



Peter J.W. Melsa

Patent Agent

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Peter prosecutes domestic and foreign patents for emerging technologies across a range of industries, with a focus on electrical, computer, and software technologies. He prepares patent applications; responds to office actions; and develops patent strategies that provide a competitive edge in the marketplace for a diverse clientele, ranging from startups to Fortune 100 companies.

Peter is adept at quickly understanding his clients' technologies, using research and engineering skills he honed during his nearly two decades of industry experience as a research and staff engineer in the fields of communications and signal processing for Tellabs, a major communications equipment supplier, and for Texas Instruments, a major semiconductor manufacturer. As part of this work, he was tasked with moving between existing and emerging technologies, developing an understanding of the current state of art, identifying areas for improvement and applicability to his employers' business interests, and developing key technological innovations. Peter holds 24 patents and has published over a dozen papers for this work. A pioneer in the inceptive days of high-speed Internet, Peter served as an editor of the International standard for high-speed Internet over ordinary telephone cables. Peter is a Senior Member of the IEEE in recognition of his industry contributions in the areas of signal processing and communications, and was awarded a National Science Foundation graduate studies fellowship.

Today, as a patent agent, Peter leverages his extensive engineering experience together with a love of learning. Peter applies his research skills, and channels his interest in new and diverse technologies into obtaining patents on the innovative products his clients are creating, many of which promise to make the world a better and safer place.

Practices

- Patent Prosecution

Industries

- Electrical & Computer Technologies

Representative Experience

Peter has prepared and prosecuted domestic and foreign patent applications across a wide range of cutting-edge technologies, including:

- Communication systems and technologies
- Signal processing
- Software
- Computers
- Consumer electronics
- Insurance
- Machine learning
- Virtual/augmented reality
- Digital imaging/cameras
- Retail equipment and systems
- Internet of Things
- Large and small domestic appliances
- Virtual machines
- Virus/malware detection
- Integrated circuits
- Oilfield exploration
- Aircraft lighting systems
- Audience measurement
- Medical imaging
- Encryption
- Fitness equipment
- Gantry cranes
- Manufacturing process control systems
- Personal weather stations

Background and Credentials

Prior to joining Marshall Gerstein, Peter worked as an electrical engineer for nearly two decades in the areas of communications and signal processing; worked as a patent agent at three other law firms; and worked as an in house patent agent for a domestic appliance manufacturer where, among other duties, he managed a patent portfolio.

Bar Admissions

- U.S. Patent and Trademark Office

Education

- North Carolina State University (M.S.)
 - Electrical and Computer Engineering
- University of Notre Dame (B.S., *summa cum laude*)
 - Electrical Engineering

Publications and Presentations

- R. Younce, P. Melsa, S. Kapoor, "Echo Cancellation for Asymmetrical Digital Subscriber Lines," *Proceedings of ICC '94*, May 1994.
- P. Melsa, R. Younce, C. Rohrs, "Impulse Response Shortening for Discrete MultiTone Transceivers," *IEEE Transactions on Communications*, pp.1662-1672, Vol. 44, Num 12, December 1996.
- P. Melsa, "Application of Programmable DSPs for DMT and ADSL," Full Day Tutorial at *DSP World Spring Design Conference*, April 1998 and April 1999.
- K. Maclean, M.Corsi, R. Hester, J. Quarfoot, P. Melsa, R.Halbach, C.Kozak, T.Hagan, "A 610-mW Zero-Overhead Class G Full-Rate ADSL CO Line Driver," *Journal of Solid State Circuits*, December 2003.