UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONOS, INC.
Petitioner

v.

IMPLICIT, LLC
Patent Owner

Case: To Be Assigned

Patent No. 8,942,252

DECLARATION OF ROMAN CHERTOV IN SUPPORT OF THE *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,942,252

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I, Roman Chertov, declare and state as follows:

I. INTRODUCTION

1. I have been retained as an expert witness for the *Inter Partes* Review ("IPR") of U.S. Patent No. 8,942,252 (the "'252 Patent" or "Balassanian") (Ex.1001), as well as the IPR of U.S. Patent No. 7,391,791 (the "'791 Patent"), filed by Sonos, Inc. ("Sonos") against Implicit, LLC ("Implicit"). In particular, for this IPR, I have been asked to render opinions as to the patentability of Claims 1-3, 8, 11, and 17 of the '252 Patent (the "Challenged Claims").

2. I understand that, on March 10, 2017, Implicit filed a Complaint against Sonos in the U.S. District Court for the District of Delaware that alleged infringement of the '791 and '252 Patents (the "Underlying Litigation").

II. BACKGROUND & QUALIFICATIONS

3. A copy of my *Curriculum Vitae* ("CV") is attached to this declaration as Appendix 1, which contains a detailed record of my professional qualifications, aspects of which I have summarized below.

4. In 2002, I earned a Bachelor of Science in Computer Science from the University of Maryland. In 2004, I earned a Master of Science in Computer Science from Purdue University. In 2008, I earned a Ph.D. in Computer Science from Purdue University. My thesis project was related to using high precision

empirical network measurements to improve the fidelity of network router simulations.

5. During the winters and summers between 1997 and 2002, I worked as a software developer for Bechtel Group, Inc. During the course of my work at Bechtel, I developed various controls in C++ and Visual Basic that served as modular components in a client application that interfaced with a large scale civil engineering database.

6. As a student at the University of Maryland, I worked as a software developer at Market Switch, Inc. in the 2000-2001 timeframe, and I developed software for the University of Maryland in the 2001-2002 timeframe.

7. From 2004 to 2008, I was a research assistant at Purdue University. During that time, I worked on various projects related to networked systems, including creating high-fidelity simulation router models; creating a network emulation tool; creating tools for experiment automation on large testbeds, such as Emulab and DETER, as part of the EMIST project; and conducting data analysis on large packet captures.

8. In 2005, I also worked for the Information Science Institute where I analyzed network performance of nodes and modular routers and developed a software link monitor.

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