

Association for Computing Machinery

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ACM AND INFOSYS FOUNDATION HONOR INNOVATOR OF SCALABLE WEB TECHNOLOGY THAT UNDERPINS ALL MAJOR INTERNET SERVICES

UC Berkeley's Brewer to Receive \$150,000 Prize for Contemporary Contributions to Data-Intensive Computing and Bringing the Information Technology Revolution to the Developing World

NEW YORK and BANGALORE, INDIA, March 15, 2010 – ACM (the Association for Computing Machinery) <u>www.acm.org</u> announced today that Eric Brewer, a professor at the University of California Berkeley, has been named the recipient of the 2009 ACM-Infosys Foundation Award in the Computing Sciences for his contributions to the design and development of highly scalable Internet services. Brewer laid the foundation for the giant data centers that make possible search, email, social networks, mapping, and other Internet services, and also enable cloud computing. Brewer, 43, also proposed the CAP Theorem (the inherent incompatibility of Consistency, Availability, and Partition tolerance, the core requirements for applications in distributed environments), an indispensable concept for practitioners who build and operate systems that serve hundreds of millions of customers cost-effectively and efficiently. He has directed his recent efforts to deliver information systems that benefit tens of thousands of people in developing countries with sustainable local resources.

The ACM-Infosys Foundation Award <u>http://awards.acm.org/infosys</u>, established in August 2007, recognizes personal contributions by young scientists and system developers to a contemporary innovation that exemplifies the greatest recent achievements in the computing field. Financial support for the \$150,000 award is provided by an endowment from the Infosys Foundation.

Dame Wendy Hall, ACM's president, said Brewer has delivered groundbreaking design and analytical work that forms the basis for how the world builds scalable service. "Professor Brewer's influential work on scalable web services has defined the basic architecture that is used by almost all systems, and marks him as a visionary with the potential to advance society on numerous social and economic levels."

In 1994, as part of the Berkeley Network of Workstations (NoW) project, Brewer recognized that clusters would be a perfect match for search and other Internet services. He built a highly scalable, cost-effective Web search service using clusters of computers, and went on to deploy this prototype at scale at Inktomi Corp., which he co-founded in 1995 with Berkeley graduate student Paul Gauthier. The company was purchased by Yahoo! in 2003.

Brewer's notion of clusters of Internet services has evolved into cloud computing, which relies on the Internet to share computer resources rather than on software or storage embedded on a local device. Brewer also introduced a model for database management systems that delivers high-scale Internet services known as the BASE (Basically Available, Soft-state, Eventual consistency) approach. This model has influenced how the massively scalable services that power e-commerce as well as cloud computing have been developed.

S. Gopalakrishnan (Kris), CEO and Managing Director, Infosys Technologies said, "We are especially proud to honor Eric Brewer for contributions to computer science research and his demonstration of the use of IT for the benefit of disadvantaged populations in many regions, especially in developing nations."

Technology and Development

Brewer is also known for Brewer's "Wireless Hypothesis," a radical notion that the best path for improving the quality of life in the rural areas of developing regions is to develop their information and communication infrastructure before the traditional infrastructure components are built, as the former are now significantly cheaper to deploy. This concept has been instrumental in the Technology and Infrastructure for Emerging Nations (TIER) research group, which Brewer heads.

TIER is aimed at bringing the information technology revolution to developing nations around the world. It has initiated several key projects that address the challenges of development in these regions using novel technologies to build educational tools, increase access to healthcare, extend wireless communications, and establish distributed storage facilities. For example, Brewer and his students deployed their WiLDNet technology, which repurposes standard low-cost WiFi chips with new software protocols and drivers to cover very long distances, thus enabling rural telemedicine in India. Over 25,000 patients have had their vision restored after diagnosis via TIER links used by India's Aravind Eye Hospital.

In 2000, Brewer founded the Federal Search Foundation, a 501(c) (3) organization to improve consumer access to government information. Through this foundation, he helped create <u>http://www.usa.gov/</u>, the official portal of the U.S. government, which was launched in September 2000.

Brewer was elected to the National Academy of Engineering in 2007, and selected as an ACM Fellow in 2008. He was named one of the Top Ten Innovators by *InfoWorld* in 2001 for his leadership of Internet search engines. In 2000, the *Industry Standard* named him Most Influential Internet Architect for leadership in large-scale web caching and early overlay networks. A graduate of UC Berkeley with a BS in electrical engineering and computer science, he was awarded MS and Ph.D. degrees from the Massachusetts Institute of Technology.

ACM will present the ACM-Infosys Foundation Award at its annual Awards Banquet June 26, in San Francisco, CA. For more information, click on <u>http://awards.acm.org/2010/acm-infosys-award.cfm</u>.

About ACM

ACM, the Association for Computing Machinery <u>www.acm.org</u>, is the world's largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

About The Infosys Foundation

Established in 1996, the Infosys Foundation is the philanthropic arm of Infosys Technologies Ltd. and has the sole objective of fulfilling the social responsibility of the company by creating opportunities and working toward a more equitable society. The Infosys Foundation has made effective strides in the areas of healthcare, education, social rehabilitation, and the arts. The company contributes up to one percent of its profit to the foundation each year.

About Infosys Technologies

Infosys (NASDAQ: INFY) defines, designs and delivers IT-enabled business solutions that help Global 2000 companies win in a Flat World. These solutions focus on providing strategic differentiation and operational superiority to clients. With Infosys, clients are assured of a transparent business partner, world-class processes, speed of execution and the power to stretch their IT budget by leveraging the Global Delivery Model that Infosys pioneered. Infosys has over 109,000 employees in over 50 offices worldwide. Infosys is part of the NASDAQ-100 Index and The Global Dow. For more information, visit <u>www.infosys.com</u>

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