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tist and manager at the Honeywell Physical Sciences Center until his early retirement on 31 December 1986.

His initial research upon joining Honeywell in 1955 was on the electrical properties of silicon. In 1960 he became manager of solid-state research. Under his direction Honeywell introduced two major product technologies: pressure-sensing devices based on the piezoresistance effect in silicon, and silicon integrated circuits.

In the mid-1960s, Long helped initiate the development of sensing and switching devices based on the Hall effect in silicon. He became manager of optoelectronics research, including laser and infrared detector development. Much of his subsequent personal research during the late 1960s and early 1970s was on the properties of mercury cadmium telluride alloys, which are useful as infrared detectors. He also directed research programs on gallium phosphide optical detectors, pyroelectric infrared detectors and extrinsic silicon infrared detectors.

In 1977 he became director of the Honeywell Corporate Material Sciences Center. He was instrumental in initiating a major research effort in the use of gallium arsenide in digital electronics, analog electronics and optoelectronics. In 1980 Long became chief scientist at the Honeywell Physical Sciences Center, with primary responsibility for research planning and review and for exploratory research into emerging technologies. He acted as a spokesman for Honeywell on advanced research in the physical sciences, and as a liaison with the university community.

Long wrote numerous technical papers and one book, *Energy Bands in Semiconductors* (Interscience, 1968). He was an outstanding research scientist, a builder and leader of research groups and organizations that had, and continue to have, a major impact on advanced technology in electronics, sensors and electro-optics. He will be sorely missed by his many friends and colleagues both at Honeywell and in the scientific community.

OBERT N. TUFT

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Osmund T. Fundingsland

My impression, upon joining the General Accounting Office in the 1970s,

was that the entire US science policy establishment knew Osmund T. Fundingsland. His name was familiar to every important science policy figure in Washington. When he died of cancer on 10 June, at the age of 73, he had been with the GAO, an investigative unit of the Congress, for 15 years and had just achieved the singular goal of his last few years—publication of a report on rationalizing the government's science policy apparatus.

The report recommended multiyear budgeting for Federal research and development programs, separating the science and technology base from the rest of R&D, and using comprehensive strategic planning across research agencies. His proposals were not surprising, considering his background in industrial research.

Born in Beresford, South Dakota, he attended Augustana College in his home state, then earned an MS in physics from MIT. During World War II he worked at MIT's Radiation Laboratory with many of the physicists who were to become key science policy makers, including Hans Bethe, I.I. Rabi, H. Guyford Stever and Jerrold Zacharias. Fundingsland was a manager of industrial research at Sylvania and EG&G for many years before joining the GAO in 1972. Upon retirement in March he was chief science adviser in GAO's Resources, Community and Economic Development Division.

Fundingsland was dogmatic, energetic and precise—so much so that he was relentless in honing his reports in word and thought. The trouble was that sometimes his five-line sentences were so jam-packed with ideas they needed deciphering. The editors of the now defunct *Washington Star* once cited one of his particularly lengthy and opaque sentences from a GAO science report in their "Gobble-dycook" column. Blessed with the capacity to laugh at his own foibles, he proudly showed the column to his colleagues for weeks.

A high-school science teacher in his youth, Fundingsland would launch into a lengthy physics lecture at the slightest provocation from a GAO auditor. He cared passionately about physics and about people, and therefore he was never satisfied until he had explained a subject in such detail that his listeners completely understood it. His contributions to reports on national science policy, nuclear accelerators and national laboratories are lasting tributes to him.

HOWARD GOBSTEIN

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