

CONTRIBUTORS TO THIS ISSUE

Nadine B. Abbott, B.S., 1971, and M.S., 1973 (Applied Mathematics and Computer Science), Washington University at St. Louis; Advanced Computation Laboratory, 1973-1975; Bell Laboratories, 1975—. Ms. Abbott's initial assignments at the Laboratories were to provide systems engineering support for rural and suburban local switching developments including No. 3 ESS and the No. 10A RSS. Since 1979, she has been engaged in the evaluation of various strategies for improving the efficiency of the network. Currently, she is participating in studies to define new interfaces between the network and customer premises equipment.

J. Mark Adrian, B.S. (Electrical Engineering), 1969, Iowa State University; M.S., 1971 (Electrical Engineering), Northwestern University; Northwestern Bell Telephone Company, 1968-1969; Bell Laboratories, 1969—. Early in his career at Bell Laboratories, Mr. Adrian performed exploratory work that led to the No. 3 ESS, as well as other exploratory work in electronic switching networks. Later, he was involved in several areas of the No. 10A RSS, such as line interface, network, and carrier interface. Presently, he is supervisor of the No. 5 ESS Line Interface Group. Member, IEEE, Tau Beta Pi, Eta Kappa Nu, Phi Kappa Phi.

Douglas A. Anderson, B.S. (Electrical Engineering), 1965, University of Colorado; M.S. (Electrical Engineering), 1966, Purdue University; Ph.D. (Electrical Engineering), 1971, University of Illinois; Bell Laboratories, 1965—. After joining Bell Laboratories, Mr. Anderson helped develop a number of electronic switching systems, including No. 2 ESS, No. 3 ESS, RSS, and currently, No. 5 ESS. Presently, he is supervisor of a software development group. His interests include real-time operating systems, programming methodologies, fault-tolerant computing, and self-checking designs. Member, IEEE.

Donald W. Brown, B.S.E.E., 1962, University of Louisville; M.S.E.E., 1964, New York University; Bell Laboratories 1962—. Mr. Brown has been engaged in the system design of proposed Signal Transfer Points for the CCIS network. Since 1976, he has worked on system and program design for the RSS. He was past supervisor of the RSS, Remote Terminal Maintenance Group and is now supervisor of the Cell Maintenance Group for the Advanced Mobile Phone Service system.

Paul N. Burgess, B.S.E.E., 1963, University of Wisconsin; MSEE, 1965, Ohio State University; Bell Laboratories, 1963—. Mr. Burgess has worked in a variety of switching development projects. He first designed maintenance circuitry for No. 5 crossbar, and participated in switching and transmission development of *PICTUREPHONE*® service for No. 5 crossbar. He then supervised groups responsible for trunk and service circuit design for No. 3 ESS, and for circuit design and system planning for the No. 10A Remote Switching System. For the latter, he participated in the development of line maintenance features and an overall transmission plan. He is now supervising a group that is responsible for peripheral circuit diagnostics for No. 5 ESS.

Kanwar J. S. Chadha, B.E. (Honors), 1967, Punjabi University; M.A.Sc. (Control Systems), 1969, University of Toronto; Ph.D. (Systems Engineering), 1973, Case Western Reserve University; Bell Laboratories, 1973—. Mr. Chadha initially worked on the development of system requirements of AMPS. He later worked on the design and implementation of the call processing software for AMPS in the mobile telephone switching office. He supervised the group responsible for designing call processing features in No. 1/1A/2B ESS for the Remote Switching System. In 1980, he was named Head of the Mobile System Software Design Department. He is currently Head, Small Business Systems Software Design Department.

John J. Driscoll, B.S.E.E., 1964, Clarkson College of Technology; M.S.E.E., 1966, Stevens Institute of Technology; Bell Laboratories, 1964—. Mr. Driscoll has been engaged in various aspects of electronic switching system development. Initially, he worked on maintenance and call processing software development for No. 2 ESS, and later he worked on exploratory studies and call processing software development for the Advanced Mobile Phone Service. He was involved with call processing and administrative software development on the No. 1 ESS and the No. 2B ESS RSS systems. Presently, he is working on No. 5 ESS performance evaluation and capacity improvement.

Laimons Freimanis, B.S.E.E., 1951, M.S.E.E., 1952, Michigan State University; Bell Laboratories, 1952-1980. Mr. Freimanis was engaged in peripheral unit development for the ESS trials at Morris, Illinois. For the No. 1 ESS, he designed the central pulse distributor, and worked on the development of the integrated circuit peripheral decoder for No. 2 ESS. In 1975, as a member of the Advanced Switching Technology Department, he was involved in exploratory studies of

line interface circuits and alerting arrangements. More recently, Mr. Freimanis had responsibility for the design and development of a floating line interface for the 10A rss. Member, Tau Beta Pi, Eta Kappa Nu, Sigma Pi Sigma.

David R. Fuller, B.S. (Electrical Engineering), 1966, University of Wisconsin; M.S. (Electrical Engineering), 1967, University of California at Berkeley; Bell Laboratories, 1966—. At Bell Laboratories, Mr. Fuller has worked on the software and hardware design of a minicomputer-based test system for mobile telephones systems. He has also worked on crosstalk reduction and cable studies and on the design of electronic remote line concentrators. Member, Phi Eta Sigma, Tau Beta Pi.

Dennis R. Hanson, B.S., 1972, Iowa State University; M.S.E.E., 1973, University of Michigan; Bell Laboratories, 1972—. Mr. Hanson was first engaged in the development and field support of the No. 2B ESS system. More recently, he has worked on the call processing and system integration of the No. 10A Remote Switching System. He presently supervises a group responsible for the system integration of the Advanced Mobile Phone Service. Member, Phi Kappa Phi.

Charles E. Jeschke, B.S.E.E., 1966, University of Illinois; M.S.E.E., 1967, University of Michigan; Bell Laboratories 1966—. Since joining Bell Laboratories, Mr. Jeschke has been involved in the physical design of No. 101 ESS, No. 2 ESS, 3A Central Control, No. 10A rss, and No. 5 ESS. He is currently head of the No. 5 ESS Physical Design Department. Member Eta Kappa Nu, Tau Beta Pi.

Frederick H. Keeve, B.S.E.E., 1967, M.S.E.E., 1968, University of Missouri at Rolla; Bell Laboratories, 1968—. Early in his career at Bell Laboratories, Mr. Keeve worked on the No. 1 ESS, and No. 10A rss. Currently, he is a member of the technical staff of the Software Recovery Detection and Initialization Group.

Andrew E. Kranenborg, B.S.E., 1976, Calvin College; B.S.M.E., 1976, University of Michigan; M.S.M.E., 1977, University of Michigan; Bell Laboratories, 1977—. Mr. Kranenborg has worked on the physical design of the new remreed networks for Nos. 1, 2, and 3 ESS, including grid and frame designs and also the physical design of the No. 10A Remote Switching System. He is currently responsible for the design of software integrity monitors in the No. 5 ESS. Member, Tau Beta Pi.

Frederick M. Lax, B.S.E.E., 1974, University of Notre Dame; M.S.E.E., 1975, Massachusetts Institute of Technology; Bell Laboratories, 1974—. From 1975 to 1979, Mr. Lax was engaged in software development for No. 11A ESS call processing and No. 10A Remote Switching System (RSS) feature design. In 1979, he was named supervisor of the RSS First Application/General Availability Features Group and subsequently supervisor of the No. 5 ESS Audit Systems Group. He is presently Head of the No. 5 ESS Software Recovery Department.

Jeffrey C. Martin, B.S.E.E., 1971, M.S., (Electrical Engineering), 1972, University of Florida; Bell Laboratories, 1972—. At the beginning of Mr. Martin's Bell Laboratories career, he was engaged in software development for the No. 1 ESS input/output programs. He then worked for several years on a variety of trunk maintenance features, prior to his involvement with maintenance arrangements for the No. 10A RSS. Presently, he is a member of a group responsible for the No. 1A ESS processor maintenance development and evaluation.

Thomas L. McRoberts, B.S. (Electrical Engineering), 1965, M.S., 1968, Ph.D., 1973, Iowa State University; Bell Laboratories, 1973—. Early in his career at Bell Laboratories, Mr. McRoberts was engaged in the characterization of crosstalk coupling in digital and analog circuits. Later, he was involved in early application studies of the RSS, particularly as a pair-gain vehicle. He worked on RSS maintenance system design, including the craft TTY interface, and served as coordinator for the first RSS installation in Clarksville, New York. Presently, he is involved in maintenance design and development for the Advanced Mobile Phone Service. Member, IEEE, Phi Eta Sigma, Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi, Sigma Xi.

James L. Neigh, B.S. (Electrical Engineering), 1973, University of Pittsburgh; M.Eng. (E.E.), 1974, Cornell University; Bell Laboratories, 1973—. Mr. Neigh has participated in several studies related to transmission planning for the introduction of digital technology in the local network. He currently has responsibility for digital transmission, synchronization, and signaling requirement in the Customer Switching Systems area.

Robert K. Nichols, B.E.E. (Electrical Engineering), 1967, M.E. (Electrical Engineering), 1969, Rensselaer Polytechnic Institute; Bell Laboratories, 1968—. Mr. Nichols has worked on circuit analysis and testing and is presently engaged in work related to digital switching systems. Member, Eta Kappa Nu.

Robert B. Schmidt, B.S.E.E., 1941, University of Illinois; M.S.E.E., 1964, Northwestern University; U.S. Army Signal Corps and Air Corps, 1941-46; Illinois Bell Telephone Co, 1946-51; Bell Laboratories, 1951-52; Illinois Bell Telephone Co., 1952-67; Bell Laboratories, 1967—. While with Illinois Bell, Mr. Schmidt was involved in Engineering of Electrical Coordination, Protection, and Transmission Maintenance of telephone plant, the design and provision of toll, special services, video and telegraph facilities, and with the preparation of the capital construction program and computerization of its administration. With Bell Laboratories in 1951-1952, he was involved with the M33 anti-aircraft radar project. Since 1967, Mr. Schmidt has been involved in the LAMP and ESS loader projects. On the 10A ESS, he developed the stand-alone feature. Currently, he is involved with the *PROMUS** reprogrammer and with the No. 5 ESS projects.

D. Paul Smith, B.S. (Electrical Engineering), 1967, Brigham Young University—; M.S., 1968, Ph.D. (Electrical Engineering), 1972, Stanford University; Bell Laboratories, 1967—. Early in his career at Bell Laboratories, Mr. Smith was engaged in work involving memories and switching network for No. 2 ESS. Later, he was named supervisor of RSS Hardware Development. Currently, he is Head, Line Interface Department.

Richard G. Sparber, B.S., 1973, Union College; M.S., 1974, University of California at Berkeley; Bell Laboratories, 1973—. Mr. Sparber's early work involved transmission, signaling, and diagnostic circuits for No. 3 ESS. He is presently working on the No. 5 ESS line interface unit. Currently, Mr. Sparber holds five patents in the areas of transmission and measurement. Member, Tau Beta Pi, Sigma Xi, Eta Kappa Nu.

Thomas J. J. Starr, B.S. (Computer Engineering), 1974, M.S. (Computer Science), 1976, University of Illinois, Champaign-Urbana; Bell Laboratories, 1976—. After joining Bell Laboratories, Mr. Starr became involved in circuit design of the data link and memory for the 10A Remote Switching System. He joined the *PROMUS** unit development group in 1977. He is presently in the Advanced Switching Technology Department, concentrating on the No. 5 ESS and on combining data-voice capabilities for local switching systems.

* Trademark of Western Electric.

Bharat S. Thakkar, B.E. (Mechanical Engineering), 1963, University of Baroda, Baroda, India; M.S. (Mechanical Engineering), 1967, Ph.D. (Mechanical Engineering), 1976, Illinois Institute of Technology; Bell Laboratories, 1977—. Prior to joining Bell Laboratories, Mr. Thakkar was engaged in product/process R&D projects for container and packaging metal working industries. At Bell Laboratories, he studied reliability aspects of No. 10A RSS, PUC/DL, PUC/DCT, *PROMUS**, and No. 5 ESS from 1977 through 1979. Simultaneously, he also investigated silicone contamination of relays used in No. 1 ESS. From 1979 through 1981, he was project leader on physical design of No. 5 ESS subsystems. Currently, he is working on assembly technologies to be used in high-density electronic packages designed for 3BX processor. Member, ASME, ASM, and SPE.

Timothy F. Wickham, B.S.E.E., 1962, Polytechnic Institute of N.Y.; M.S. (Electrical Engineering), 1964, Rutgers University; Bell Laboratories 1962—. Mr. Wickham worked on the initial call processing design of the No. 1 ESS. From 1971 to 1976, he supervised the development of major call processing additions to the No. 1 ESS including CAMA, 2/4 wire local toll capability, and various centrex features. In 1977, he assumed responsibility for the call processing development of the 10A RSS. Mr. Wickham currently supervises a group responsible for the system performance and integrity of the 1/1A ESS. Member IEEE, Eta Kappa Nu, Tau Beta Pi, Sigma Ki.

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