

BIOGRAPHICAL SKETCH OF HAROLD W. GEGENHEIMER

Harold W. Gegenheimer has been associated with the printing industry all his life: as a machinist, machine design engineering, inventor, product development manager, and corporate chief executive. He is the Chairman Emeritus of the Baldwin Technology Company, an international manufacturer of material handling, press accessory, and prepress equipment for offset printing.

His father, William, started the Baldwin Company in 1918 in a small building next to their house in Baldwin (Long Island), New York. He invented the Baldwin Press Washer and the company began to emerge as a manufacturer of printing press accessories and controls. Harold always took an interest in things mechanical, so it was natural that he went to Georgia Tech, where he received his bachelor's degree in mechanical engineering in 1933. Later, he invented the Convertible Offset Perfecting Press, a feature used by most press manufacturers, that allows for one or more colors to be printed on both sides of the paper with just one pass through the press. His inventions, for which many United States and foreign patents have been obtained, were keys to the great growth of the offset printing process in the post-World War II period.

Mr. Gegenheimer was President of the National Printing Equipment and Supply Association from 1977 to 1979. As an officer or director of other industry associations and recipient of technical and educational awards, he was elected 1983 Graphic Arts Man of the Year. He is a long-time contributor to Georgia Tech's *Thousand Club*, served as co-chair of his 50th Reunion Committee, and was the recipient of the 1996 Woodruff School Distinguished Alumnus Award. As an inventor, he continues to express interest in the great advances made at his alma mater through innovative programs that link industry with graduate and undergraduate studies.



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***The George W. Woodruff
School of Mechanical Engineering
Presents the Fourth Annual
Harold W. Gegenheimer
Lecture on Innovation
October 29, 1998***

Synopsis of the 1998 Gegenheimer Lecture

Thermo Electron and the Spin-Out Business Design

In the past fifty years, the United States has been exceptionally successful in creating new industries, ranging from xerography to personal computers, that resulted from technology innovations. Most new technology firms, however, were started in garages and not within established big companies; indeed, many were started by entrepreneurs who walked out of big firms. A likely cause of this phenomenon is that talented entrepreneurs are greatly attracted and motivated by the process of building their own business and reaping significant rewards. This is happening despite the fact that a large number of startups fail for reasons unrelated to the merit of their business such as, for example, access to capital.

In 1983, Thermo Electron developed and implemented a novel corporate structure that offers innovators both the advantages of new startups and the resources of an established large corporation. *The Wall Street Journal* called this the “spin-out” strategy to differentiate it from the “spin-off” strategy increasingly practiced by large corporations in the United States.

The spin-out structure calls for all of the parent’s divisions with well-defined and promising business plans to be incorporated into subsidiaries and to sell a minority of the outstanding shares to the public. The spin-out — rather than the parent — keeps the proceeds of the sale to finance its growth. Thus, the parent acts as a venture capital group or investment trust. Whereas venture capital firms often collect the cash and leave entrepreneurs to their fate; here the parent acts as an incubator. For a flat fee, it supplies its spin-outs a variety of services, such as banking, legal, taxation, accounting, investment banking, management of human resources and risk, and it is committed to keeping a controlling interest indefinitely.

Since 1983, when this structure was put in place at Thermo Electron, the company’s compound return to stockholders has averaged 28 percent per year. Today, Thermo Electron makes everything from power plants to artificial hearts and analytical instruments. At present, the group includes 23 spin-outs — and spin-outs of spin-outs — with aggregate sales of over \$4 billion, employing 24 thousand individuals in 23 countries.

PROGRAM

Introduction	Dr. Ward O. Winer Eugene C. Gwaltney, Jr. Chair in Manufacturing Systems and Chair of the Woodruff School
Lecture	Mr. George N. Hatsopoulos Founder, Chairman of the Board of Directors and Chief Executive Officer Thermo Electron Corporation
Question and Answer Session	
Presentation	Dr. Ward O. Winer
Reception	MARC Atrium

An endowment given to the Woodruff School in 1995 established the **Harold W. Gegenheimer Lecture Series on Innovation** to support student programs that encourage creativity, innovation, and design. Through the lecture series and support of capstone design projects, students are exposed to processes that stimulate creativity and lead to inventions and patents.

Note: Regrettably, Dr. George N. Hatsopoulos will not be able to be present at the Gegenheimer Lecture. In his place is his brother,
Mr. John N. Hatsopoulos of Thermo Electron Corporation

John N. Hatsopoulos
Thermo Electron Corporation



John N. Hatsopoulos is Vice Chairman of the Board of Directors and Chief Financial Officer of Thermo Electron Corporation. Thermo Electron is a world leader in environmental monitoring and analysis instruments and a major producer of paper-recycling equipment, biomedical products (including heart-assist and mammography systems), alternative-energy systems, and other products and services related to environmental quality, health, and safety.

Mr. Hatsopoulos joined Thermo Electron as Purchasing Agent in 1956. In 1963, he became President of the company's metals division, and was named Vice President in 1970. Seven years later, he was appointed Vice President of Corporate Strategy, handling acquisitions, financial and investor relations, and corporate investments.

Mr. Hatsopoulos became Senior Vice President in 1984, and Executive Vice President in 1986. In 1988 he was appointed Chief Financial Officer and Executive Vice President, and was named President in 1997. Also in 1997, he was elected to the Board of Directors. He currently serves as Vice President and Chief Financial Officer for all of Thermo Electron's public subsidiaries.

Mr. Hatsopoulos also serves as Chairman of the Board of Directors for Thermedics, Inc., a publicly traded subsidiary of Thermo Electron that manufactures detection instruments for security and quality assurance applications, and biomedical materials and products. He is a member of the

Board of Directors for Thermo Instrument Systems, Inc., which manufactures analytical instruments that monitor and measure nuclear radiation, environmental pollution, and trace concentrations of metals and other elements; Thermo TerraTech Inc., which provides environmental services and infrastructure planning and design; Thermo Power Corp., which manufactures packaged cogeneration and commercial cooling systems and develops and builds natural gas-fueled engines for vehicles; ThermoTrex Corp., which develops technologies and products in unconventional imaging, adaptive optics, lasers, and direct energy conversion; Thermo Fibertek Inc., which develops and manufactures equipment and accessory products for the paper and paper-recycling industries; Thermo Ecotek Corp., which develops clean combustion and engineered clean fuels, as well as a range of other environmentally sound technologies; Thermedics Detection, which manufactures and markets high-speed systems used for product quality assurance in a variety of industrial processes; and Metrika Systems Corporation, which manufactures and markets on-line industrial process optimization systems.

Mr. Hatsopoulos graduated from Athens College in Athens, Greece, in 1953. He holds a B.S. in history and mathematics from Northeastern University. He is a member of the Board of Directors of the American Stock Exchange, a member of the Board of Directors of Premier, Inc., and a member of the board of Lois/USA, located in New York.