

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

COMARCO WIRELESS TECHNOLOGIES, INC.,
Patent Owner.

Case No. _____

**DECLARATION OF NATHANIEL J. DAVIS IV, Ph.D.
IN SUPPORT OF APPLE INC.'S PETITION FOR *INTER PARTES*
REVIEW OF U.S. PATENT NO. 8,492,933 CHALLENGING
CLAIMS 1 AND 2 UNDER 35 U.S.C. § 321, 37 C.F.R. § 42.104**

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

I. INTRODUCTION

1. I am presently a Professor and Department Head in the Department of Electrical and Computer Engineering at the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio.
2. I have prepared this Declaration in connection with Apple Inc.'s ("Apple") Petition for *Inter Partes* Review of U.S. Patent No. 8,492,933 ("the '933 Patent"), which is to be filed concurrently with this Declaration.
3. In the course of preparing this Declaration, I reviewed the '933 Patent, its prosecution file history, and its parent applications. I have also reviewed the prior art references and related documents discussed and/or referenced in this Declaration.
4. I have been retained by Apple as an expert in the field of electrical and computer engineering, and related technologies, including electrical circuitry. I am being compensated at my normal consulting rate of \$450 per hour for my time. My compensation does not depend in any way on the substance of my conclusions and is not affected by the outcome of this proceeding.
5. I have no financial interest in Apple. I similarly have no financial interest in the '933 Patent or the owner of the '933 Patent, and I have had no contact with the named inventor of the '933 Patent.

II. EXPERIENCE AND QUALIFICATIONS

6. My curriculum vitae is attached to this Petition as Apple 1017. Since 2005, I have served as a 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. AFIT is the Air Force’s graduate school of engineering and its institution for technical professional continuing education. AFIT is a component of Air University and Air Education and Training Command (one of the U.S. Air Force’s ten major commands) and is committed to providing defense-focused graduate and professional continuing education and research to sustain the technological supremacy of America’s air and space forces. AFIT offers master’s and doctoral degree programs in computer engineering, computer science, electrical engineering, and other fields.

7. My responsibilities as a professor include teaching courses in the field of electrical and computer engineering (including graduate-level courses) and conducting research in these areas. As department head, I am responsible for the academic and research direction as well as the administration of the 38-faculty department.

8. I serve as a consultant and researcher for several 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 Polytechnic Institute and State University

(“Virginia Tech”) (from 1989 to 2005) resulted in grants and equipment donations totaling more than \$5 million. During my previous tenure as a professor at AFIT 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).

9. Throughout my tenure as an electrical and computer engineering professor, I have taught undergraduate and graduate courses in these same subject areas, including courses relating to electrical and computer engineering. I have taught courses which provided a broad-based introduction to the computer engineering field, as well as advanced courses that dealt with state-of-the-art and emerging computer architectures, including computer architecture, high-performance uniprocessors, massively parallel processing systems, computers embedded within larger systems, distributed computing systems, and computer-communications networks. I have also advised dozens of undergraduate and graduate students on theses, dissertations, and projects, many of which have involved the design of computer-enabled hardware. For example, while at Virginia Tech, I served as faculty adviser to a group of graduate and undergraduate students designing a low-power, low-cost satellite, a prototype of which was successfully launched into orbit.

10. I attended Virginia Polytechnic Institute and State University in Blacksburg, Virginia from 1972 to 1977 and received Bachelor of Science and Master of Science

degrees in Electrical Engineering in 1976 and 1977, respectively. From 1982 to 1985, I attended Purdue University to pursue a Ph.D. in Electrical Engineering, which I received in 1985.

11. From 1981 to 1982, I was an instructor in the Department of Electrical and Computer Engineering at AFIT. 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 AFIT, 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 Tech, and from 2000 to 2004, I held the position of assistant department head.

12. 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, among others, the Federal Bureau of Investigation, the Department of the Navy, and the Commonwealth of Virginia State Police.

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