

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

OpenTV, Inc.,
Patent Owner.

Case No. _____

**DECLARATION OF STEPHEN MELVIN, Ph.D.
IN SUPPORT OF APPLE INC.'S PETITION FOR *INTER PARTES*
REVIEW OF U.S. PATENT NO. 7,055,169**

I, Stephen Melvin, hereby declare as follows:

I. INTRODUCTION

1. I have prepared this Declaration in connection with Apple Inc.'s Petition for *Inter Partes* Review of U.S. Patent No. 7,055,169 ("the '169 patent") (Ex. 1101), which is to be filed concurrently with this Declaration.

2. In the course of preparing this Declaration, I reviewed the '169 Patent, its prosecution file history, as well as the documents discussed in this Declaration.

3. I have been retained by Apple, Inc. ("Apple" or "Petitioner") as an expert in the fields of computer science, computer communications, and related technologies. I am being compensated at my normal consulting rate of \$445 per hour for my time. My compensation is not dependent on and in no way affects the substance of my statements in this Declaration.

4. I have no financial interest in Apple. I similarly have no financial interest in the '169 Patent or the owner of the '169 Patent, and I have had no contact with the named inventors of the '169 Patent.

II. QUALIFICATIONS

5. I received a Ph.D. in Computer Science from the University of California at Berkeley in 1991 and a B.S. in Electrical Engineering and Computer Science from the University of California at Berkeley in 1982. I have more than 30 years of

experience in computer science and computer engineering. I am an inventor on over 45 patents, and I am a registered patent agent before the USPTO.

6. My Ph.D. research areas included high-performance computer architecture and microarchitecture and microcode-based system performance analysis tools.

From September 2001 through April 2002, I was a Visiting Scholar at the University of Texas, Austin, where I directed graduate students in research in the area of high-performance computer architecture.

7. In May 2001, I co-founded and was the Chief Architect of Flowstorm, Inc., a start-up company based in Silicon Valley, where I defined and guided the overall chip architecture for a multithreaded packet processor. From March 2000 through May 2001, I worked as the Senior CPU Architect at Clearwater Networks, where I was involved in defining the architecture and microarchitecture of Clearwater's CNP810S multithreaded network processor.

8. From August 1983 to the present, I have been the President of Zytek Communications Corporation ("Zytek"). Zytek is an engineering, consulting, and small-scale manufacturing company that currently provides intellectual property consulting services as well as services related to the design, implementation, and testing of embedded systems. Zytek's general areas of activity have included industrial control and measurement, Internet-related services, hard disk analysis and file recovery, and computer engineering research services. Through my work

at Zytex, I have designed numerous microprocessor-based embedded systems, including analog and digital circuit design, firmware development for embedded microcontrollers, and software development for host interfacing, product development, and debugging.

9. I am a member of the following professional organizations: The Institute of Electrical and Electronics Engineers (IEEE); The Association for Computing Machinery (ACM); The American Intellectual Property Law Association (AIPLA); The Intellectual Property Owners Association (IPO); and The National Association of Patent Practitioners (NAPP).

10. I served as General Chair of the 45th Annual International Symposium on Microarchitecture (Micro-45), held in Vancouver in December of 2012. I also served as co-chair of the 29th Annual International Symposium on Microarchitecture (Micro-29), held in Paris in December of 1996.

11. For further details regarding my employment and academic history, please refer to my curriculum vitae, attached as Ex. 1105.

III. RELEVANT LAW

12. I am not an attorney. For the purposes of this Declaration, I have been informed about certain aspects of the law that are relevant to my opinions. My understanding of the law is summarized below.

13. I have been informed and understand that claim construction is a matter of law and that the final claim constructions for this proceeding will be determined by the Patent Trial and Appeal Board.

14. I have been informed and understand that in the context of an *Inter Partes* review, a claim of an unexpired patent must be construed according to its broadest reasonable construction in light of the specification.

15. I have been informed and understand that a patent claim is obvious and therefore invalid if the claimed subject matter, as a whole, would have been obvious to a person of ordinary skill in the art as of the priority date of the patent based on one or more prior art references and/or the knowledge of one of ordinary skill in the art. I understand that an obviousness analysis must consider (1) the scope and content of the prior art, (2) the differences between the claims and the prior art, (3) the level of ordinary skill in the pertinent art, and (4) secondary considerations, if any, of non-obviousness (such as unexpected results, commercial success, long-felt but unmet need, failure of others, copying by others, and skepticism of experts).

16. I understand that a prior art reference may be combined with other references to disclose each element of the invention under 35 U.S.C. § 103. I understand that a reference may also be combined with the knowledge of a person of ordinary skill in the art, and that this knowledge may be used to combine

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