UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.

Petitioner,

v.

VOIP-PAL.COM, INC.,

Patent Owner

Case No. IPR2016-01201
U.S. Patent 8,542,815

DECLARATION IN SUPPORT PATENT OWNER RESPONSE TO INTER PARTES PETITION

Voip-Pal Ex. 2016
IPR2016-01201

I, William Henry Mangione-Smith, declare as follows:

I. INTRODUCTION

1. During the preparation of this Declaration, I have reviewed the following, as well as the other documents discussed in this Declaration:

a. U.S. Patent No. 8,542,815 ("the '815 Patent") and its file history;

b. U.S. Patent No. 9,179,005 ("the '005 Patent") and its file history;

c. Apple, Inc.'s Petition For *Inter Partes* Review Of U.S. Patent No. 8,542,815, including attached Declaration Of Henry H. Houh, PhD;

d. Apple, Inc.'s Petition For *Inter Partes* Review Of U.S. Patent No. 9,179,005, including attached Declaration Of Henry H. Houh, PhD;

e. Declaration of Ryan Purita (**Ex. 2011**);

f. Declaration of Johan Emil Viktor Bjorsell (**Ex. 2012**);

g. Declaration of Clay Perreault (**Ex. 2013**);

h. Declaration of David Terry (**Ex. 2018**);

i. Deposition Transcript of Henry H. Houh, Ph.D. Volumes I and I (**Ex. 2043, 2044**)

j. Subversion repository svn.tar file;

k. U.S. Patent No. 7,486,684 to Chu ("the Chu '684 Patent");

l. U.S. Patent No. 8,036,366 to Chu ("the Chu '366 Patent");

m. U.S. Patent Publication No. 2007/0064919 to Chen at al. ("the Chen Patent").

2. I have been retained by Voip-PAL.Com Inc. ("Voip-PAL") as an expert in the fields of computer science, computer communications, and related technologies. I am being compensated at my normal consulting rate. My compensation is not dependent on and in no way affects the substance of my statements in this Declaration. I have no financial interest in Voip-PAL, in the '815 Patent or in the '005 Patent.

II. QUALIFICATIONS

3. My technical background covers most aspects of computer system design, including low level circuitry, computer architecture, computer networking, graphics, application software, client-server application, Web technology, and system software (e.g., operating systems and compilers). I am a member of the Institute of Electrical and Electronics Engineers and the Association for Computing Machinery, which are the two most significant professional organizations in my profession. I have been employed as a design engineer, research engineer, professor and technical expert. Over my professional career I have been an active inventor with 109 issued U.S. patents, 196 published and pending U.S. patent applications and many unpublished U.S. patent applications.

4. From 1984 until 1991 I attended the University of Michigan in Ann Arbor, Michigan. I was awarded the degrees of Bachelor of Science and Engineering, Master of Science and Engineering, and Doctorate of Philosophy. My doctoral research focused on high performance computing systems including computer architecture, applications and operating system software, and compiler technology. One of my responsibilities during my graduate studies included teaching senior undergraduate students who were about to enter the profession.

5. After graduating from the University of Michigan I was employed by Motorola in Schaumburg, Illinois. While at Motorola, I was part of a team designing and manufacturing the first commercial battery-powered product capable of delivering Internet email over a wireless (i.e., radio frequency) link and one of the first personal digital assistants. I also served as the lead architect on the second-generation of this device. Part of my responsibilities at Motorola involved the specification, design, and testing of system control Application-Specific Integrated Circuits ("ASICs"). I conducted the initial research and advanced design that resulted in the Motorola M*Core embedded microprocessor. M*Core was designed to provide the high performance of desktop microprocessors with the low power of contemporaneous embedded processors. The M*Core received widespread use in a number of communications products including various

telephonic handsets, advanced pagers, and embedded infrastructure. While at Motorola I was the sole inventor on one U.S. patent.

6. From 1995 until 2005 I was employed by the University of California at Los Angeles ("UCLA") as a professor of Electrical Engineering. I was the director of the laboratory for Compiler and Architecture Research in Embedded Systems ("CARES") and served as the field chair for Embedded Computing Systems. The CARES research team focused on research, engineering and design challenges in the context of battery-powered and multi-media mobile computing devices. One of the key developments of my lab was the Mediabench software tool, which is widely used to design and evaluate multi-media embedded devices. Key elements of Mediabench include software that is essential for modern digital telephony. My primary responsibility, in addition to classroom teaching, involved directing the research and training of graduate students. I was a tenured member of the faculty, and had responsibilities for teaching as well as scholarly research. While at UCLA I was a named inventor on three U.S. patent applications, one of which issued as a patent. My colleagues at UCLA were some of the leading scientists and engineers in the world with a long list of innovations from computer network security devices to the nicotine patch. The graduate student researchers in my laboratory came from a diverse set of backgrounds, all with undergraduate degrees in computer engineering, electrical engineering or computer science, many

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