

Contributors to This Issue

Douglas L. Bayer, B.A., 1966, Knox College; M.S. (physics), 1968, and Ph.D. (nuclear physics), 1970, Michigan State University; Rutgers University, 1971-1973; Bell Laboratories, 1973—. At Rutgers University, Mr. Bayer was involved in low-energy nuclear scattering experiments. At Bell Laboratories, he has been involved in computer operating systems research on mini- and microcomputers. Member, ACM.

S. R. Bourne, B.Sc. (mathematics), 1965, University of London; Diploma in Computer Science, 1966, and Ph.D. (applied mathematics), 1969, Cambridge University; Bell Laboratories, 1975—. While at Cambridge Mr. Bourne worked on the symbolic algebra system CAMAL, using it for literal calculations in lunar theory. This work led to his interest in programming languages and he has been an active member of IFIP Working Group 2.1 on Algorithmic Languages since 1972. He has written a compiler for a dialect of ALGOL 68 called ALGOL68C. Since coming to Bell Laboratories he has been working on command languages. Member, RAS, CPS, and IFIP Working Group 2.1.

L. L. Cherry, B.A. (mathematics), 1966, University of Delaware; M.S. (computer science), 1969, Stevens Institute of Technology; Bell Laboratories, 1966—. Ms. Cherry initially worked on vocal tract simulation in Acoustics and Speech Research. After a brief assignment at Whippany and Kwajalein where she was responsible for the Safeguard utility recording package, she joined the Computing Science Research Center. Since 1971, she has worked in the areas of graphics, word processing, and language design. Member, ACM.

Carl Christensen, B.S. (electrical engineering), 1960, and M.S. (electrical engineering), 1961, University of Wisconsin; Bell Laboratories, 1961—. Mr. Christensen is currently a member of the Digital Switching and Processing Research Department.

Harvey Cohen, B.A. (mathematics), 1967, Northeastern University; M.S. (applied mathematics), 1970, New York University; Bell Laboratories, 1968—. Mr. Cohen began work in software development on the Automatic Intercept System (AIS). He later worked on

the system design and software development of the EADAS family of traffic collection and network management minicomputer systems. He is currently supervising the Network Engineering Support Group in the Advanced Communication System project. Member, Phi Kappa Phi.

T. H. Crowley, B.A. (electrical engineering), 1948, M.A., 1950, and Ph.D. (mathematics), 1954, Ohio State University; Bell Laboratories 1954—. Mr. Crowley has worked on magnetic logic devices, sampled-data systems, computer-aided logic design, and software development methods. He is presently Executive Director, Business Systems and Technology Division. Fellow, IEEE.

T. A. Dolotta, B.A. (physics) and B.S.E.P., 1955, Lehigh University; M.S., 1957, Ph.D. (electrical engineering), 1961, Princeton University; Bell Laboratories, 1960-1962 and 1972—. Mr. Dolotta has taught at the Polytechnic Institute of Grenoble, France, and at Princeton University. His professional interests include the human interface of computer systems and computerized text processing. Until March, 1978, he was Supervisor of the PWB/UNIX Development Group. He is now Supervisor of the UNIX Support Group. He served as ACM National Lecturer and as Director of SHARE INC. Member, AAAS and ACM; Senior Member, IEEE.

A. G. Fraser, B.Sc. (aeronautical engineering), 1958, Bristol University; Ph.D. (computing science), 1969, Cambridge University; Bell Laboratories, 1969—. Mr. Fraser has been engaged in computer and data communications research. His work includes the Spider network of computers and a network-oriented file store. Prior to joining Bell Laboratories, he wrote the file system for the Atlas 2 computer at Cambridge University. In 1977 he was appointed Head, Computer Systems Research Department. Member, IEEE, ACM, and British Computer Society.

R. C. Haight, B.A. (English literature), 1955, Michigan State University; Bell Laboratories, 1967—. Mr. Haight was with Michigan Bell from 1955 to 1967. Until 1977, he was Supervisor of the PWB/UNIX Support Group; since then, he has been Supervisor of the Time Sharing Development Group.

S. C. Johnson, B.A., 1963, Haverford College; Ph.D. (pure mathematics), 1968, Columbia University; Bell Laboratories, 1967—. Mr. Johnson is a member of the Computer Systems Research Department. His research interests include the theory and practice of compiler construction, program portability, and computer design. Member, ACM and AAAS.

J. C. Kaufeld, Jr., B.S., 1973, Michigan State University; M.S., 1974, California Institute of Technology; Bell Laboratories, 1973—. Mr. Kaufeld has participated in the design, programming, testing, and maintenance of minicomputer-based network management systems and in UNIX operating system support for operations support systems. Currently, he is working in operating system support for the Advanced Communications System.

Brian W. Kernighan, B.A.Sc., 1964, University of Toronto; Ph.D., 1969, Princeton University; Bell Laboratories, 1969—. Mr. Kernighan has been involved with heuristics for combinatorial optimization problems, programming methodology, software for document preparation, and network optimization. Member, IEEE and ACM.

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Gottfried W. R. Luderer, Dipl. Ing. E. E., 1959, Dr. Ing. E. E., 1964, Technical University of Braunschweig, Germany; Bell Laboratories, 1965—. Mr. Luderer has worked in the field of computer software; his special interests include operating systems and their performance. Mr. Luderer has taught at Stevens Institute of Technology and at Princeton University. He currently supervises a group engaged in the development and support of minicomputer operating systems for real-time applications. Member, IEEE and ACM.

H. Lycklama, B. Engin. (engineering physics), 1965, and Ph.D. (nuclear physics), 1969, McMaster University, Hamilton, Canada; Bell Laboratories, 1969-1978. As a member of the Information Processing Research Department, Mr. Lycklama was responsible for the

design and implementation of a number of operating systems for mini- and microcomputers. In 1977 he became supervisor of a software design group at Holmdel responsible for message switching and data entry services for a data communications network. He is currently associated with the Interactive Systems Corporation in Santa Monica, California.

Joseph F. Maranzano, B.Sc. (electrical engineering), 1964, Polytechnic Institute of Brooklyn; M.Sc. (electrical engineering), 1966, New York University; Bell Laboratories, 1964-1968 and 1970—. Mr. Maranzano is a Supervisor in the Small Systems Planning and Development Department. He has been engaged in the centralized maintenance, distribution, and support of the UNIX system since 1973.

J. R. Mashey, B.S. (mathematics), 1964; M.S. 1969, Ph.D. (computer science), 1974, Pennsylvania State University; Bell Laboratories, 1973—. Mr. Mashey's first assignment at Bell Laboratories was with the PWB/UNIX project. There, and later, in the Small Systems Planning and Support Department, he worked on text-processing tools, command-language development, and UNIX usage in computer centers. He is now a Supervisor in the Loop Maintenance Laboratory. His interests include programming methodology, as well as interactions of software with people and their organizations. Member, ACM.

M. D. McIlroy, B.E.P. (engineering physics), 1954, Cornell University; Ph.D. (applied mathematics), 1959, Massachusetts Institute of Technology; Bell Laboratories, 1958—. Mr. McIlroy taught at M.I.T. from 1954 to 1958, and from 1967 to 1968 was a visiting lecturer at Oxford University. As Head of the Computing Techniques Research Department, he is responsible for studies of basic computing processes, aimed at discovering the inherent capacities and limitations of these processes. He has been particularly concerned with the development of computer languages, including macro languages, PL/I, and compiler-compilers. Mr. McIlroy has served the ACM as a National Lecturer, as an editor of the Communications and Journal, and as Turing Award Chairman.

L. E. McMahon, A.B. 1955, M.A. 1959, St. Louis University; Ph.D. (psychology), 1963, Harvard University; Bell Laboratories, 1963—. Mr. McMahon's research interests include

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Robert Morris, A.B. (mathematics), 1957, A.M., 1958, Harvard University; Bell Laboratories, 1960—. Mr. Morris was on the staff of the Operations Research Office of Johns Hopkins University from 1957 to 1960. He taught mathematics at Harvard University from 1957 to 1960, and was a Visiting Lecturer in Electrical Engineering at the University of California at Berkeley during 1966-1967. At Bell Laboratories he was first concerned with assessing the capability of the switched telephone network for data transmission in the Data Systems Engineering Department. Since 1962, he has been engaged in research related to computer software. He was an editor of the Communications of the ACM for many years and served as chairman of the ACM Award Committee for Programming Languages and Systems.

Elliot R. Nagelberg, B.E.E., 1959, City College of New York; M.E.E., 1961, New York University; Ph.D., 1964, California Institute of Technology; Bell Laboratories, 1964—. Mr. Nagelberg is currently Head, CORDS Planning and Design Department, with responsibilities in the area of data base management for operations support and Electronic Switching Systems. Member, IEEE, Sigma Xi.

Joseph F. Ossanna, Jr., B.S. (electrical engineering), 1952, Wayne State University; Bell Laboratories, 1952-1977. During his career Mr. Ossanna did research on low-noise amplifiers, and worked on feedback amplifier theory and on mobile radio fading studies. He developed methods for precise prediction of satellite positions for Project Echo. He was among the earliest enthusiasts for time-sharing systems and took part in the development of the MULTICS system. More recently he was concerned with computer techniques for document preparation and with computer phototypesetting. Mr. Ossanna died November 28, 1977. Member, IEEE, Sigma Xi and Tau Beta Pi.

S. P. Pekarich, B.S. (electrical engineering), 1972, Monmouth College; M.S. (computer science), 1975, Stevens Institute of Technology; Bell Laboratories, 1967—. Mr. Pekarich first worked on support software for the maintenance of the Voiceband Interface and the Echo Suppressor Terminal. He is currently working for the MAC-8 microprocessor department. Member, Eta Kappa Nu, Sigma Pi Sigma, ACM.

Michael A. Pilla, B.S.E.E. and M.S.E.E., 1961, and Ph.D., 1963, Massachusetts Institute of Technology; Bell Laboratories, 1963—. Since joining Bell Laboratories Mr. Pilla has been involved with minicomputer software development. Initial projects in the Human Factors Engineering Research Department were concerned with the development of tools and techniques for real-time process control. Next, he supervised a group responsible for developing a computer-aided reorder trap analysis system. Subsequently, he supervised a group responsible for advanced software techniques for projects in the CORDS Planning and Design Department. He presently supervises a group responsible for the design and development of a product to perform Recent Change Memory Administration for Nos. 1, 1A, 2, and 2B ESS.

Elliot N. Pinson, B.A., 1956, Princeton University; M.S., 1957, Massachusetts Institute of Technology; Ph.D. (electrical engineering), 1961, California Institute of Technology; Bell Laboratories, 1961—. From 1968 to 1977, Mr. Pinson was Head of the Computer Systems Research Department where he supervised work on programming languages, operating systems, computer networks, and computer architecture. Included in these activities was the development of the C programming language and portions of the UNIX operating system. Since October 1977, Mr. Pinson has been Director of the Business Communications Systems Laboratory in Denver, where he is responsible for software design and development for the DIMENSION® PBX system. Member, ACM, Phi Beta Kappa, Sigma Xi.

Dennis M. Ritchie, B.A. (physics), 1963, Ph.D. (applied mathematics), 1968, Harvard University; Bell Laboratories, 1968—. The subject of Mr. Ritchie's doctoral thesis was subrecursive hierarchies of functions. Since joining Bell Laboratories, he has worked on the design of computer languages and operating systems. After contributing to the MULTICS project, he joined K. Thompson in the creation of the UNIX operating system, and designed and

implemented the C language, in which UNIX is written. His current research is concerned with software portability, specifically the transportation of UNIX and its software to a variety of machines.

Helen D. Rovegno, B.S. (mathematics), 1969, City College of New York; M.S. (computer science), 1975, Stevens Institute of Technology; Bell Laboratories, 1969—. Ms. Rovegno, a former member of the Microprocessor System Department, worked on the design of the MAC-8 architecture and its support system and implemented the MAC-8 C compiler. Subsequently, she was involved in software coordination of UNIX-based MAC-8 tools. She currently supervises a group responsible for all programming languages and compilers for ESS software development and for exploratory work on languages and compilers. Member, Phi Beta Kappa, ACM.

J. D. Sieber, B.S. (computer science) 1978, Massachusetts Institute of Technology; Bell Laboratories, 1974—. Mr. Sieber's first contact with UNIX was as part of an Explorer Scout Post which met at Bell Labs in 1972. Since then he has worked on various UNIX and MERT projects as a summer employee and consultant. He is primarily interested in using low-cost microprocessors to design distributed processing networks that afford large computational resources and real-time response.

Arthur R. Storm, B.A. (physics), 1969, Fairleigh Dickinson University; M.S. (materials research), 1975, Rutgers University; Bell Laboratories, 1956-1959, 1960—. Mr. Storm began working at Bell Laboratories in the Semiconductor Physics Research Department. In 1959, he worked in the Low Temperature Physics Department at the University of North Carolina. In 1960 he returned to Bell Laboratories in the Materials Research Laboratory, where he has been involved with X-ray analysis of materials and studies of the automation of such experiments.

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In 1973, his department assumed the additional responsibility for central support and development of the UNIX system. Member, IEEE, ACM, Sigma Xi, and Phi Beta Kappa.

Ken Thompson, B.Sc. and M.Sc. (electrical engineering), 1965 and 1966, University of California, Berkeley; Bell Laboratories, 1966—. Mr. Thompson was a Visiting Mackay Lecturer in Computer Science at the University of California at Berkeley during 1975-76. His current work is in operating systems for telephone switching and in computer chess. Member, ACM.

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