



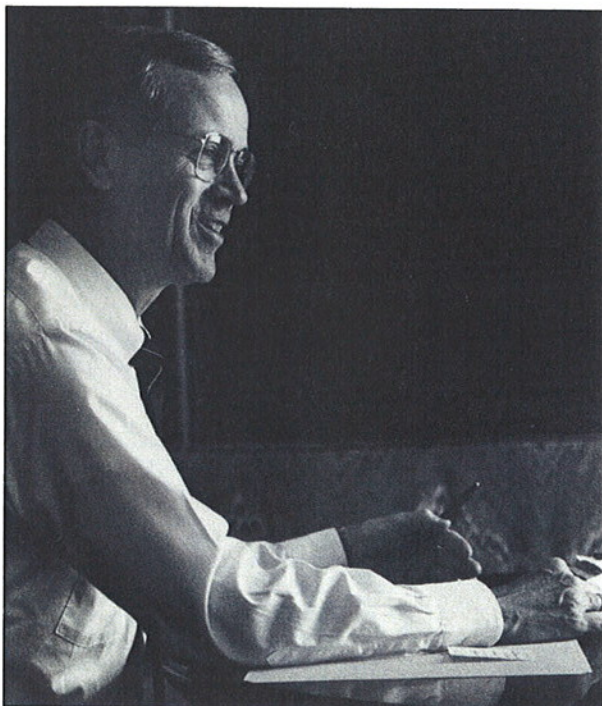
RLE

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The Research Laboratory of Electronics at the Massachusetts Institute of Technology

MEASURING THE RETURN ON INVESTMENT IN UNIVERSITY-BASED RESEARCH



Charles M. Vest, MIT President (Photo by Donna Coveney)

This issue of *RLE currents* is a celebration and a demonstration of the broad social return derived from investing in advanced education and research—a return in the form of new knowledge, technologies, jobs, and a better quality of life.

Research in science and technology has generated profound advances in virtually every facet of modern life: communications, health care, the manufac-

turing industries and financial services, military security, housing, transportation, energy generation, environmental protection, agriculture, entertainment, and the management of government and industry. It will be even more critical in the future, where we can already picture the benefits of gene therapy, artificial organs, microscopic machinery, intelligent software, wireless networks, sustainable agriculture, and more.

The profiles of the RLE alumni in these pages are testimony to the wisdom of making such an investment. In a sense, each is a case study of how bringing together faculty and students from

many disciplines creates an intellectual ferment that sparks both innovation and entrepreneurship.

Jerry Wiesner once referred to RLE as a “unique scientific incubator . . . which . . . has provided an almost ideal research environment and has been a model for the structure of other research centers.” From its well-focused origin as the MIT Radiation Laboratory, RLE has moved with the times, or, more accurately, it has moved ahead of the times.

What has made it so special? The laboratory itself puts it this way: “The constant tension between individual focus and intergroup collaborations leads to highly specialized strengths and collective efforts that arise from the mutual interest of many investigators . . . The focus is on basic understanding, and the development of intellectual means to model increasingly complex phenomena. In this way, a foundation is established for building new high-performance technologies while constantly exploiting these technologies to further research progress.”

Today, this broad mission and operating philosophy is expressed in work performed by sixteen distinct

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