Filed on behalf of:

Patent Owner Sightsound
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE, INC.,

Petitioner,

v.

Patent of SIGHTSOUND TECHNOLOGIES, LLC,

Patent Owner.

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Case CBM2013-00020
Patent 5,191,573

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**DECLARATION OF JOHN SNELL IN SUPPORT OF PATENT OWNER
SIGHTSOUND TECHNOLOGIES, LLC'S RESPONSE TO PETITION**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

I, John Snell, hereby declare as follows:

1.   I have been retained by the plaintiff Patent Owner SightSound
Technologies, LLC ("Patent Owner" or "SightSound"), to provide assistance and
expert testimony in the Covered Business Method Review ("CBM Review") taking
place before the Patent Trials and Appeals Board ("PTAB" or "Board") regarding
U.S. Patent No. 5,191,573 ("the '573 Patent") and U.S. Patent No. 5,966,440 ("the
'440 Patent"). 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. My
curriculum vitae describing my background and experience is attached hereto as
Appendix A.

2.   This Declaration gives the opinions, and their underlying bases and
reasons, about which I may testify further. This report further includes information
regarding the validity of the patents in light of Petitioner Apple Inc.'s ("Petitioner"
or "Apple") assertions in this proceeding that the patents are anticipated under 35
U.S.C. § 102 and obvious under 35 U.S.C. § 103(a). This report also includes
information regarding why one skilled in the art would not find the inventions

disclosed in the patents obvious at the relevant time and further information relating to considerations of non-obviousness, as well as information regarding the advantages of the patented invention over the prior art.

I.   Background and Qualifications

3.   I am an engineer, and reside and work in San Geronimo, California. I specialize in the design and analysis of microelectronics, software, and systems for recording, playing, synthesis, processing and transferring of electronic media over electronic networks. I have over four decades of experience in electronics engineering, computer science, signal processing mathematics, and the engineering of audio, video and music. I have researched, designed, developed and analyzed the microelectronics and software of numerous digital music and video systems.

4.   I studied at Carnegie-Mellon University from 1967–74. My interdisciplinary graduate work through the electrical engineering department at Carnegie-Mellon University was performed with a grant from the National Science Foundation. I earned my Bachelor of Science degree in Electrical Engineering and my Bachelor of Arts degree in Cybernetics (an interdisciplinary program, combining coursework in computer science, signal processing mathematics, physics, music analysis and composition, psychology and physiology of perception as well as audio, video and electrical engineering) at Carnegie-Mellon University. I wrote my first computer program in 1968 on a mainframe computer at Carnegie-

Mellon University, where I took courses in programming, including data structures and software design for real-time systems. I have programmed computers and media processing digital systems at all levels, from high-level code down to assembly language and microcode (including binary, octal and hexadecimal for debugging systems).

5.　　I worked on the development of a large multiprocessing system and a graphics display processor, as well as analog-to-digital and digital-to-analog audio converters in the Engineering Lab of the Artificial Intelligence Lab at Carnegie-Mellon University in the early 1970s. I co-designed the microelectronics and software of a real-time microwave (wireless) signal analyzer in the mid-1970s.

6.　　I am the founder (1976) and original editor of the COMPUTER MUSIC JOURNAL,[1] an academic publication of international research on the application of computer science, signal processing mathematics, electronics, software, physics, acoustics and psychology of perception to the composition, recording, editing, and processing of music. Publication of several books[2] resulted from the articles I collected and edited.

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[1] Computer Music Journal, MIT Press.

[2] Revised articles from the COMPUTER MUSIC JOURNAL with new articles edited by John Snell, John Strawn and Curtis Roads were published in 3 books:

7.   I also did research in digital audio and music processing at Stanford University from 1977–1980 at the Center for Computer Research in Music and Acoustics (CCRMA). I worked on the development of the third generation of the CCRMA mainframe computer for editing, signal processing, and playing digital music files, and our computer was connected to the ARPANET.

8.   I was a design engineer from 1980–86 at Lucasfilm Ltd., where we designed and developed the microelectronics and software of graphics-based multiprocessor supercomputers for recording, processing, synthesis, editing and transferring of digital music, voices, Foley, and sound effects. In addition to design of the programmable digital mixing console and solid state memory system of our Digital Audio Signal Processor (a.k.a. ASP and SoundDroid), I contributed to the architecture[3] and use of higher-speed circuitry (change from noisy, slower

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Footnote continued from previous page

FOUNDATIONS OF COMPUTER MUSIC (MIT PRESS 1985), DIGITAL AUDIO Engineering (Kaufmann 1985), and DIGITAL AUDIO SIGNAL PROCESSING (Kaufmann 1985).

[3] Contributions to the architecture included replacement of the traditional single-bus with a dual-bus for faster processing (since most calculations involve dual-operands), touch-sensitive, interactive graphics screen technology for ease of

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