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Cable Repair Administrative System (CRAS), and now supervises the Information Processes and Architecture group. His interests include programming methodology and the interactions of software with people and their organizations. Mr. Mashey is an ACM National Lecturer. Member, Association of Computing Machinery.

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Leo Schenker, B.S. (Civil Engineering), 1942, University of London; M.S., 1950, University of Toronto; Ph.D., 1954, University of Michigan. Bell Laboratories, 1954—. After joining Bell Laboratories, Mr. Schenker was involved in the development of telephone station equipment, including *TOUCH-TONE*® dialing and the *TRIMLINE*® phone. In 1968, he was promoted to Director of the Military Electronic Technology Laboratory in North Carolina and, in 1971, became Director of the Loop Maintenance Systems Laboratory, which was closely involved with the development of new software and hardware systems aimed at reducing the expense of maintaining the customer's telephone service. In 1978, he became Director of the Loop Systems Engineering and Methods Laboratory and, in 1979, he was made Director of the Customer Network Operations Systems Engineering Center. Mr. Schenker is Executive Director of the Central Office Operations Division. This division provides operation systems to the telephone com-

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Robert W. Vetter, B.E.E., 1968, Pratt Institute; M.S. (Electrophysics), 1969, Polytechnic Institute of Brooklyn; Bell Laboratories 1968—. After joining Bell Laboratories, Mr. Vetter was involved with the design of strip line circuits for the CAMAR and TACMAR RF Processor and RF Microwave Converter of SPRINT and SPARTAN missiles in the SAFEGUARD Antiballistic Missile system. Later he worked on the logic design of hardware for the Mechanized Line Record (MLR) system which evolved into the Loop Maintenance Operations System (LMOS). Currently, Mr. Vetter is supervisor of the Testing Requirements Group, which is responsible for specifying the functional requirements for the Mechanized Loop Testing System and for negotiating design requirements, as they pertain to loop testing, for pair gain system and loop electronics. Before his present assignment, he worked for Southern Bell for a two-year operating telephone company assignment and returned to Bell Laboratories to work on

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John E. Zielinski, M.E., 1964, M.S., 1968, Stevens Institute of Technology; M.B.A., 1981, Rutgers University; Bell Laboratories 1969–1972, 1976—. Mr. Zielinski is currently Supervisor, Information and Decision Sciences Group, with personnel subsystem development responsibilities for Loop Maintenance Operations System and Loop Cable Administrative and Maintenance Operations System. Additional responsibilities include applied research in Artificial Intelligence (Expert Systems), speech recognition/synthesis, and decision support systems.