

Contributors to this Issue

A. B. CLARK, B.E.E., University of Michigan, 1911. A. T. & T. Co., 1911-34; Bell Telephone Laboratories, 1934-. Toll Transmission Development Engineer, 1929; Toll Transmission Development Director, 1934; Director of Transmission Development, 1935; Director of Systems Development, 1940; Vice President, 1944. Bell System Chairman of Joint Subcommittee on Development and Research of the Edison Electric Institute and Bell System since 1938. Since June, 1951, Mr. Clark has been in charge of coordinating all Bell System programs at the Laboratories. During World War II he served both as a consultant to and a member of various divisions of the Office of Scientific Research and Development. In 1944 he was appointed Consultant to the Secretary of War, and in connection with this work made trips to the European and Mediterranean theaters of operation. Member of I.R.E., Tau Beta Pi, Sigma Xi, and A.A.A.S. and Fellow of A.I.E.E. and the Acoustical Society of America.

J. R. FRY, M.E., Cornell University, 1915. Western Electric Company, 1915-25. Bell Telephone Laboratories 1925-. Mr. Fry has been Assistant Switching Apparatus Engineer in the Switching Apparatus Development Department since 1946. Except for the years 1941-45, when he worked on military projects, most of Mr. Fry's Bell System service has been devoted to the design and development of electromagnetically operated switching apparatus such as relays, switches, registers, and selectors. Member of Eta Kappa Nu.

H. C. MONTGOMERY, A.B., University of Southern California, 1929; M.A., Columbia University, 1933. Bell Telephone Laboratories, 1929-. Prior to the war, Mr. Montgomery was engaged in studies of hearing acuity and the analysis of speech sounds. His recent work in the transistor physics group has been concerned with fluctuation phenomena in semiconductors.

SAMUEL P. MORGAN, JR., B.S., California Institute of Technology, 1943; M.S., California Institute of Technology, 1944; Ph.D., California Institute of Technology, 1947. Bell Telephone Laboratories, 1947-. A

research mathematician, Dr. Morgan specializes in electromagnetic theory. He has been particularly concerned with problems of wave guide and coaxial cable transmission. Member of the American Physical Society, Tau Beta Pi, and an associate member of Sigma Xi.

W. H. NUNN joined the Home Telephone and Telegraph Company of Los Angeles in 1915. He became Plant Staff Engineer in 1927; Traffic Engineer in 1928; General Traffic Engineer, Oregon, 1935; General Traffic Engineer, Northern California and Nevada, 1940; Traffic Operations Engineer, Pacific Telephone and Telegraph Company, 1942; and General Traffic Manager, Northern California and Nevada, 1947. In July of 1949 he transferred to the American Telephone and Telegraph Company as Traffic Facilities Engineer, and since March of this year has been Assistant Chief Engineer.

H. S. OSBORNE, B.S., Mass. Inst. of Technology, 1908; Eng. D., Mass. Inst. of Technology, 1910; A. T. & T., Co., 1910-. Since joining the American Telephone and Telegraph Company in 1910, Mr. Osborne has been with the company continuously: as engineer in the Transmission and Protection Department until 1914; assistant to Transmission and Protection Engineer, 1914-1920; Transmission Engineer, 1920-1939; Operating Results Engineer, 1939-1940; Plant Engineer, 1940-1942; Assistant Chief Engineer, 1942-1943; and Chief Engineer from 1943 until his retirement in August of this year. During the war Mr. Osborne was Special Consultant in the office of the Secretary of War and a member of the Telegraph Committee, War Communications Board. In addition, he is a member of the Industry Advisory Council, Federal Specifications Board; of the Industry Advisory Committee for Supply Cataloging, Munitions Board; and of the Domestic Communications Industry Advisory Committee to N.P.A. For many years he has been active in the work of the A.I.E.E.: Chairman, Standards Committee, 1923-1926; member, Committee on Communications, 1931-1934; member, Edison Medal Committee, 1936-1943 and 1947-1952; Chairman, Committee on Award of Institute Prizes, 1936-1939; Chairman, Technical Program Committee, 1936-1939; member, Publication Committee, 1936-1939; Chairman, Special Committee on Institute Activities, 1936-1937; member, Committee on Planning and Coordination, 1936-1942, 1945-1946, and 1947-1949; member, Alfred Noble Prize Committee, 1937-1942; Chairman, Finance Committee, 1939-1942; President, 1942-1943; Chairman, Executive Committee, 1942-1943; member, Board of Directors and Executive Committee, 1942-1945; member, John Fritz Medal Board of Award, 1942-1946; Chairman, Board of Trustees, A.I.E.E. Retirement

ment System, 1944-1945; member, Hoover Medal Board of Award, 1945-1951; and Chairman, Board of Trustees of Volta Memorial Fund, 1949-. He also has been active in the American Standards Association. He was long a member of the Board of Directors, and was Chairman of the Standards Council from 1942-1945 and Vice President 1948-1951. Since 1949 he has been President of the U. S. National Committee of the International Electrotechnical Commission. He is a member of the Joint Conference Committee on Standards of the Department of Commerce and ASA, and Chairman of the U. S. N. C. Executive Council Subcommittee. He is Fellow of the American Institute of Electrical Engineers, Acoustical Society of America, American Physical Society, American Association for the Advancement of Science, and of the Institute of Radio Engineers; and is a member of the American Society for Engineering Education and of Tau Beta Pi.

J. J. PILLIOD, E.E. 1908, D.E. (Hon.) 1939, Ohio Northern University; A. T. & T. Co., 1908-. From 1910 until 1943 Mr. Pilliod was associated with the Long Lines Department and the General Engineering Department of the American Telephone and Telegraph Company. From 1914 to 1918 he was Division Plant Engineer in Chicago; 1918-1920, Engineer of Transmission, New York City; 1920-1941, Engineer in charge of Long Lines Engineering Department; and 1941-1943, General Manager of the Long Lines Department. In 1943 he assumed his present position as Assistant Chief Engineer of the American Telephone and Telegraph Company. From October 1942 to April 1943 he was Chief of Signal Section, Production Division, Army Service Force. He is a Fellow of the A.I.E.E. and is a Trustee of Ohio Northern University and of Vassar College.

F. F. SHIPLEY, B.S. in E.E., Purdue University, 1925. A. T. & T. Co., 1925-34; Bell Telephone Laboratories, 1934-. Since 1948, Mr. Shipley has been switching engineer in charge of planning large automatic switching systems, both local and toll. This includes panel, crossbar, and large step-by-step systems. Member of the A.I.E.E., Tau Beta Pi, and Eta Kappa Nu.

H. T. WILHELM, B.S. in E.E., Cooper Union, 1927; E.E., Cooper Union, 1936. Western Electric Company, 1922-24; Bell Telephone Laboratories, 1925-. Since joining the Laboratories Mr. Wilhelm's work has been with the Transmission Apparatus Development Department, where he has designed electrical measurement apparatus and developed test methods. Member of A.I.E.E. and Tau Beta Pi.