Paper
UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
APPLE INC., MOTOROLA MOBILITY, LLC, AND TOSHIBA AMERICA INFORMATION SYSTEMS, INC., Petitioners
v.
GLOBAL TOUCH SOLUTIONS, LLC Patent Owner
G IDD2015 01172
Case IPR2015-01172 Patent No. 7,498,749 B2

DECLARATION OF ROBERT E. MORLEY, JR.



I, Robert E. Morley, Jr. do hereby declare and state that:

I. INTRODUCTION

- 1. My name is Robert Morley. I am a Professor in the Electrical and Systems Engineering Department at the Washington University in St. Louis, Missouri. I hold the degrees of BS, MS, and D.Sc. all conferred on me by Washington University in St. Louis in 1973, 1975, and 1977, respectively. Prior to joining the faculty of Washington University in St. Louis I worked in the industry addressing electronics and micro-electronics. I have remained active in industry during my appointment to the faculty of Washington University in St. Louis.
- 2. I have been retained as an expert witness by counsel on behalf of Global Touch Solutions ("GTS") in connection with a series of *Inter Partes* Reviews ("IPR") of a number of patents held by GTS. These patents include, in no particular order, U.S. Patent Nos. 7,265,494; 7,994,726; 7772781; 7,798,749; 7,329,970; 7,781,980; 8,035,623; and 8,288,952. I understand that this proceeding involves U.S. Patent No. 7,329,970 ("the '970 Patent"). It is my understanding that the other patents are the subject of related IPRs and that the subject matter specific to each is considered in each separate Declaration.



- As an example of the interrelationship of the various 3. proceedings, it is my understanding that the current case involves the allegation that Claims 21 and 23 of the '749 Patent (sometimes referred to herein as the "challenged claims") are unpatentable as obvious over U.S. Patent 5,898,290 to Beard, taken in view of U.S. Patent 5,955,869 to Rathmann. At the same time I understand that in a distinct but related proceeding, IPR2015-01148, claims of the '749 Patent are challenged as obvious over two different references, U.S. Patent 6,125,286 to Jahagirdar and U.S. Patent 4,053,789 to Schultz. Further, the same references are alleged to be the foundation of arguments that claims of another related patent, U.S. Patent 7,329,970 are obvious. While I have prepared a separate and distinct Declaration for that proceeding and the other related proceedings as well, it is easy to see that there is a substantial amount of technical overlap in the subject matter of these proceedings, and consequently, I have considered this family of patents together.
- 4. I have reviewed and am familiar with the '749 Patent as well as its prosecution history. I also have reviewed and am familiar with the Petition filed and the Beard and Rathmann patents. I also have reviewed and am familiar with the Declaration of Paul Beard, provided to me as Ex. 1003. I have also reviewed the decision of the Patent Trial and Appeal Board



identified as Paper 13, dated November 17, 2015. While it is the opinion expressed in Paper 13 that the combination of Beard and Rathmann, as would have been made by one of skill in the art, renders the challenged claims obvious, in this Declaration I express the opinion that one of skill in the art would not have combined those references in the fashion relied upon, and that the challenged claims are not obvious over that combination of art as considered by a person of skill in the art around 1998.

- 5. As noted above, I am familiar with the type of technology addressed in the '970 Patent as of 1998, which I understand to be the year in which the patent application from which priority is claimed in the '970 Patent was originally filed. I have been asked to provide my technical review, analysis, insights, and opinions regarding the assertions in the Petition concerning the alleged obviousness of the challenged claims of the '970 Patent by the Beard and Rathmann Patents. I am being compensated for my work in connection with the GTS Patents and the several IPRs at my established rate of \$500 per hour. My compensation does not depend on the outcome of this proceeding.
- 6. In forming the opinions and beliefs expressed herein, I have relied on my own experience and knowledge, my review of the '970 Patent and its file history, and the Beard and Rathmann patents. Although the other



IPRs directed at the GTS patents and the art cited therein form a backdrop for my opinions, if I have relied on art other than that cited in this proceeding for my opinions in a specific or selective way, it is specifically mentioned in my Declaration.

7. My experience relied on in arriving at the opinions expressed in this Declaration includes my work as a Professor of Electrical Engineering, my work in industry including the development of various microprocessor-based technologies, and my research in the area of computer architecture and magnetic media. My experience and education is spelled out more fully in my curriculum vitae, submitted herewith as Exhibit 2001. My own personal experience in assisting other lawyers in the prosecution of patent applications and the enforcement of 17 U.S. Patents naming me as the inventor or one of the inventors over the years, has allowed me to develop a fundamental understanding of the concepts underlying obviousness.

i. Other Relevant Qualifications

8. As noted above, I have had significant involvement in the preparation and prosecution of United States Patents and patent applications as well as the enforcement of United States Patents, including 17 |naming me as inventor. Obviousness of claims over the prior art is a question I have



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