

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC., TOSHIBA
CORPORATION, AND VIZIO, INC.
Petitioners

v.

STRAIGHT PATH IP GROUP, INC.
Patent Owner

INTER PARTES REVIEW OF U.S. PATENT NO. 6,108,704
Case IPR No.: *To Be Assigned*

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 6,108,704
UNDER 35 U.S.C. §§ 311-19 AND 37 C.F.R. § 42.100 *et seq.*

DECLARATION OF HENRY HOUH, PH.D.

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I, Henry Houh, Ph.D., being of legal age, hereby declare, affirm, and state the following:

I. INTRODUCTION

1. The facts set forth below are known to me personally and I have first-hand knowledge of them.

2. Other than paragraph 3, this declaration in support of a Petition for *Inter Partes* Review of U.S. Patent No. 6,108,704 is identical to my declaration of August 22, 2014, submitted as Exhibit 1004 in IPR2014-01366.

II. BACKGROUND AND QUALIFICATIONS

3. I have been retained by counsel for LG Electronics, Inc., Toshiba Corporation, and VIZIO, Inc. (“Petitioner”) in order to submit this declaration in connection with Petitioner’s Petition for *Inter Partes* Review of claims 1, 11-12, 14, 16, 22-23, 27, and 30-31 of U.S. Patent No. 6,108,704 (“the ’704 patent”). I am being compensated for my time at a rate of \$590 per hour, plus actual expenses. My compensation is not dependent in any way upon the outcome of Petitioner’s Petition.

4. My Curriculum Vitae is submitted herewith as Exhibit 1 to this declaration.

5. I received a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (MIT) in 1998. I also received a Master of

Science degree in Electrical Engineering and Computer Science in 1991, a Bachelor of Science Degree in Electrical Engineering and Computer Science in 1990, and a Bachelor of Science Degree in Physics in 1989, all from MIT. During my time at MIT, I took graduate-level courses in communications and networking.

6. I defended and submitted my Ph.D. thesis, titled “Designing Networks for Tomorrow’s Traffic,” in January 1998. As part of my thesis research, I analyzed local-area and wide-area flows to show a more efficient method for routing packets in a network, based on traffic patterns at the time. My thesis also addressed real-time streamed audio and video.

7. As further indicated in my CV, I have worked in the electrical engineering and computer science fields, including in Voice over IP, on several occasions. As part of my doctoral research at MIT from 1991-1998, I worked as a research assistant in the Telemedia Network Systems (TNS) group at the Laboratory for Computer Science. The TNS group built a high speed gigabit network and applications which ran over the network, such as remote audio and video capture, processing, segmentation and search on computer terminals. In addition to helping design the core network components, designing and building the high speed links, and designing and writing the device drivers for the interface cards, I also set up the group’s web server, which at the time was one of the first several hundred web servers in existence and went on to provide what was likely one of the first live

Internet video initiated from a web site. I co-authored papers on our web server video system and on database-backed web sites for which I attended the first World Wide Web conference to present.

8. I authored or co-authored at least twelve papers and conference presentations on our group's research. I also co-edited the final report of the gigabit networking research effort with Professor David Tennenhouse and Senior Research Scientist David Clark. David Clark is generally considered to be one of the fathers of the Internet Protocol, and served as chief protocol architect for the Internet and headed the Internet Activities Board.

9. From 1997 to 1999, I was a Senior Scientist and Engineer at NBX Corporation, a start-up that made business telephone systems that streamed packetized audio over data networks instead of using traditional phone lines. NBX was later acquired by 3Com Corporation, and to my knowledge the phone system is still available and being used at tens of thousands of businesses or more. As part of my work at NBX, I designed the core audio reconstruction algorithms for the telephones, as well as the packet transmission algorithms. I also designed and validated the core packet transport protocol used by the phone system. The protocol is used millions of times daily currently. Two of the company founders and I received US Patent No. 6,697,963 titled "Telecommunication method for ensuring on-time delivery of packets containing time sensitive data," for some of the work I

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