

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

VOIP-PAL.COM, INC.

Plaintiff,

v.

META PLATFORMS, INC., and
WHATSAPP, INC.

Defendants.

CIVIL ACTION NO. 6:20-cv-267-ADA

VOIP-PAL.COM, INC.

Plaintiff,

v.

GOOGLE LLC,

Defendant.

CIVIL ACTION NO. 6:20-cv-269-ADA

VOIP-PAL.COM, INC.

Plaintiff,

v.

AMAZON.COM, INC.;
AMAZON.COM SERVICES LLC; and
AMAZON WEB SERVICES, INC.,

Defendants.

CIVIL ACTION NO. 6:20-cv-272-ADA

DECLARATION OF WILLIAM HENRY MANGIONE-SMITH

I, William Henry Mangione-Smith, declare as follows under penalty of perjury according to the laws of the United States:

I. Introduction

1. I have personal knowledge of the facts contained in this declaration and, if called as a witness, I could and would competently testify to those facts. I am being compensated at my normal consulting rate, which is \$650 per hour. My compensation does not depend on and in no way affects the substance of my statements in this Declaration.

II. Qualifications

2. 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 the computer field. 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an active inventor with at least 121 issued U.S. patents, 206 published and pending U.S. patent applications and many unpublished U.S. patent applications.

3. 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 Doctor 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.

4. 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 communicating 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 several communications products including various telephone handsets, advanced pagers, and embedded infrastructure. While at Motorola I was also the sole inventor on one U.S. patent.

5. 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. 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 of them had multiple years of experience working as professional engineers in areas such as software development, computer system design and ASIC circuit design.

6. From 2005 until 2009, I was employed at Intellectual Ventures in Bellevue, Washington. My responsibilities at Intellectual Ventures included business development, technology assessment, market forecasting, university outreach, collaborative inventing, intellectual property licensing support, and intellectual property asset pricing. My colleagues and co-inventors at Intellectual Ventures included the former lead intellectual property strategist at Intel, Intel's lead IP council, Microsoft's chief software architect, the founder of Microsoft research, the designer of the Mach operating system, the architect of the U.S. Defense Department's Strategic Defense Initiative, the founder of Thinking Machines (a seminal parallel-processing computer system), and Bill Gates. I had responsibility for hiring and managing over 15 staff members including multiple Ph.Ds. with degrees in engineering and science along with decades of experience in product design and engineering.

7. A brief summary of some of my qualifications for the facts and understandings stated in this declaration are as follows: I have more than 27 years of experience as a computer architect, computer system designer, educator, and as an executive in the PC and electronics business. I am also a member of a number of professional associations, such as the ACM, IEEE and have been intimately involved in professional research through the International Symposium on Microarchitecture (Program Chair for 26th and General Chair for 36th), IEEE Transactions on Computers (Associate Editor), ACM Transactions on Embedded Computing Systems (Associate Editor), and IEEE Computer (Associate Editor). I also have been on the program committees for many computer conferences, including a Network Processors Workshop. For further details regarding my employment and academic history, please refer to my curriculum vitae (Ex. A).

III. Task

8. I have been asked to provide testimony regarding the understanding of a person of ordinary skill in the art ("POSITA") at the time of invention regarding the technology disclosed and

claimed in VoIP-Pal's patents in general, and in particular, in U.S. Patent No. 10,218,606 patent ("the '606 patent"). This is not the first time I have provided testimony for VoIP-Pal. For example, I provided expert declarations and deposition testimony in *inter partes* reviews (IPR2016-01198 and IPR2016-01201) relating to two of VoIP-Pal's patents, namely, U.S. Patent No. 8,542,815 ("the '815 Patent") and U.S. Patent No. 9,179,005 ("the '005 Patent"), of which the '606 patent is a continuation. I have also previously submitted a declaration regarding the '606 patent, which I incorporate by reference. *See* Case No. 5:20-cv-2397-LHK, Dkt. No. 52-1; Case No. 5:20-cv-2460-LHK, Dkt. No. 62-1; Case No. 5:20-cv-2995-LHK, Dkt. No. 63-1. While I am not a lawyer and have no formal legal training, I am a prolific inventor with many issued Patents, I have worked at the intersection of patents and computer technology for at least 15 years, and I have provided expert testimony in many patent cases. In making the statements contained in this declaration, I have relied on my education in computer engineering, 30+ years of professional experience, and at least the documents identified below.

- U.S. Patent No. 8,542,815 ("the '815 Patent") and its file history;
- U.S. Patent No. 9,179,005 ("the '005 Patent") and its file history;
- Documents filed in IPR2016-01198 and IPR2016-01201 (*inter partes* reviews relating to the parent '815 and '005 Patents), including inventor declarations, prior art, telecommunications dictionaries and reference works.
- U.S. Patent No. 9,826,002 ("the '002 patent") and its file history;
- U.S. Patent No. 9,948,549 ("the '549 patent") and its file history;
- U.S. Patent No. 9,813,330 ("the '330 patent") and its file history;
- U.S. Patent No. 9,537,762 ("the '762 patent") and its file history;
- U.S. Patent No. 9,935,872 ("the '872 patent") and its file history;
- U.S. Patent No. 10,218,606 ("the '606 patent") and its file history;

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