IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Inter Partes Review of:

Darbee et al.

Patent No.: 6,587,067

Filed: February 23, 2001

Issued: July 1, 2003

Assignee: Universal Electronics, Inc.

Title: UNIVERSAL REMOTE

CONTROL WITH MACRO COMMAND CAPABILITIES

DECLARATION OF Alan J. Herr, Ph.D.

IN SUPPORT OF THE PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 6,587,067

Mail Stop *Inter Partes* Review ATTN: PTAB
United States Patent and Trademark Office P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF Alan J. Herr, Ph.D.

Background and Qualifications

1. My name is Alan Jack Herr. I am currently the Chief Technical Officer ("CTO") at a company named Global Mile Solutions, LLC of Great Falls, Virginia. I have studied, taught, and practiced in the relevant electronic device control technology for over 35 years.



- 2. I earned my Doctor of Philosophy (Ph.D.) degree in Electrical and Computer Engineering from Oregon State University in 1975. I received my Masters of Science (M.S.) degree in Electrical and Computer Engineering in 1967 from North Dakota State University and my Bachelor of Science (B.S.) degree in in Electrical and Computer Engineering in 1966 from North Dakota State University.
- 3. Upon receiving my Ph.D. degree until 1979, I worked for Bell Telephone Laboratories (Indian Hills) as a member of the technical staff. In this position, I proposed, designed, and performed evaluations of a number of telecommunication digital local office switches and fault tolerant microprocessor designs. I also performed work on networks used for interactive digital cable television systems. From 1980 to 1982, I worked as the Engineering Manager for Wavetek Corporation. In this position, I designed and implemented digital speech processing systems, computer voice response systems, and related telephone networking technologies.
- 4. Since 1982, I have worked at MicroIndustrie, Inc., in various positions, performing consulting, engineering, and software services. These services have been performed for a variety of industry clients in the areas of process control, real time data collection and analysis, and real time data DSP (digital signal processing). The company provides design engineering with a focus on telecommunications, wireless systems, digital systems, and product design.



- In my position with MicroIndustrie, Inc., I have been involved in consulting 5. and engineering roles for design and product implementations of a variety of wireless communication and electronic device control technologies. Some of the projects which I have involvement with, in consulting, design, and implementation roles, include: remote control systems for toy industry clients (including Mattel and Radio Shack); transmitter remote controls; remote radio frequency (RF) transponders; radio frequency (RFID) tag identification and processing systems; RFID access control systems; and multiple transmitter interference. Other projects engaged by my company among private, government, and military clients include designs and implementations for transmitters and receivers, antennas, telecommunication signaling, spread-spectrum wireless systems, telephone system switching, automobile alarms, speech processing, neural net computing systems, and associated systems and devices.
- 6. My teaching experience includes course instruction at major engineering schools, including a position as Visiting Professor in the Department of Engineering at the University of San Diego between 2003-2008. I have taught and lectured in a variety of computer and electrical engineering areas, including microprocessor hardware design, programming, and system design; RF transmitters, receivers, antenna couplers (matching networks), and antennas; RF transmission path losses and RF transmitter coverage area; RFID tag coupling



methodologies; and computer programming languages including C++, PHP and java script, and assembly languages. I am a senior member of the Institute of Electrical and Electronic Engineers (IEEE) and have been a member of the Executive Board of the IEEE San Diego Section, and was a recipient of the prestigious Millennium Medal Award in recognition and appreciation of valued services and outstanding contributions to IEEE.

7. A copy of my latest curriculum vitae (C.V.) is attached as Appendix A.

Status as Independent Expert Witness

- 8. I have been retained in this matter by Universal Remote Control, Inc. ("Petitioner" or "URC") to provide an analysis of the scope and content of U.S. Patent No. 6,587,067 (hereinafter "'067 Patent") relative to the state of the art at the time of the earliest application underlying the '067 Patent. I have also been retained to provide analysis regarding what a person of ordinary skill in the data processing arts related to universal remote control devices would have understood at the time of the earliest application underlying the '067 patent.
- 9. I am being compensated at the rate of \$300 per hour for my work. My fee is not contingent on the outcome of any matter or on any of the technical positions I explain in this declaration. I have no financial interest in Petitioner.
- 10. I have been informed that Universal Electronics, Inc. (hereinafter referred to as "Patent Owner") owns the '067 Patent. I have no financial interest in the Patent



Owner or the '067 patent nor to my recollection have I ever had any contact with the Patent Owner, or the inventors of the '067 patent, Paul V. Darbee, Richard E. Ellis, Louis Steven Jansky, or Avram S. Grossman.

Description of the Relevant Field and the Relevant Timeframe

- 11. I have carefully reviewed the '067 Patent, as well as U.S. Patent No.4,959,810 (the '810 Patent) with which the '067 Patent shares a specification and allegedly claims priority.
- 12. For convenience, all of the information that I considered in arriving at my opinions is listed in Appendix B.
- 13. Based on my review of these materials, I believe that the relevant field for purposes of the '067 Patent is remote controls and electronic device controls, in particular programmable remote controls used for control of consumer electronics. I have been informed that the relevant timeframe runs from at least 1984 and through 1987.
- 14. As described in above, I have extensive experience in the relevant field, including experience relating to device programming and operations for electronics used in such remote controls and electronic device controls. Based on my experience, I have an established understanding of the relevant field in the relevant timeframe.



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