

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Eric J. Robb
U.S. Patent No.: 6,936,611 Attorney Docket No.: 39907-0011IP1
Issue Date: March 27, 2007
Appl. Serial No.: 10/417,596
Filing Date: Apr. 17, 2003
Title: BARRIER MOVEMENT OPERATOR HUMAN
INTERFACE METHOD AND APPARATUS

DECLARATION OF DR. NATHANIEL J. DAVIS IV

I, Dr. Nathaniel J. Davis IV, declare as follows:

1. A summary of my background and qualifications as a technical expert for this IPR is provided below. A complete listing of my qualifications and background are detailed in my curriculum vitae, which is attached hereto as Exhibit B.

2. I received a B.S. and an M.S. in Electrical Engineering from Virginia Polytechnic Institute and State University in 1976 and 1977, respectively. I received a Ph.D. in Electrical Engineering in 1985 from Purdue University.

3. In December 2016, I retired from my position as Professor and Department Head in the Department of Electrical and Computer Engineering at the Air Force Institute of Technology (“AFIT”), Wright-Patterson Air Force Base in Ohio. Upon my retirement, I was appointed as a Professor Emeritus at AFIT. My responsibilities as Professor included teaching courses in the field of electrical and

computer engineering and conducting research in these areas. As Department Head, I was responsible for the academic and research direction as well as the administration of the 38-faculty department. In 2009, I received the Air Force Award for Meritorious Civilian Service for visionary improvements to my department's organization, administration, and graduate degree curricula. I received the Air Force Civilian Career Service Award upon retirement.

4. I serve as a consultant and researcher for nationally known companies and institutions. I am currently a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). I am also a member of the IEEE Computer Society. My research efforts at Virginia Tech (from 1989 to 2005) resulted in grants and equipment donations totaling in excess of \$5 million. During my previous tenure as a professor at the Air Force Institute of Technology from 1985 to 1989, I worked on research projects totaling \$2.8 million. These efforts focused on computer architecture, digital design, computer networks, and embedded microprocessors, (among others). Throughout my tenure as an electrical and computer engineering professor, I have taught undergraduate and graduate courses in these same subject areas.

5. From 1981 to 1982, I was an Instructor in the Department of Electrical and Computer Engineering at the Air Force Institute of Technology, Wright-Patterson Air Force Base in Ohio. From April 1988 to December 1988 I

was an Adjunct Assistant Professor in the Department of Computer Science and Engineering at Wright State University, in Dayton, Ohio. From 1985 to 1989 I was an Assistant Professor in the Department of Electrical and Computer Engineering at the Air Force Institute of Technology, Wright-Patterson Air Force Base in Ohio, on tenure track to have been effective October 1, 1989. From 1989 to 2005 I held the position of Associate Professor and then Professor (beginning in 2002) in the Bradley Department of Electrical and Computer Engineering at Virginia Polytechnic Institute and State University, and from the Fall of 2000 to 2004 held the position of Assistant Department Head. From 2005 to present I have held the position of Professor and Head of the Department of Electrical and Computer Engineering, Air Force Institute of Technology (as stated above).

6. In 1987, I revised the technology assessment portion of the U.S. Army's Joint Tactical Fusion Program Management Office's Preplanned Product Improvement Implementation Plan. The topical areas in the technology assessment included: interconnection networks, parallel computer architectures, VLSI circuit design capabilities, application algorithm development, and mass storage devices. I have also worked on computer network design research and development projects for the Federal Bureau of Investigation, the Department of the Navy, and the Commonwealth of Virginia State Police (among others).

7. From 2010-2014, I was a member of the Air Force High Performance Computing Review Panel, tasked to evaluate proposals for use of Air Force and Department of Defense supercomputer resources (panel disbanded in 2015). In 2007, I was a member of the Army Science and Technology Basic Research Review panel. Under the direction of the Director for Research and Laboratory Management for the Department of the Army, this panel reviewed all basic research projects being conducted by Army laboratories and recommended the continuance or termination of each project.

8. From December 2011 to August 2012, I was a member of the Mission Support Panel for the Air Force Chief Scientist's Cyber Vision 2025 Cyber S&T strategy team. This team, spanning all Air Force major commands and its research and development community, was instrumental in the development of education and training strategies and priorities for the next decade that will improve the cyber workforce and its operational capabilities within the Air Force.

9. From January 2013 to May 2013, I also served on the Education and Training Team for the Air Force Chief Scientist's Global Horizons Study. The purpose of the study was to identify, forecast, and capitalize on global trends in education and training that will impact the Air Force in the next decade.

10. I am a program evaluator for electrical and computer engineering programs for ABET, Inc., the recognized accreditor for college and university

programs in applied science, computing, engineering, and technology. I was nominated for this position by my engineering professional society, the IEEE. As a program evaluator, I evaluate university programs in electrical or computer engineering and, on behalf of ABET, make determinations as to whether these programs meet the criteria for accreditation. Since 2007, I have completed assessment visits to 9 different universities.

11. In January 2011, the US Patent and Trademark Office issued patent 7,877,621, “Detecting software attacks by monitoring electric power consumption patterns,” for which I am a co-inventor. This patent describes detecting malicious attacks launched against a mobile computing device by monitoring the device’s power consumption for anomalous behavior.

12. I have authored or co-authored over 70 technical articles in archival journals and conferences. I have co-authored two book chapters. The topics of my publications generally focused on computer systems to include computer architecture, to include embedded computer systems and input/output mechanisms; parallel processing computer systems; the performance of local area networks (LAN) and wide area networks (WAN); and computer and network security. In addition, I have provided expert witness testimony in cases involving embedded computer systems that are similar to the ones envisioned in the ’611 patent. While on the faculty at Virginia Tech, I led a team of graduate and undergraduate

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.