UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO HOLDING COMPANY, INC., LENOVO (UNITED STATES) INC., and MOTOROLA MOBILITY LLC, Petitioners,

v.

DODOTS LICENSING SOLUTIONS LLC, Patent Owner.

CASE IPR2019-01279 Patent No. 8,510,407

DECLARATION OF DOCTOR EARL SACERDOTI, PH.D.



I, Dr. Earl Sacerdoti, Ph.D., declare as follows:

I. <u>BACKGROUND AND QUALIFICATIONS</u>

- 1) My name is Earl Sacerdoti. I have practiced in the field of computer science for 50 years. I am being compensated at the rate of \$550 an hour for my testimony in this matter.
- 2) I received my Bachelor of Arts in Psychology from Yale College in 1969. I received both my Master of Science (M.S.) and my Doctor of Philosophy (Ph.D) degrees in Computer Science from Stanford University in 1972 and 1975, respectively, and also took courses at Stanford's graduate business school in 1983 as part of its American Electronics Association-sponsored Executive Education Program.
- Institute (now SRI International), initially as a Research Mathematician, and later as the Associate Director for the Artificial Intelligence Center. In those roles, I managed and performed research in a variety of subfields within Artificial Intelligence. In 1973-4 I developed QLISP, an interpreted, incrementally compilable programming language for AI systems. I am credited with pioneering "modern problem solving," along with developing, marketing and participating in research programs in automated and



interactive problem solving, natural-language interaction with data bases, distributed robotics, and programming languages. From 1975 through 1979, I conceived and managed a project that developed software for a testbed operated for the US Navy, which offered English-language access to a database distributed across multiple computers on the Arpanet, the predecessor to today's Internet.

- 4) After leaving SRI International, I co-founded Machine Intelligence Corporation, where I served as Director of Research and Development, Vice President of Engineering, and President of International Machine Intelligence Corporation. Here, I directed development of the first general industrial vision system, the first vision-guided industrial robot, and the first computer-networked industrial robot. I also supervised and participated in developing the prototype of a data management product, for which we created a spin-off business named Symantec, Inc., a leading software publisher.
- 5) In 1983 I joined Teknowledge, Inc. as Chief Technical Officer, and later served as General Manager of its products division and Vice President of Business Development. In these roles, I managed the development, sales, and application of two programming languages for developing expert systems.



- Since leaving Teknowledge in 1988, I worked primarily as 6) Principal Consultant for The Copernican Group and subsequently as Managing Partner for Opero Partners, LLC. In these roles, I provided management and technical consultation to over 100 companies. Many of these projects, including work for Sun Microsystems, Apple Computer, and dozens of early-stage software vendors, involved applications downloadable from network locations that display content to users. In 1997 I served as Acting VP, Engineering for Open Minded Solutions, where I developed a product that generated HTML web pages dynamically from document descriptions using the SGML standard, a predecessor to XML. I consulted for Sun Microsystems during 1989-91, where I became aware of the development of what became its Java language, which was originally created to program embedded systems. My recent work includes serving on the Advisory Board and consulting for Lingto, Inc., where I assisted in drafting and prosecuting US Patent 10,492,041, which discloses a system and method for easily modifying applications for mobile devices.
- 7) In 1994-95, I established the Apple Systems Architecture group, reporting to Apple's Chief Scientist, to coordinate technology developments across its business units. There, I developed Apple's first technology roadmap. I led the AppleSoft Architecture Council. I executed



special projects for the CEO's Product Strategy Council, including market and technical strategies for enterprise computing, and for the Internet. In this role, I believe I introduced Java to the Apple executive team.

- 8) I also am the author of a book and over 20 papers and articles on a wide range of advanced software topics. I am the inventor of U.S. Patent Number 6,222,540, which discloses an aspect of a downloadable application for selecting the most appropriate data visualization for a data set. I am principal inventor of U.S. Patent Number 6,188,403, and co-inventor of seven other United States Patents: U.S. Patent Numbers 6,954,728, 7,797,168, 7,996,264, 8,407,086, 8,417,535, 8,583,562, and 9,589,274. I am the inventor of an as-yet-unpublished application for a United States Patent. I am also a co-inventor of several abandoned applications.
- 9) I am a co-founder of the American Association for Artificial Intelligence (AAAI), and a former member of the editorial boards of Cognitive Science, Robotics World, and AI Expert, and was Conference Chair for AIPS-96 (an international conference on automatic planning). I also am a former member of the Steering Committee of the DECUS AI Special Interest Group, and program committees of numerous AAAI and IEEE conferences on both computer science research and applications. I



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