

Keynote Talk

P2P, DSM, and Other Products of the Complexity Factory

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Abstract

In order to get your paper accepted at a major conference, the idea you develop in the paper must be complex, preferably even incomprehensible to all but the few experts. In order to have your idea have any impact in a real system, it must be simple and comprehensible to the above-average programmer in industry. The obvious net result of this contradiction is that very few papers at major conferences have any impact in real systems. This talk will explore some examples of this dilemma, some counterexamples of ideas that were successfully transferred to practice, and some ideas on how we can perhaps improve the situation.

Categories & Subject Descriptors: [C.5.0] Computer systems implementation: General; [D.1.3] Programming techniques: Concurrent Programming; [D.4.7] Operating Systems: Organization and design.

General Terms: Design.

Bio

Willy Zwaenepoel is professor and dean of the School of Computer and Communication Sciences at EPFL in Lausanne, Switzerland. He received his B.S. from the University of Gent in 1979, and his M.S. and Ph.D. from Stanford, in 1980 and 1984, respectively. Before joining EPFL in 2002, Willy Zwaenepoel was on the faculty at Rice University, where he was the Karl F. Hasselmann Professor of Computer Science and Electrical and Computer Engineering.

He has worked in a variety of aspects of operating systems and distributed systems, including microkernels, fault tolerance, parallel scientific computing on clusters of workstations, clusters for web services, and mobile computing. He is most well known for his work on the Treadmarks distributed shared memory system, which was licensed to Intel and became the basis for Intel's OpenMP cluster product. His work on high-performance software for network I/O led to the creation of iMimic Networking, Inc, which he led from 2000 to 2005, and which was later acquired by Ironport Systems. His current projects include database replication, I/O performance of virtual machines, and software update mechanisms.

He was elected Fellow of the IEEE in 1998, and Fellow of the ACM in 2000. He won best paper awards at SigComm 1984, OSDI 1999, Usenix 2000, and Usenix 2006. He was program chair of OSDI in 1996 and Eurosys in 2006, and general chair of Mobisys in 2004. He was also an Associate Editor of the IEEE Transactions on Parallel and Distributed Systems from 1998 to 2002. In 2000, he received the Rice University Graduate Student Association Teaching and Mentoring Award.