

## Contributors to This Issue

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THOMAS G. CROSS, B.S.E.E., 1963, California State Polytechnic College; M.S.E.E., 1965, Northeastern University; Bell Telephone Laboratories, 1963—. Mr. Cross has been involved in a group responsible for the system analysis of the new TD-3 Long-Haul Radio System, and is currently involved in system planning for microwave radio relay systems.

DETLEF GLOGE, Dipl. Ing., 1961, D.E.E., 1964, Braunschweig Technische Hochschule (Germany); research staff, Braunschweig Technische Hochschule 1961–1965; Bell Telephone Laboratories, 1965—. In Braunschweig, Mr. Glöge was engaged in research on lasers and optical components. At Bell Telephone Laboratories, he has concentrated in the study of optical transmission techniques. Member, VDE, IEEE.

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1940-46; Bell Telephone Laboratories, 1953—. He was engaged at first in the development of analog-to-digital converters. He obtained several patents including one covering the multi-pole-pair resolver, a precise angle transducer, and published several technical papers. He is concerned with shielding electronic equipment from atmospheric electromagnetic pulses. Senior member, IEEE.

KANEYUKI KUROKAWA, B.S., 1951, Ph.D., (Engineering), 1958, both from the University of Tokyo; assistant professor, University of Tokyo, 1957-1963; Bell Telephone Laboratories, 1963—. Mr. Kurokawa has been engaged in designing and developing microwave transistor amplifiers. He supervises a group responsible for the exploratory development of solid state functional devices and circuits. Member, IEEE, Institute of Electronics and Communications Engineers of Japan.

MASON A. LOGAN, B.S., 1927, California Institute of Technology; M.A., 1933, Columbia University; Bell Telephone Laboratories, 1927-1967. His early work included transmission design problems of local manual and dial circuits and circuit research on alternating current methods of signaling. During and immediately after the war he worked on mine fire-control systems, proximity fuses, Nike-Ajax, and other military projects. Later he was engaged in development of electromagnets and relays, followed by development of instrumentation for semiconductor device process control and evaluation. The article in this issue is related to his interest in this field. Most recently he has been supervising the development and design of new four-phase data sets for world-wide government networks. He retired after more than 40 years of service and now lives in Sun City Center, Florida.

DEAN W. MAURER, B.S. (Chemistry), 1954, Carnegie-Mellon University; Ph.D. (Chemistry), 1959, University of Rochester; Bell Telephone Laboratories, 1959—. Since joining Bell Laboratories Mr. Maurer has been concerned with the chemistry of vacuum tube devices, thermionic emission and life factors, and the development of new and improved cathode types. In 1964 he became concerned with the development of new photosensitive materials for hologram recording media. In January 1967 he became supervisor of the Nickel Cadmium Battery Applications and Development Group. Member,

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ELLIOTT 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 Telephone Laboratories, 1964—. Mr. Nagelberg has been concerned with problems involving microwave antennas and propagation. Member, IEEE, American Physical Society, Eta Kappa Nu, Sigma Xi.

C. M. PLEASS, B.Sc., 1953, Ph.D. (Chemistry), 1955, both from the University of Southampton, England. Scientific Officer, Atomic Weapons Research Establishment, England, 1955–1959; Fellow, National Research Council of Canada, 1959–1961; Bell Telephone Laboratories, 1961—. Mr. Pleass was engaged at first in the development of high reliability electron tube cathodes. Subsequent research involved photosensitive materials for use in hologram recording. He is responsible for *Picturephone*\* materials and processing at the Reading Laboratory of Bell Telephone Laboratories.

DAVID SLEPIAN, 1941–43, University of Michigan; M.A., 1947, Ph.D., 1949, Harvard University; Bell Telephone Laboratories, 1950—. He has been engaged in mathematical research in communication theory and the theory of noise, as well as in a variety of aspects of applied mathematics. Mr. Slepian has been mathematical consultant on a number of Bell Laboratories projects. During the academic year 1958–59, he was visiting Mackay Professor of Electrical Engineering at the University of California at Berkeley and during the Spring semester 1967 was a Visiting Professor of Electrical Engineering at the University of Hawaii. Member, AAAS, American Math. Society, Institute of Math. Statistics, IEEE, SIAM.

R. D. STANDLEY, B.S., 1957, University of Illinois; M.S., 1960, Rutgers University; Ph.D., 1966, Illinois Institute of Technology; U.S. Army Research and Development Laboratory, Fort Monmouth, N. J., 1957–1960; IIT Research Institute, Chicago, 1960–1966; Bell Telephone Laboratories, 1966—. At Fort Monmouth, Mr. Standley was project engineer on various microwave component development

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programs. His work at IITRI included microwave and antenna research, and management of an electromagnetic compatibility group. At Bell Telephone Laboratories he has been concerned with millimeter-wave up-converters, local oscillator injection filters, and channel dropping filters. He is investigating millimeter-wave impact ionization avalanche transit time diode devices, integrated circuits, and time delay equalizers. Member, IEEE, Sigma Tau, Sigma Xi.