

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Richard L. McDowell et al.
U.S. Patent No.: 7,039,435 Attorney Docket No.: 18768-0183IP1
Issue Date: May 2, 2006
Appl. Serial No.: 09/967,140
Filing Date: September 28, 2001
Title: PROXIMITY REGULATION SYSTEM FOR USE WITH A
PROTABLE CELL PHONE AND A METHOD OF
OPERATION THEREOF

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DECLARATION OF MATTHEW VALENTI

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I, Matthew Valenti, hereby declare the following:

I. INTRODUCTION

1. I have been retained as an independent technical expert on behalf of LG Electronics, Inc. (“LG” or “Petitioner”). I understand that LG is petitioner in an *inter partes* review before the Patent Trial and Appeal Board (“PTAB” or “Board”) of U.S. Patent No. 7,039,435 (“the ’435 patent”) (EX1001).

2. I have been asked to provide my independent analysis of the ’435 patent in light of the prior art publications cited below.

3. I based my findings, as explained below, on my study, experience, and background in the fields discussed below. I have also relied on my review and analysis of the prior art, information provided to me in connection with this case, and information I have independently reviewed.

4. I am not, and never have been, an employee of LG. I am being compensated for my work at my normal hourly compensation, based on time actually spent analyzing the ’435 patent, the prior art publications cited here, and the issues related to these materials, but my compensation is not contingent in any way on the content of my opinions or the outcome of this proceeding.

II. QUALIFICATIONS

5. My research and teaching interests are in the areas of communication theory and statistical signal processing. I am currently a Professor in and Interim Chair of the Lane Department of Computer Science Electrical Engineering at West Virginia University and previously worked as an Electronics Engineer at the U.S. Naval Research Laboratory. Upon joining West Virginia University in 1999, I founded the Wireless Communications Research Lab. I am also a registered Professional Engineer (P.E.) in the state of West Virginia. A complete list of my publications, professional activities, and honors that I have received is fully set forth in my curriculum vitae, attached hereto as Appendix A.

6. I received a bachelor's degree in Electrical Engineering from Virginia Polytechnic Institute and State University (Virginia Tech) in 1992, a master's degree in Electrical Engineering from The Johns Hopkins University in 1995, and a Ph.D. degree in Electrical Engineering from Virginia Tech in 1999, where I was a Bradley Fellow.

7. Prior to attending graduate school at Virginia Tech, I was an Electronics Engineer with the United States Naval Research Laboratory in Washington, DC, where I engaged in the design and development of a space-borne adaptive antenna array and a system for the collection and correlation of maritime electronic intelligence (ELINT) signals.

8. My research areas include communication theory, interference analysis, error correction coding, applied information theory, efficient coded-modulation, cooperative communications, and wireless multiple-access networks. I have been recognized as an Outstanding Researcher by the College of Engineering and Mineral Resources of West Virginia University on three occasions: 2001, 2002, and 2009. I teach undergrad courses in Wireless Networking and Digital Signal Processing Fundamentals, as well as graduate courses in Stochastic Systems Theory, Communication Theory, and Coding Theory.

9. I act as a Consultant to several companies engaged in various aspects of wireless receiver and protocol design and implementation for military, satellite, and third-generation cellular applications.

10. I have authored and co-authored approximately 150 technical papers for various journals and conferences. I have presented several tutorials on wireless systems including LTE and WiMAX at international conferences and regional events, including a tutorial entitled “A day in the life of an LTE handset” at the 2013 Virginia Tech Symposium on Wireless Personal Communications and Annual Summer School. My publications in the area of communication systems date back to 1998. An example publication is “Analysis of a frequency-hopping millimeter-wave cellular uplink,” published in the October 2016 issue of *IEEE*

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