

## ***The UNIX System:***

### **Preface**

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Major technological breakthroughs, like the transistor, are rare events. These breakthroughs have far-reaching effects on science, business, and, at times, society. The *UNIX*<sup>™</sup> operating system is such a breakthrough.

This breakthrough is reflected in its rapid and continuing academic spread and acclaim, as well as its exploding commercial usage. The *UNIX* operating system presently is used at 1400 universities and colleges around the world. It is the basis for 70 computer lines covering the microcomputer to supercomputer spectrum; there are on the order of 100,000 *UNIX* systems now in operation, and approximately 100 companies are developing applications based on it. The 1983 Turing Award was presented to Thompson and Ritchie for their invention.

The importance of the *UNIX* system to AT&T and AT&T's support of it continue to grow. In his preface to the *UNIX Time-Sharing System*<sup>1</sup> issue of the *Journal*, T. H. Crowley observed that "the original design of the *UNIX* system was an elegant piece of work done in the research area, and that design has proven useful in many applications." In AT&T that observation is even truer now than it was in 1978. The *UNIX* operating system is the backbone development environment for AT&T and is now being used on hundreds of projects

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by thousands of programmers. The recently announced AT&T 3B family of 32-bit computers is based on *UNIX* System V.

This Computing Science and Systems issue of the *Journal* demonstrates two key points. First, the intellectual foundations laid by Thompson and Ritchie are firm footings for continued innovation and advances in computer science. Second, even though the *UNIX* system is already widely accepted, it is continuously being improved by the company that invented it.

## REFERENCE

1. T. H. Crowley, "The *UNIX* Time-Sharing System: Preface," *B.S.T.J.*, 57, No. 6, Part 2 (July–August 1978), pp. 1897–8.

## AUTHOR

**Robert L. Martin**, B.S. (Electrical Engineering), 1964, Brown University; M.S. (Electrical Engineering) and D.S. (Computer Science), The Massachusetts Institute of Technology in 1965 and 1967, respectively; AT&T Bell Laboratories, 1967—. Mr. Martin became Head of the Loop Maintenance Operations System department in 1972, Director of the Loop Maintenance Systems Laboratory in 1978, and Director of the Assignment Systems Design Laboratory in 1979. In 1981 he became Executive Director of the Customer Network Operations division. He assumed his present position as Executive Director of the Computer Systems Software division in 1983. Mr. Martin is responsible for *UNIX* system development. He holds two patents and is the author of numerous technical articles and a textbook. Member, Tau Beta Pi, Sigma Xi.