise"), Decoder, File, Program File, Direct Memory Access, RAM, and RAM Cache, Microsoft Press Computer Dictionary (3d ed. 1997)("MSFT Dictionary"), Jacob Ziv & Abraham Lempel, A Universal Algorithm for Sequential Data Compression, IT-23 No. 3 IEEE Transactions on Information Theory 337 (1977)("Ziv"), James A. Storer & Thomas G. Szymanski, Data Compression via Textual Substitution, 19 No. 4 Journal of the Association for Computing Machinery (1982)("Storer"), Kyle Loudon, Mastering Algorithms with C (1999) ("Loudon"), Michael Barr, Programming Embedded Systems in C and C++ (1999)("Barr"), Eric Pearce, Windows NT in a Nutshell

(1999)("Pearce"), and Tim O'Reilly, Troy Mott, and Walter Glenn, Windows 98 in a Nutshell (1999)("O'Reilly").

5. I am an electrical engineer by training and profession with a specialization in the area of computer based systems. My educational and practical background also includes extensive experience in the field of computer science and engineering. I have been a practicing electrical engineer since 1968. In formulating my opinions, I have relied upon my training, knowledge, and experience in the relevant art. A copy of my curriculum vitae was provided as Appendix A to my previous Declaration, and it provides a description of my professional experience, including my academic and employment history, publications, conference participation, and more.

6. I have extensive educational and professional engineering experience. I was awarded a BSEE degree from the University of Notre Dame in 1968. Immediately after graduating from the University of Notre Dame, I was employed as a Technical Staff Member by Bell Telephone Laboratories (which has subsequently become Alcatel-Lucent).

7. During my time at Bell Telephone Laboratories, I worked on the specification, testing, and development of computer controlled data and telephone switching systems. During that time, I also received my MSEE from Northwestern University (1971) under a company sponsored program.

8. I left Bell Telephone Laboratories in 1971 to pursue a Ph.D. in a joint CS/EE program at Johns Hopkins University. In 1980, I was awarded a doctorate based on my research in evaluating computer architectures using emulation techniques.

9. While working on my Ph.D. research, I joined the Digital Systems Laboratory at Stanford University as a research associate in 1974. There, I worked on the development of emulation systems for architectural research. In 1974, I also began working on a part-time basis at Palyn Associates, Inc. to develop a range of commercial products based on this research.

10. In 1980, I joined Palyn as a full-time member of the Technical Staff. I later became Director of Engineering at Palyn and, by 1985, I was the Vice President of Engineering. At Palyn, I was responsible for directing product development on behalf of our clients, which consisted of a range of international entities

involved in computer technology. I also directly consulted with clients regarding processor and peripheral design.

11. In my consulting role at Palyn, I was responsible for the specification, design, testing, and debugging of a wide range of computer devices, including mini-computers, microprocessors, printers, and communication interfaces. This involved both hardware and software development.

12. Since 1994, I have been an independent consultant focusing on technical analysis primarily in support of litigation or potential litigation. In this role I have analyzed many different types of computer based systems, including robotic manufacturing systems, television transmission and reception systems, microprocessors, main-frame systems, peripheral systems and networked systems. I also have led teams of engineers in the functional analysis of various types of systems, including robotic systems, networked processors, processor operation, and video production equipment.

13. Other details concerning my background, including a list of my publications, professional service, and more, are set forth in my curriculum vitae. In forming the opinions expressed in this report, I have relied upon my education and my

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