



RICHARD H. CARO

4 Clyde Ter, Arlington, MA 02474 Tel: (978) 206-1449
Mobile Tel: (978)764-4728 Fax: (978)246-1270
E-mail: Rcaro@CMC.us

Selected Major Accomplishments

LEADERSHIP

- As a recognized industry spokesperson and analyst, lead the adoption of Ethernet for control level networks within the industrial automation industry. This has led to higher levels of interoperability among the competing suppliers to the benefit of the end user. All of the major industrial network open standards groups have, as a direct result, adopted an Ethernet strategy.
- As the chairman of the international standards subcommittee, lead the global effort to complete the fieldbus standards. These standards are used by most suppliers to the process industries for process control, and also by many major suppliers of controllers to discrete and batch processing industries.
- Recruited, hired and led, as Director Advanced Systems Technology, an elite advanced development team to create a software-centric, microprocessor-driven, process control system architecture. Leading-edge technology formed the basis for this manufacturer of instrumentation and control systems to become an industry trend-setter. Early-to-market success led to the formation of a strategic partnership with Intel that significantly contributed to both companies establishing their position as market leaders.
- Turned around a failing project in the Digital Systems Division of the leading supplier of real-time computer I/O equipment for process systems. This Division had been unable to ship its hardware because software development was incomplete. After taking over as General Manager, conducted a detailed review to diagnose why the software was unacceptable to customers, and focused the effort by setting new design goals and targets. Within three months, the first system was shipped, and all outstanding orders were filled within six months. The Division was prepared for sale and was sold to a systems integrator.
- Developed, as a consultant, the product plan for a European-based multi-national manufacturer of networked control systems for the power, steel, and paper industries to merge their product lines with those of an acquired process controls manufacturer. Developed a marketing and technology road map for classifying and merging technologies over a five-year period to preserve the existing client bases, and incrementally transition the brand lines to a single evolutionary product line. Also recommended a strategy to implement total systems in many of their international markets rather than simply sell products. Implementation of this strategy has been highly successful in increasing total business.
- Completed, as Department Manager, the development of a computer control system for a control systems manufacturer. Previous failure to bring the project to market sacrificed a year of potential market share to the company's competitors. Takeover of the department and project began with a strategic analysis to identify and classify existing problems and issues. Refocusing of resources permitted delivery of the first system within ten months. Market reception positioned the company as the leading supplier of computer control systems.

DIRECTION SETTING

- Established, as VP Marketing and Sales, the product strategy for a first-stage, venture-backed, start-up in the process control market. This strategy, as defined in his Business Plan, defined the company as a manufacturer of high reliability distributed control systems with innovative designs in distributed intelligence, fiber optic networking, environmental protection, and use of personal computers for color graphic operator workstations. We raised first and second rounds of venture capital to design, fabricate, and bring the product to market. He defined and led the creation of all sales literature, press releases, and promotional materials for launch of the product at the industry's annual conference and exhibit. He recruited and ran a national sales force of independent sales reps. Initial sales positioned the company as the leader in fault-tolerant process control products for nuclear power generation, chemical production and steel manufacturing.

- Persuaded, as Director Industry Marketing, the senior management of a late-stage, start-up, minicomputer company to abandon their strategy of converting another company's process control software to run on their hardware because it had limited functionality and was too costly to convert to a marketable product. Identified superior third-party software and convinced the supplier to modify it to run on their hardware platforms. This strategic partnership produced operational software with much greater functionality in one-quarter of the original time, and increased mini-computer sales by fifty percent, doubling revenues within three years.
- Assumed responsibility, as Marketing Product Manager, for developing marketing strategies, production evolution plans, materials and sales training programs for all software products of a Fortune 600 instrumentation and controls manufacturer. Reengineered the hardware platform to take advantage of newer, low-cost technologies and avoid software revision. Implementation extended the product lines another seven years, which quadrupled revenues over the extended product cycle.
- Consulted for a Wall Street investment banker performing due diligence to validate proposed technology for installing a trans-Atlantic telecommunications cable and assessing the economic return on the sale of bandwidth in competition with other communications technologies. Analysis was completed within six weeks to determine if the project should be underwritten. Extensive research into the projected growth of the Internet became necessary to validate the assumptions made in the venture's Business Plan. Presentations were made to investment partners in New York and London providing the results of our study and our prognosis of the project technology and evaluation of the intended market. Based on our recommendations, underwriting was completed in January 1997, and sets the stage for accommodating the expected exponential growth of the Internet well into the 21st century.

Professional Employment History

- CMC Associates, Arlington, MA, President and CEO, 2001 to present
- ARC Advisory Group, Dedham, MA, Vice President and Director, *Networking and Discrete Manufacturing Industries*, 1997 to 2001
- Arthur D. Little, Inc., Cambridge, MA, Senior Manager and Director, *Communications and Information Technology*, 1988 to 1997
- Computer Products, Inc., Pompano Beach, FL, General Manager, *Digital Systems Division*, 1986 to 1988
- Autech Data Systems, Inc., Pompano Beach, FL, Vice President, *Marketing and Sales*, 1981 to 1986
- Modular Computer Systems, Inc., Ft. Lauderdale, FL, Director, *Process Industry Systems*, 1978 to 1981
- The Foxboro Company, Inc., Foxborough, MA, Director, *Advanced Systems Development*, 1970 to 1978

Education

Alexander Hamilton Institute, New York
Louisiana State University, Baton Rouge
University of Florida, Gainesville

MBA, General Business
MS, Chemical and Systems Engineering
BS, Chemical Engineering

Professional Honors and Associations

Industrial Computing Society . . . Elected Fellow, 1996
Instrument Society of America. . . Elected Life Fellow, 2001 . . . Founder and President, Florida GoldCoast Chapter 1983-84 . . . Standards Award, 1981, 1997, 2000. . . Chairman SP50 Fieldbus Standards Committee, 1994 to present

International Electrotechnical Commission (IEC) .. Convenor SC65C/WG6 (Fieldbus), 1994 to 2000

Elected to Automation Hall of Fame, 2005
Author of more than 45 Technical Publications and Magazine Articles
Contributing author to Instrument Engineer's Handbook, 2002
Holder of US Patents: 5,692,093 (1996), 5,455,630 (1995)
Frequent speaker and invited keynote speaker at industry conferences