

Filed on behalf of:

Patent Owner SightSound Technologies, LLC

Paper No. _____

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.

Petitioner

v.

SIGHTSOUND TECHNOLOGIES, LLC,

Patent Owner

Case CBM2013-00020
Patent 5,191,573

**DECLARATION OF JOHN P. STAUTNER CONCERNING
COMPUSONICS CORP. AND COMPUSONICS VIDEO CORP.**

I, John Stautner, declare as follows:

1. I am a resident of The Woodlands, Texas. I provide this Declaration in connection with the above-captioned proceeding. I am being compensated by SightSound Technologies, LLC for time spent in connection with my factual research and providing testimony in this matter at the rate of \$ 450 per hour. My compensation is in no way dependent on the contents of this Declaration or any testimony I may provide, nor on the outcome of this proceeding. I make this declaration of my own personal knowledge and could testify competently to the contents herein.

2. I am a technologist with over thirty years of experience in digital audio and video and computer technologies. I have an undergraduate degree in Physics and a Masters of Science from the Department of Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (MIT).

3. In 1983, shortly after graduating the master's program at MIT or at approximately that time, I was contacted by David Schwartz and asked to join CompuSonics as its second employee. (At first, CompuSonics was known as CompuSound. For sake of clarity, unless otherwise specified, by "CompuSonics" I mean the audio company founded by Mr. Schwartz in or around 1983.) I worked full-time for CompuSonics beginning in late 1983 or early 1984. At the time, I was living in Cambridge, MA. Later, I relocated to Palo Alto, CA, after CompuSonics moved its base of operations there from Denver, CO.

4. In 1985, I also became President of CompuSonics Video Corporation, a company affiliated with CompuSonics. I remained President of CompuSonics Video until both it and CompuSonics went out of business in late 1989 or 1990. However, at all times, CompuSonics and CompuSonics Video were small, closely related companies, and I continued to be closely involved in CompuSonics throughout my time as president of CompuSonics Video. The two companies

shared common offices in Palo Alto, often partnered in development and marketing efforts, and pursued largely similar objectives, in all of which I was generally aware or involved.

5. The objective of CompuSonics was to sell high-end audio equipment to consumers, “prosumers” and professional users. The devices sold by CompuSonics were called DSP’s, or digital signal processors, which were special-purpose devices or “audio computers”. A secondary objective of CompuSonics was to license its CSX technology, which consisted of its patents and various implementations of digital audio compression technology, operating software and hardware designs.

6. DSP’s came in two series. The first CompuSonics devices to be sold were professional-grade devices in the 2000 series, which included models such as the DSP-2002 (a 2-channel digital stereo recorder) and the DSP-2004 (a digital recorder capable of simultaneously recording 4 channels). With multiple devices, recording studios could record on eight or more channels simultaneously. DSP-2000 series devices were sold to professional sound recording, post-production, mixing, and editing studios. Like all DSP’s, these devices were capable of converting analog sound signals into digital waveforms, where the signals could be recorded, edited, mixed, and mastered. The prices for devices in the DSP-2000 series started at \$35,000. The first such recorder was sold in 1984. During CompuSonics’ existence, the company sold fewer than approximately 40 DSP-2000 series devices (this is a rough estimate).

7. Originally, CompuSonics intended to develop a consumer audio product and use “super floppy” discs for storage on all of its DSP’s. However, because the storage capacity of floppy discs was not advancing quickly enough, I proposed using hard drives in the interim and developing a product for professional audio studio and post-production use. Thus, the DSP-2000 series devices used

arrays of Maxtor 5 1/4" hard drives. Because the of expense (each 140MB drive cost on the order of \$1000, I estimate), the noise emitted by the drives, and impracticality of using hard drives for consumer equipment, CompuSonics intended to return to using "super floppy" discs or a similar form of removable storage once the storage capacity of the superfloppies was sufficient and once the compression technology had developed sufficiently. The combination of high capacity disk storage and a high ratio of audio compression and the cost of each of these is what would determine the eventual feasibility of building and marketing a consumer product. In the meantime, the 2000 series was a feasible product to build and market to audio professionals.

8. CompuSonics also made consumer DSP devices, in the 1000 series, which were based on a single integrated circuit board design and which featured removable storage (such as an optical disk or a floppy disk). DSP-1000's were digital stereo recorders that were chiefly intended to replace audio tape recorders in home stereo systems. CompuSonics intended that the DSP-1000's would also allow consumers to archive albums that were contained in analog storage mediums (vinyl or cassette). The goal with digital storage was that sound quality wouldn't degrade over time in addition to providing other benefits, like random access playback and the ability to edit the audio. DSP-1000's had the promise of giving consumers the ability to edit out clicks or defects in their existing music collections. Finally, consumers could record their own music. Like the DSP-2000 series devices, DSP 1000's stored music in digital form. For playback, digital signals would be converted to analog form and transmitted via conventional analog RCA output jacks to a home stereo system. For recording, DSP's contained analog RCA input jacks that could receive an analog digital signal from the components of a home stereo system and convert that signal to a digital waveform.

9. CompuSonics made approximately 20-50 (rough estimate) DSP-1000's in 1985 and early 1986. Some of these were pilot models and some were "production," though we never got into any high volume production. The DSP 1000's used a floppy disk storage system as well as cartridge floppy storage and cartridge optical disk storage. Many of the units were sold to radio stations and broadcasters, where the machines were used in lieu of "cart machines." These units were called DSP 1500's if they had record and play capability, and they were called DSP 1200's if they had only play capability. Cart machines were broadcast systems that employed a tape-based recording and playback system. The short audio clips that could be saved on DSP 1500's using floppy disks or cartridge storage were well-suited to use with broadcast radio and were a great replacement for the tape based cart machines that were commonly in use. A UK based company called "Ferrograph" even licensed the CompuSonics DSP 1500 and 1200 series for sale in Europe. (As a point of clarification: we would refer to audio computers that were built using the single board design as the DSP-1000 series, which would include the DSP-1000, DSP-1200 and DSP-1500.)

10. Another run of DSP-1000's was produced in late 1986. These were sold to high-end consumer stereo dealers. Given the lack of high-density floppy disk storage sufficient to store more than a few minutes of digital audio data, these DSP-1000's utilized a write-once optical disk drive.

11. The DSP-2000 series devices sold by CompuSonics were based on a Unix operating system (or a variant of Unix called Regulus or something like that), and in this regard resembled many other computers of the day. In addition to building the machines, CompuSonics also developed the software needed to run the DSP's recording, playback, editing and other functions. The software for the DSP-1000 series devices was written directly for the host processor and comprised its own operating system. (The DSP-1000's did not run Unix or Regulus.) As

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