

SIGOPS Annual Report 2003

Fiscal Year July 2002 - June 2003

Submitted by David Kotz, SIGOPS Chair

Overview

The SIGOPS community is as vital as ever. Despite the "operating systems" in our name, we continue to involve people who are interested in a wide range of systems issues, as exhibited by the content in the conferences listed above. In addition to core topics in operating systems, our community's interests span distributed systems, networks and the Internet, middleware, pervasive computing, security, mobile computing, multimedia systems, and more. Some areas that seem to be of rapidly increasing interest are pervasive computing, power management, sensor networks, security, scalable Internet services, peer-to-peer storage, and overlay networks.

Awards

At PODC last summer, the organizers gave the annual Influential Paper Award to Edsger W. Dijkstra, for "Self-stabilizing systems in spite of distributed control," in CACM 1974. This award was created to acknowledge an outstanding paper on the principles of distributed computing, whose significance and impact on the theory and/or practice of distributed computing has been evident for at least a decade. Indeed, shortly after PODC last year the ACM further recognized Dijkstra by renaming the award the "Edsger W. Dijkstra Prize in Distributed Computing". We note with sadness that Dijkstra passed away a few days later. This month, at PODC '03 in Boston, the Dijkstra Prize was given to Maurice Herlihy for "Wait-free synchronization", which appeared in TOPLAS in 1991. Congratulations to Maurice!

At OSDI in December SIGOPS presented the Mark Weiser award to Mendel Rosenblum. The award is presented each year at OSDI and SOSP to an individual "who has demonstrated creativity and innovation in operating systems research" and who began his or her career no earlier than 20 years prior to nomination.

Events

Coming soon, the Symposium on Operating Systems Principles (SOSP) will be held on the shores of Lake George in upstate New York. We look forward to seeing many of you there.

Also in the coming year, we have created two new conferences. Networked Systems Design and Implementation (NSDI) is cosponsored with SIGCOMM and USENIX, and SenSys is cosponsored with SIGCOMM, SIGMOBILE, SIGARCH, and SIGMETRICS.

NSDI 2004 is a new conference focused on the design principles of large scale distributed and networked systems. We believe systems as diverse as scalable web services, peer-to-peer file sharing, sensor nets, and distributed network measurement share a set of common challenges. Progress in any of these areas requires a deep understanding of how researchers are addressing the challenges of large scale systems

in other contexts. Our goal is to bring together researchers from across the systems community -- including operating systems, distributed systems, and computer networking -- to foster a cross-disciplinary approach to addressing our common research challenges. The first NSDI will be held in San Francisco at the end of March.

SenSys 2003 introduces a high caliber forum for research on systems issues in the emerging area of embedded, networked sensors. These distributed systems of numerous smart sensors and actuators connecting computational capabilities to the physical world have the potential to revolutionize a wide array of application areas by providing an unprecedented density and fidelity of instrumentation. They also present a host of novel systems challenges because of resource constraints, uncertainty, irregularity, and scale. SenSys design issues cut across multiple fields, including wireless communication, networking, operating systems, architecture, low-power circuits, distributed algorithms, data processing, scheduling, sensors, energy harvesting, and signal processing, so a holistic approach is required. SenSys seeks to provide a cross-disciplinary venue for researchers addressing the rich space of networked sensor system design issues to interact and exchange recent results. It is the first of a planned series of annual meetings with a highly selective, single-track technical program and a hands-on research exhibition. The first SenSys will be held in Los Angeles in November.

Looking beyond the coming year, note that the European Workshop will be held in Belgium in the fall (Yolande Berbers is General Chair, and Miguel Castro is Program Chair). We are actively seeking ideas for European locations for SOSP in 2005. Our long-term goal is to hold SOSP in Europe approximately once every three iterations. Given the overlap between SOSP and SIGCOMM attendance, there is an effort to avoid holding SOSP in Europe the same years that SIGCOMM is held in Europe.

Issues

We continue to communicate to our membership through the Operating Systems Review newsletter and the monthly email to the SIGOPS-announce mailing list. We continually strive to serve our community and our members well. The number of members is, however, decreasing. Although our conferences are well attended and in increasing numbers, and the research community is thriving, we find that fewer members of that community choose to become SIGOPS members. We encourage all systems researchers to continue support our community and to join SIGOPS.

Acknowledgements

Finally, I am happy to report the election of three outstanding new officers. Keith Marzullo (UCSD) replaces me as Chair, Gilles Muller (École des Mines de Nantes) replaces Valerie Issarny as Vice Chair, and Andrea C. Arpaci-Dusseau (U. Wisconsin) replaces Mike Dahlin as Treasurer. I wish them all the best.

I close with a great big thanks to all of those who have worked with us to make SIGOPS activities a great success... all the program chairs and their committees, all the general chairs and their committees, and all the ACM staff. I particularly thank my co-officers Valerie Issarny, Mike Dahlin, and Amin Vahdat, our newsletter editor Bill Waite, and our ACM program manager Irene Frawley.