



RLE

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The Research Laboratory of Electronics at the Massachusetts Institute of Technology

THE MIT RADIATION LABORATORY: RLE's Microwave Heritage

The recent Persian Gulf conflict vividly demonstrated America's high-tech arsenal. Although laser-guided smart weapons and Patriot missiles had not been previously used in actual combat, their superiority on the battlefield was evident. While they may not have single-handedly won the war, they did minimize civilian casualties by accurately pinpointing strategic targets, and may have curtailed hostilities by challenging traditional military tactics.

Fifty years ago, the new technology of that era would also change the nature of warfare. Even as fighting raged on, no effort was spared to develop combat-ready microwave radar equipment that eventually gave the Allies a decisive edge in World War II. The remarkable success of this wartime effort depended not only on the goodwill between the U.S. and Britain, but also on an innovative partnership that was taking shape between academia, industry, and the government; and the new cooperation that was evolving between physicists, engineers, and other scientists from different academic backgrounds. These fledgling bonds would transform scientific research and how it would be carried out in the future.



From left: Professors Julius A. Stratton, Albert G. Hill, and Jerome B. Wiesner have been the inspiring and foresighted builders of the Research Laboratory of Electronics. As both RadLab scientists and RLE directors, all three have emphasized the importance of collaboration between government, industry, and academia in broad-based, fundamental research. (1948 Photo by Benjamin Diver)

Hands Across the Water

Radar, an acronym for radio detection and ranging, had been patented in 1935 by British scientist Sir Robert Watson-

Watt for meteorological applications. Watson-Watt and other scientists believed that radar could also be developed into a system to locate objects

using transmitted and reflected high-frequency radio waves. The range of an

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