Contributors to This Issue

A. E. Bakanowski, B.S., 1943, Worcester Polytechnic Institute; S.M., 1948, and Ph.D., 1954, Brown University; Bell Telephone Laboratories, 1954—. He has specialized in development of improved semiconductor diodes for use as microwave frequencies as modulators, detectors and amplifiers and computer diodes. Member American Physical Society, American Institute of Physics, Sigma Xi, Tau Beta Pi.

Václav E. Beneš, A.B., 1950, Harvard College; M.A., Ph.D., 1953, Princeton University; Bell Telephone Laboratories, 1953—. Mr. Beneš has been engaged in mathematical research, on stochastic processes, traffic theory and servomechanisms. In 1959–60 he was visiting lecturer in mathematics at Dartmouth College. Member American Mathematical Society, Association for Symbolic Logic, Institute of Mathematical Statistics, Mind Association, Phi Beta Kappa.

ALEXANDER FEINER, Technische Hochschule, Vienna; M.S.E.E., 1952, Columbia University; Bell Telephone Laboratories, 1953—. He has been engaged in various phases of switching systems development. In 1959 he was appointed Switching Systems Development Engineer. Member Sigma Xi.

J. H. Forster, B. A., 1944, and M. A., 1946, University of British Columbia; Ph.D., 1953, Purdue University; Bell Telephone Laboratories, 1953—. He has been engaged in development and reliability studies of transistors and semiconductor surface studies. He served as instructor in semiconductor electronics in the Bell Laboratories' C.D.T. program. Member Sigma Pi Sigma, Sigma Xi.

Dennis B. James, B.Sc., 1948, University of Wales; Ph.D., 1953, Cambridge University; Telecommunication Research Establishment (England), 1944–46; Atomic Energy Research Establishment (England), 1946–47; University of British Columbia, 1952–54; Bell Telephone Laboratories, 1954—. His first work with Bell Laboratories was on magnetic core circuits. More recently he has been engaged in research in time division switching and pulse code modulation, especially with application to electronic switching systems. Member I.R.E.

John D. Johannesen, B.S.E.E., 1943, Bucknell University; M.S.E.E., 1948 and Ph.D., 1953, Case Institute of Technology; Bell Telephone Laboratories, 1954—. He has specialized in development of solid state switching systems with emphasis on time-division switching. Member I.R.E., Eta Kappa Nu, Sigma Xi.

MICHAEL KOWALCHIK, B.S., 1954, Seton Hall University; Bell Telephone Laboratories, 1951—. He has been engaged in research in semi-conductors with special emphasis on the control of impurities.

V. E. Legg, A.B., 1920 and M.S., 1922, University of Michigan; Western Electric Company Engineering Department, 1922–25; Bell Telephone Laboratories, 1925—. He has specialized in studies and development of magnetic materials for application to submarine telephone and telegraph cables, loading coils, magnetic detecting apparatus, and recently in studies of magnetic materials for telephone apparatus. Fellow American Physical Society; member A.I.E.E., American Society for Metals; American Society for Testing Materials, Phi Beta Kappa.

Clarence A. Lovell, B.A., 1922, Mississippi College; M.A., 1928 and Ph.D., 1932, University of Pennsylvania; Bell Telephone Laboratories, 1929—. While taking graduate studies, before joining Bell Laboratories, he taught mathematics at Mississippi College and Drexel Institute of Technology. His early work was research on electroacoustical apparatus and mechanical filters. From 1934 to 1936 he worked on design of television terminal apparatus for the first experimental coaxial cable. He supervised acoustical research on recording and measuring instruments and tone synthesizers until World War II, when he worked on gun directors and gun data computers. Since World War II he has headed groups in switching research and is now Director of Switching Systems Development in charge of electronic switching systems. Awarded Presidential Medal for Merit and Howard N. Potts Medal of the Franklin Institute for work on Electrical Gun Director. Fellow Acoustical Society of America; member, A.I.E.E., American Mathematical Society, Franklin Institute.

TERRELL N. LOWRY, B.E.E., 1952 and M.S.E.E., 1955, Georgia Institute of Technology; Bell Telephone Laboratories, 1955—. He has been engaged in exploratory development of remote line concentrators for use in electronic switching and is now in charge of a group with that responsibility. Member I.R.E., Eta Kappa Nu, Phi Kappa Phi, Tau Beta Pi; associate member, Sigma Xi.

- W. A. Malthaner, B.E.E., 1937, Rensselaer Polytechnic Institute; Bell Telephone Laboratories, 1937—. His first work was in development and research on automatic telephone central offices. During World War II he worked on fire control and radar systems, and after the war returned to research on automatic telephone central offices, customer dialing and supervisory arrangements, interoffice signaling systems and data transmission systems. He was appointed Systems Research Engineer in 1958. Senior member I.R.E.; member A.I.E.E., American Association for the Advancement of Science, Sigma Xi, Tau Beta Pi.
- Philip G. Ridinger, B.S.E.E., 1950, Lehigh University; Bell Telephone Laboratories, 1950—. After completing rotational assignments in the C.D.T. program, he worked on centralized AMA for crossbar tandem switching centers. More recently, he has been engaged in the development of remote line concentrators for electronic switching systems. Member Eta Kappa Nu, Pi Mu Epsilon, Tau Beta Pi.
- John P. Runyon, M.E., 1944, Stevens Institute of Technology; Diploma in Mathematics, 1950, Swiss Federal Institute of Technology; Bell Telephone Laboratories, 1950—. He has been engaged in research and development on switching systems and apparatus. Member I.R.E., American Association for the Advancement of Science.
- L. Schenker, B.Sc., 1942, University of London; M.Sc., 1950, University of Toronto; Ph.D., 1954, University of Michigan; Bell Telephone Laboratories, 1954—. He has been studying various phases of pushbutton calling relating to station apparatus, central office receiving equipment and voice frequency transmission. Member American Society of Civil Engineers, Engineering Institute of Canada, Phi Kappa Phi, Sigma Xi.
- Carl D. Thurmond, B.S., 1943, and Ph.D., 1949, University of California; instructor, research fellow, University of California, 1949–51; Bell Telephone Laboratories, 1951—. He has been engaged in research in the physical chemistry and thermodynamic properties of semiconductors. Member American Chemical Society, American Physical Society, Sigma Xi.
- F. A. Trumbore, B.S., 1946, Dickinson College; Ph.D., 1950, University of Pittsburgh; National Advisory Committee for Aeronautics, 1950–52; Bell Telephone Laboratories, 1952—. He has specialized in studies of thermodynamic properties of germanium and silicon alloys and compounds. Member American Chemical Society, American Association for the Advancement of Science, Phi Beta Kappa, Sigma Xi, Phi Lambda Upsilon.

Hans-Georg Unger, Dipl. Ing., 1951, and Dr. Ing., 1954, Technische Hochschule, Braunschweig (Germany); Siemens and Halske (Germany), 1951–55; Bell Telephone Laboratories, 1956—. Mr. Unger's work at Bell Laboratories has been in research in waveguides, especially circular electric wave transmission. Senior member I.R.E.; member N.T.G. (German Communication Engineering Society).