

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

In re Patent of: Darbee et al.

Patent No.: 5,255,313

Filed: Apr. 8, 1993

Issued: Oct. 19, 1993

Assignee: Universal Electronics Inc.

**Title: UNIVERSAL REMOTE
CONTROL SYSTEM**

**Declaration of
Thomas A. Gafford**

**In Support of the Petition for *Inter
Partes* Review of U.S. Patent No.
5,255,313**

Case No. IPR2014-01106

Trial Paralegal: Cathy Underwood

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United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF THOMAS A. GAFFORD

1. My name is Thomas A. Gafford. I am a working consulting engineer in the field of computer related systems and devices.

2. I have over 43 years of experience in the computer industry working for corporations in the design, manufacturing, and support for computer systems and microprocessors. My experience includes analysis

and design of processors and motherboards incorporating such processors, as well as the design of hardware and software for clocking and power management of monolithic and bit-slice microprocessors. I am experienced in both hardware and software aspects of these areas, as well as in transistor-level design of this hardware. As detailed below, I have worked on many projects and technologies highly relevant to the subject matter of the '313 patent.

3. In 1972, I received a Bachelor of Science Degree in Electrical Engineering from the University of Washington. During this time, my studies concentrated on the area of digital and analog circuit analysis.

4. In 1972-1973, I attended the Master of Science in Electrical Engineering program at Stanford University. My work was concentrated on logic, circuit and computer design, computer architecture, software algorithm design, and systems programming.

5. From 1973-1976, I worked at the Stanford University Artificial Intelligence Laboratory in Palo Alto, California. There I worked on the design, construction and debugging of motor controls and sensor electronics for a robotic arm and its associated computer interfaces. This included work on a large assembly-language software system and computer board layout.

6. From 1976-1983, I worked at G Systems, which I founded. There I designed the hardware and software interfaces for a disk controller, and the power, clocking, arithmetic and self-diagnostic portions of a mainframe computer system.

7. From 1983-1986, I was the head of engineering for Softix, Incorporated, which I co-founded. There I worked on the design and servicing of a large scale computer system for the sale of tickets by ticket agencies and arena complexes. I was responsible for software development, computer architecture, and field support of large-scale software and hardware systems.

8. In 1986, I founded Gafford Technology, a private firm working on research and development and computer-related services to the technology industry. I also consult and provide opinions in patent and other technology-driven litigation. My work has included computer system design, software selection, and network configuration. I have been the primary consultant at Gafford Technology since I founded the company.

9. A more detailed resume, which contains further details on my education, experience, publications, and other qualifications, is provided as Appendix A.

10. 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. 5,255,313 (hereinafter the "313 patent")(Ex. 1001) relative to the state of the art at the time of the earliest application underlying the '313 Patent. I have also been retained to provide analysis regarding what a person of ordinary skill in the art related to universal remote control devices would have understood at the time of the earliest application underlying the '313 patent.

11. I am being compensated at the rate of \$550 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.

12. I have been informed that Universal Electronics Inc. (hereinafter referred to as "Patent Owner") is asserting claims 1, 2, and 20 the '313 Patent. I have no financial interest in the Patent Owner or the '313 patent.

13. I have carefully reviewed the '313 Patent.

14. For convenience, all of the documents that I considered in arriving at my opinions is listed in Appendix B.

15. Based on my review of these materials, I believe that the relevant

field for purposes of the '313 Patent is remote controls and consumer electronics. I have been informed that the relevant timeframe runs from around 1986 and through 1987.

16. As described in above, I have extensive experience in the relevant field, beginning with consumer electronics diagnosis and repair and continuing into design and production experience relating to microprocessor based embedded systems. Based on my experience, I have an established understanding of the relevant field in the relevant timeframe.

17. I understand that Mr. Cook defined the relevant field slightly differently. Ex. 2029 at ¶29. I have considered the differences between my and Mr. Cook's definitions, and concluded that those differences would not affect my opinions expressed in this declaration. No one gets a degree in handheld remote devices. The basic field of study is embedded microprocessor systems and communications, and the design variations due to battery power and IR communications aren't significant given this basic field.

18. I have been informed that "a person of ordinary skill in the relevant field" is a hypothetical person to whom an expert in the relevant field could assign a routine task with reasonable confidence that the task would be successfully carried out. A person of ordinary skill in the art at the time the

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