



Association for
Computing Machinery

Advancing Computing as a Science & Profession

Contact: Virginia Gold
212-626-0505
vgold@acm.org

ACM HONORS MACH OPERATING SYSTEM FOR LASTING INFLUENCE ON COMPUTING LANDSCAPE

Rashid and Tevanian Led Mach's Development as an Innovative System For Widespread Commercial Use

NEW YORK, NY, April 20, 2015 – ACM, the Association for Computing Machinery (www.acm.org), today announced that Mach, a pioneering operating system used as the basis for later operating systems, has won the prestigious ACM Software System Award (http://awards.acm.org/software_system). The lead developers, Rick Rashid and Avie Tevanian, created a system that advanced the state of operating systems and led to practical, widespread adoption. Mach-based operating systems are used by hundreds of millions of people 30 years after the project began. ACM will present this and other awards at the ACM Awards Banquet on June 20 in San Francisco.

The Mach operating system, a DARPA-funded research project at Carnegie Mellon University conducted from 1983-1992, was based on innovative approaches to virtual memory management and microkernel architecture. Under the leadership of Rashid and Tevanian, Mach established a foundation for later operating systems on personal computers, tablets, and mobile phones. Rashid founded Microsoft Research in 1991, and is Vice President and Chief Technology Officer for Microsoft Applications and Services Group. Tevanian, formerly of Apple Inc., is Managing Director of Elevation Partners, a private equity firm.

Mach's influence reflects both significant commercial acceptance and substantial contributions to the concept of operating systems. For example, Mach's portability and performance attributes made it possible for Apple to rely extensively on it in their operating systems for their devices.

The Mach kernel forms the heart of the Apple iOS and OS X systems. Mach was at the core of NeXT's operating system, which Apple acquired and subsequently used as the basis of OS X and iOS. Mach's influence can also be traced to operating systems such as GNU Hurd, and UNIX systems OSF/1, Digital Unix, and Tru64 Unix.

About the ACM Software System Award

The ACM Software System Award honors an institution or individual(s) recognized for developing a software system that has had a lasting influence, reflected in contributions to concepts, in commercial acceptance, or both. This award carries a prize of \$35,000. Financial support for the award is provided by IBM.

About ACM

ACM, the Association for Computing Machinery www.acm.org, 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.

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