W. Deming Lewis

1915-1989
By William C. Hittinger

Willard Deming Lewis, a major contributor to communications science and technology and to education, died on April 19, 1989, at the age of seventy-four. He had been president of Lehigh University from 1964 until his retirement in 1982 after an illustrious career of twenty-three years with Bell Telephone Laboratories and Bellcomm, Inc., the Bell System subsidiary devoted chiefly to systems engineering for the National Aeronautics and Space Administration's (NASA) Apollo program. His contributions cover a broad spectrum of technical disciplines—mathematics, microwave communications, digital error detection, and systems engineering—followed by eighteen years of leadership in directing the evolution of Lehigh into a teaching and research institution of national distinction.

Deming Lewis, son of Willard and Constance (Deming) Lewis, was born in 1915 and was a native of Augusta, Georgia. He enrolled at Harvard University at age sixteen, where he earned the B.A., M.A., and Ph.D. in physics. He received two additional degrees at Oxford University, where he was a Rhodes Scholar in advanced mathematics. He was awarded seven honorary degrees in recognition of his contributions to technology and education. He was the father of five daughters by his first wife, Marian Carter Chapman Lewis,
who died in 1965, and added two children to his family when he married Emmaline Hoffman in 1966.

In 1941 Deming joined Bell Telephone Laboratories as a member of the technical staff, and rose to executive director of communications systems. He was granted thirty-three U.S. patents on such components and systems as microwave filters, antennas, and digital error detection. He authored many technical articles in his field. He was also responsible for the research efforts of groups of scientists and engineers in advanced telecommunications; much of the research led to newly emerging telephone switching systems that are the main building blocks of today's switched telecommunications network.

When NASA requested the Bell System in 1962 to form a systems engineering organization to guide the Apollo moon landing program, Deming Lewis was one of four technical leaders who built Bellcomm, Inc. and managed this effort to ensure the technical evolution and integrity of the lunar mission.

On October 11, 1964, Deming Lewis was installed as president of Lehigh University. In his inaugural address, Lewis called for broad undergraduate programs to provide a firm understanding of fundamentals, specialized graduate and research training, and continuing education.

Lewis' abilities were much sought after during his career. He was a charter member of the Polaris Command and Communications Committee and the Defense Industry Advisory Committee. In 1964 he was appointed by the Secretary of the Navy to the Naval Research Advisory Committee, which he chaired for two years. He also served as a consultant to the President's Scientific Advisory Committee for the U.S. Office of Science, Research, Development.

He was chairman of Pennsylvania's Board of Education, chairman of the Pennsylvania Commission for Independent Colleges and Universities, and president of the Lehigh Valley Association of Independent Colleges. Also, he was chairman of the council for the Harvard Foundation for Advanced
Study and Research and a member of the Overseers' Visiting Committee for Engineering and Applied Physics at Harvard. He was on the board of governors and was a vice-president of the Harvard Engineering Society. He participated in many community functions as well, including hospital and United Way.

Deming Lewis was elected to the National Academy of Engineering (NAE) in 1967. He was a member of NAE's Executive Committee; he chaired the National Research Council's Space Applications Summer Study and NAE's Committee on Power Plant Siting.

He was a fellow of the Institute of Electrical and Electronics Engineers and of the American Association for the Advancement of Science. He was a member of many learned and technical societies, including the American Physical Society, Phi Beta Kappa, Tau Beta Pi, Sigma Xi, and the American Institute of Aeronautics and Astronautics, Inc.

Industry also sought his council and wisdom through membership on boards such as those for Pennsylvania Power and Light Company; Bethlehem Steel Corporation; Fairchild Industries, Inc.; Fisher & Porter Company; and Zenith Radio Corporation.

Deming's accomplishments reflect in part his many talents and interests. A voracious reader since early childhood and an avid handyman around the house, Lewis rapidly did "The New York Times" crossword puzzle daily and spent weekends during his later Lehigh years designing and building by hand "Capricorn", his family's 35-foot cabin cruiser. He also continued to play his college sports of squash and tennis and presented an imposing, towering challenge to his opponents.

A witty idealist without illusions, he is remembered by his colleagues for his zest for living and the breadth of his interests. To those who knew him well, Deming Lewis was a symbol of integrity. He did not merely advocate scholarship, he was a scholar. He did not preach high ideals; he was their embodiment. In a tribute by his university colleagues,
it was said, "all educational institutions are measured by the quality of students they produce. A few are fortunate enough to want to be measured also by the quality of the leaders they nourish. Lehigh is proud to have flourished under the leadership of Deming Lewis, whom it honors and will long remember."