

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Former Group Art Unit: 2646	§	
Former Examiner: Erika Washington	§	
	§	
	§	

For: SYSTEM AND METHOD FOR MANAGING MEDIA

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**DECLARATION OF DR. SCHUYLER QUACKENBUSH  
IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF  
UNITED STATES PATENT NO. 8,532,641**

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I, Schuyler Quackenbush, hereby declare under penalty of perjury:

## **I. INTRODUCTION**

1. I have been retained to provide assistance regarding U.S. Patent No. 8,532,641 (“641 patent”). Attached hereto as Appendix A is a true and correct copy of my Curriculum Vitae describing my background and experience. I have personal knowledge of the facts and opinions set forth in this declaration, and, if called upon to do so, I would testify competently thereto.

2. I received a B.S. in Electrical Engineering from Princeton University in 1975, and M.S. and Ph.D. in Electrical Engineering from the Georgia Institute of Technology in 1980 and 1985, respectively. While at the Georgia Institute of Technology, I concentrated my research on signal processing, including both speech and image processing. In my thesis I explored the factors that determine the perceived quality of a processed speech signal, such as speech signals from a mobile telephone system. My thesis was titled “Objective Measures of Speech Quality” and the thesis research was on computer algorithms that could predict perceived speech quality.

3. Between 1975 and 1978, I worked for Loral Electronics in Yonkers, NY, where I was employed as a test engineer. Loral Electronics produced airborne electronics systems for the U.S. Air Force. My responsibilities in this position included: assisting the lead engineer in setting up test equipment; assembling custom test equipment; and using this equipment to test items from the production line.

4. From 1978 to 1979, I worked for Diagnostic/Retrieval Systems (DRS), Inc. in Oakdale, NJ, where I was a hardware design engineer. DRS produced electronic sonar systems for the U.S. Navy. My responsibilities in this position included: design of an analog to digital signal acquisition sub-system; design of a digital heterodyne sub-system; and assisting in test and debugging of the complete prototype system.

5. Between 1986 and 2002, I worked for AT&T Bell Labs in Murray Hill where I was Member of Technical Staff in the Signal Processing Research Department, and subsequently at AT&T Labs in Florham Park, NJ, where I was Principal Technical Staff and then Acting Supervisor of the Speech and Audio Coding Group. During the time period from 1986 to 2000 I: developed and implemented a speech coding algorithm; developed and implemented several audio coding algorithms; developed and implemented an image and audio decoding algorithm (for use as a “talking mail-order catalog”) and worked on a large team that built a working Digital Audio Broadcast system using AT&T’s Perceptual Audio Coding (PAC) technology. I was the lead expert in the effort to promote AT&T’s PAC technology in the ISO MPEG standards group. This effort resulted in the MPEG Advanced Audio Coding standard, which contained more than 80 percent of AT&T’s PAC technology. I developed a client/server music player using the AT&T audio technology. This used an OpenGL graphical user interface and UNIX socket-based client/server communication. I worked on a team that developed a second generation of this

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