

Patent Law and Defense Technology: Original Intent and Current Practice

Douglas W. Robinson
Lenovo Group Ltd.
Morrisville, North Carolina
drobinson1@lenovo.com

Mark C. Davis
Computer Engineer
Mooresville, North Carolina
davismc@ieee.org

Dan M. Davis & Nicholas J. Kaimakis
University of Southern California
Los Angeles, California
dmdavis@acm.org & kaimakis@usc.edu

ABSTRACT

The protection of inventions and other intellectual property (IP) is provided for in Article I of the U.S. Constitution, but the passage of time and the evolution of society has clouded the original goals and obfuscated the vision of promoting progress. Using diverse points of view, the authors present the history and the current impact of the Patent system on the development and deployment of technology, especially as these relate to national defense issues. This paper begins with a quick review of the inherent need for the protection of IP, the founders' intent, and the ways in which the legal processes have altered over the decades. They justify their assertion that not all of these changes have been salutary and discuss times when they have become impediments to or destructive of progress. Some feel that protection of the lone inventor has given way to weapons of organized interlopers and defensive tactics by large corporations. Patent grants have exploded to unimaginable levels. Data will be presented on the number and complexity of patents. The paper will follow that with an analysis of the pressures that have caused that drift from the original goals. There is a review of thought concerning the current practice and future changes to encourage creative endeavors from the point of view of Legal, Technical and Academic participants. A brief outline is given of international issues and the impact of various countries' approach to this problem and steps that the U.S. might take to enhance the rule of law and the global protection of IP. This is discussed in relation to its being necessary for a strong defense environment for the Nation and its allies. The paper closes with possible areas of future disruption.

ABOUT THE AUTHORS

Douglas W. Robinson is the Executive Director of Intellectual Property at the Lenovo Group Ltd. Lenovo is one of the world's largest computer manufacturers. Prior to that he was Corporate Counsel for Infineon Technologies North America Corp. Earlier professional activities include being a partner in Banner & Witcoff, Ltd., an IP law firm in Washington, D.C. and worked in various law firms for over 20 years. Mr. Robinson received a BSEE degree from the Rensselaer Polytechnic Institute in Troy New York and a JD Degree from the Benjamin N. Cardozo School of Law, Yeshiva University in New York City.

Mark C. Davis, Ph.D. is currently retired after careers in the US Navy and as a computer design engineer for both IBM and Lenovo. Rising to the level of Distinguished Engineer at Lenovo, he was responsible for the design of laptop computer cross-disciplinary technology, including PC architecture, imbedded systems, open source and virtualization. Previous work was with IBM in the areas of software development and architecture involving security, storage and virtualization. Dr. Davis has been granted well over fifty patents that were filed during his service at both companies. He is a graduate of the Duke University NROTC program and was commissioned as an Ensign, attended nuclear power school, and served as an Submarine Officer for twelve years before leaving the service as a Lieutenant Commander to pursue a PhD. Mark holds a BSEE degree from Duke University and a PhD in Computer Science from the University of North Carolina, where his advisor was Professor Fredrick P. Books.

Dan M. Davis is a consultant for the Institute for Creative Technologies, University of Southern California, focusing on large-scale distributed DoD simulations. Before retiring, he was the Director of the JESPP project at USC for a decade. As the Assistant Director of the Center for Advanced Computing Research at Caltech, he managed Synthetic Forces Express, bringing HPC to DoD simulations. Prior experience includes serving at the Maui High Performance Computing Center as the Director of Contracts and Finance and at the Jet Propulsion Laboratory and Martin Marietta. He has served as the Chairman of the Coalition of Academic Supercomputing Centers and has taught at the undergraduate and graduate levels. As early as 1971, Dan was writing programs in FORTRAN on one of Seymour Cray's CDC 6500's. He saw duty in Vietnam as a USMC Cryptologist and retired as a Commander, Cryptologic Specialty, U.S.N.R. He received B.A. and J.D. degrees from the University of Colorado in Boulder.

NICHOLAS J. KAIMAKIS is active in research at the Institute for Creative Technologies of the University of Southern California. His current research thrusts are in the use of computer generated avatars or video clips,

animated and directed by natural language optimized Artificial Intelligence (A/I) programs that present a life-like dialogue capability to interact with remote users via the internet. His current project is funded by the Navy and is designed to help improve knowledge of STEM fields across varied demographics with the development of an interactive interface that makes STEM information more accessible on-line. He is an undergraduate student studying Computer Science within the Viterbi School of Engineering at the University of Southern California.