



Thomas W. Barr, Ph.D.

Science Advisor

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Education

Rice University (Ph.D.,
Computer Science; M.S.,
Electrical and Computer
Engineering)

Harvey Mudd College (B.S.,
Engineering and Music),
with distinction, honors in
Computer Science

Dr. Thomas W. Barr is a science advisor at Irell & Manella LLP, where he specializes in technical advising for patent litigation and runs Irell's in-house Technical Analysis Laboratory. He has experience advising on various technologies, including computer architecture, integrated circuit design and fabrication, telecommunications, medical and embedded devices, and operating systems/security.

Prior to joining Irell, Thomas was a research assistant at Rice University. His research has focused on computer architecture and operating systems, specifically in the areas of high-performance computing, memory systems, robotics, and embedded systems. Thomas was the original maintainer of embeddedpython.org, an open-source Python environment for microcontrollers. He is an active member of the Institute of Electrical and Electronics Engineers and the Association for Computer Machinery.

Thomas earned his Ph.D. in Computer Science and his M.S. in Electrical and Computer Engineering from Rice University. He earned his B.S. in Engineering and Music, with distinction, from Harvey Mudd College.

Experience

- *Intel Corporation v. Future Link Systems LLC (D. Del.)*. Obtained a settlement for Future Link Systems, resolving a patent dispute against Intel Corp. involving many hundreds of billions of dollars of microprocessors manufactured by Intel. In total, every one of Intel's high-volume processors sold within the last eight years was accused of infringing multiple patents. Irell obtained favorable claim construction rulings, defeated two rounds of summary judgment motions and convinced the court to reject every one of Intel's Daubert motions. With trial scheduled to begin in September, Intel had not managed to remove a single claim of a single patent from the case. In August 2017, after three years of litigation, Intel agreed to a confidential settlement.
- *MyMail, Inc. v. Conduit Ltd., Perion Network Ltd., et al. (E.D. Tex., PTAB)*. Represented the defendants in patent litigation and related *inter partes* review involving patents related to browser toolbar technology. The case

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settled shortly before oral hearing in the *inter partes* review.

- *MyMail, Ltd. v. Yahoo!, Inc. (E.D. Tex.)*. Defended Yahoo! against patent infringement claims related to toolbar updating. The case settled in late 2017 on confidential terms.

Publications

- "Microcontroller Programming for the Modern World," Dissertation, Rice University, Houston, TX (2014)
- "Medusa: Managing Concurrency and Communication in Embedded Systems," *In Proceedings of the 2014 USENIX conference on Annual Technical Conference (USENIX ATC'14)*, USENIX Association, Berkeley, CA (2014)
- "Design and implementation of an embedded python run-time system," *In Proceedings of the 2012 USENIX conference on Annual Technical Conference (USENIX ATC'12)*, USENIX Association, Berkeley, CA, pp.27-27 (2012)
- "SpecTLB: A Mechanism for Speculative Address Translation," *In Proceedings of the 37th Annual International Symposium on Computer Architecture (ISCA'11)*, ACM, New York, NY, pp.307-318 (2011)
- "A Low-Cost Multi-Robot System for Research, Teaching, and Outreach," *In Proceedings of DARS 2010, a volume of Tracts in Advanced Robotics*, Springer (2011)
- "Translation Caching: Skip, Don't Walk (the Page Table)," *In Proceedings of the 36th Annual International Symposium on Computer Architecture (ISCA '10)*, ACM, New York, NY, pp.48-59 (2010)
- "Grid-enabling orbital analysis and computationally intensive applications for a growing set of diversified users," *In Proceedings of the Network Operations and Management Symposium*, pp.615-629 (April 2008)
- "Owl: Microcontroller Development for the Modern World," *In USENIX/login*, pp.45-51 (February 2013)
- "A MIPS R2000 Implementation," *In Proceedings of the 45th Annual Design Automation Conference (DAC '08)*, ACM, New York, NY, pp.102-107 (2008)