ALUM Matters

A newsletter for alumni of the Department of Computer Science

Anandan leads Microsoft Research India

D r. PADMANABHAN ANANDAN (Ph. D. '87) has recently been named managing director of Microsoft Research India. Inaugurated on January 12, this newest Microsoft Research facility will carry out basic research in computer science, with its initial focus on technology for emerging markets and underserved communities in the fields of multi-language computing systems, sensor networks, and geographical information systems. A central issue being explored in the lab, and one in which it is well positioned to answer, is the basic question of how information technology can be made "accessible, affordable, and relevant" to the rural populations of emerging markets such as India.

One project that Microsoft Research India is already participating in is rural information technology (IT) kiosks. The emerging markets group, expected to be the largest group of the lab, has part-

nered with a number of organizations in India and in several African countries in an effort to assess the real computing needs of rural villagers and to determine the efficacy of rural computing kiosks. Given the prohibitive cost to the villagers for purchasing a computer, these kiosks often serve as the only way rural villages can benefit from information technology. Recognizing this, the project also aims to uncover the socio-economic concepts underneath information technology as we know it today, and is working with ethnography experts as well.

There are literally hundreds of rural IT kiosk projects in India representing the joint ventures of dozens of companies and research organizations. Anandan estimates that there are probably 6000 to 8000 individual kiosk stations in India alone, and there are projects going on in various African countries as well. Typically, the kiosks are comprised of one or more computers housed in a community building, with a designated operator assisting people with the computers' use. Some type of connectivity is usually provided, and with it comes access to potentially valuable information such as grain markets and farming equipment company websites. Often, the kiosks also serve as a place for children to receive informal computer training.

There are various models for the kiosks, from those completely funded by private corporations

Kiosk near Chennai, India.

or government agencies to those that are entirely commercial, and subsist by charging for hourly usage, or by charging the kiosk operator to perform certain tasks. The emerging markets group, which is led by the Assistant Managing Director Kentaro Toyama is in part trying to assess which model would work best for the computing needs. One thing that has become immediately clear from this research, said Anandan, is that the success of a kiosk depends a great deal on the training the kiosk operator has received.

Anandan has a very simple view of how to make an excellent research facility. "The best way to build a lab is to find good people for research and let them do problems they want to work on." He quips, "it's better to hire someone good and listen to them than to hire someone who's not good and tell them what to do." The Microsoft labs in general tend to be very much like academic departments, he said, and are very casual without much hierarchical management structure. With little pressure from the higher-ups to direct research, unlike most corporate labs, there is a great deal of personal freedom here.

After graduating from UMass Amherst, Anandan worked as an assistant

Twelve year old boy learning to type in a kiosk.

professor of computer science at Yale University, and built the computer vision group from the ground up. Then he had the opportunity to join forces with another UMass Amherst alumnus, Peter Burt (Ph.D. '76), at Sarnoff Corporation. Anandan worked as a research manager there, directing projects in airborne video surveillance and video stabilization technology.

Anandan left Sarnoff to join Microsoft where he served for seven years as a senior researcher in the Microsoft Research headquarters in Redmond, Washington. There he worked primarily in the areas of computer vision and video processing, the former being the subject of his Ph.D. research at UMass Amherst in the computer vision laboratory. Although these days he is not working in the area of his thesis directly, Anandan said that his time at UMass Amherst was an excellent preparation for him because of the responsibilities given to him by his advisors, Professors Ed Riseman and Allen Hanson. "Ed and Al gave me opportunities for leadership at a very young stage of my career," said Anandan. "They were very generous advisors." Even during his thesis work, Anandan began advising some of the more junior members of the lab. "By the time I finished my Ph.D., I felt like I had done much more."

Anandan recalls his UMass Amherst days fondly, remembering daily walks that he and his wife would take around the campus pond. Even in the winter, they would walk along the pond to the COINS department building, and his wife would say that the ducks weren't quacking but actually laughing at them. Asked about the reason for his success, Anandan replied that his wife would say he is just good at bringing out the best in the people around him.

Having been in both industry and academia, Anandan is in a unique position to comment on the differences between the two. He first qualified his industry experience as perhaps different from most because he was able to set his own agenda, and so it was a lot like academia. However, he noted that in a campus setting one constantly interacts with students, or as he put it, "fresh minds," which can invigorate or inspire research. The benefit of industrial research is that you can impact many people's lives through the product(s) the company makes. This benefit, however, can also limit one's efforts, as the research you conduct must be relevant to the business.

(l. to r.) **P. Anandan, managing director of Microsoft Research India; Kapil Sibal, Minister of State for Science and Technology, and Ocean Development for the Government of India; and Rick Rashid, senior vice president, Microsoft Research, at the Microsoft Research India inauguration. Minister of State Sibal inaugurated the operations by unveiling a plaque at the opening ceremonies for the facility.**

More information about Anandan's recent post as managing director can be found at **research.microsoft.com/aboutmsr/presskit/anandan/** and more information about Microsoft Research India can be found at **research.microsoft.com/aboutmsr/labs/india/.**

Save this Date

Computer Science Homecoming
Friday, October 14, 2005
www.cs.umass.edu/homecoming

Alumni Connections

Dr. Tom Wagner (Ph.D. '00) is serving an appointment as a Defense Advanced Research Projects Agency (DARPA) Program Manager in the Information Processing Technology Office (IPTO). While Wagner was Principal Research Scientist in the Advanced Applications Laboratory at Honeywell Laboratories, he collaborated with Professor Victor Lesser, his Ph.D. advisor during his years at UMass Amherst.

Michael Zyda (M.S. '78), a noted interactive game creator and theorist, joined the University of Southern California's Viterbi School of Engineering. He shares appointments at the Viterbi School's Information Sciences Institute (ISI) as Director of the GamePipe Laboratory and also at the Integrated Media Systems Center (IMSC), where he serves as an Associate Director and major thrust leader. The GamePipe Laboratory undertakes research and development in all aspects of interactive games. Zyda has created several highly successful games for the American military, including "America's Army" in his role as originator and director of the MOVES Institute at the Naval Postgraduate School in Monterey, California, as well as researching many basic aspects of interactive media. He has a D.Sc. in computer science from Washington University in St. Louis, and in 2003 was named a National Associate of the National Academies, in recognition of "extraordinary service."

Dan Suthers (Ph.D. '93), Associate Professor of Information and Computer Sciences at the University of Hawaii at Manoa, spent over a month on the National Oceanic and Atmospheric Administration (NOAA) research vessel conducting a scientific expedition to the Northwestern Hawaiian Islands. As part of the Education and Outreach team, Suthers documented the research and monitoring efforts as science writer for the expedition. More on the expedition and Suthers' journals can be viewed at **hawaiianatolls.org/research/NWHIRAMP2004/.**

Alden DoRosario (M.S.'04) left a senior research engineer position at Terra Lycos to co-found Chitika, Inc., a contextual advertising provider. Chitika offers unique one-stop-shop contextual advertising services that combine the strengths of multiple pay-per-click advertising networks into one, simplifying ad placement and revenue generation for clients.