Connecticut Academy of Science and Engineering

Annual Report

2005–2006

Connecticut Academy of Science and Engineering

The Connecticut Academy is a non-profit institution patterned after the National Academy of Sciences to identify and study issues and technological advancements that are or should be of concern to the state of Connecticut. It was founded in 1976 by a Special Act of the Connecticut General Assembly.

Vision

The Connecticut Academy will foster an environment in Connecticut where scientific and technological creativity can thrive and contribute to Connecticut becoming a leading place in the country to live, work and produce for all its citizens, who will continue to enjoy economic well being and a high quality of life.

Mission Statement

The Connecticut Academy will provide expert guidance on science and technology to the people and to the state of Connecticut, and promote the application of science and technology to human welfare and economic well being.

Goals

- *To provide information and advice on science and technology to the government, industry and people of Connecticut.*
- *To initiate activities that foster science and engineering education of the highest quality, and promote interest in science and engineering on the part of the public, especially young people.*
- *To provide opportunities for both specialized and inter-disciplinary discourse among its own members, members of the broader technical community, and the community at large.*

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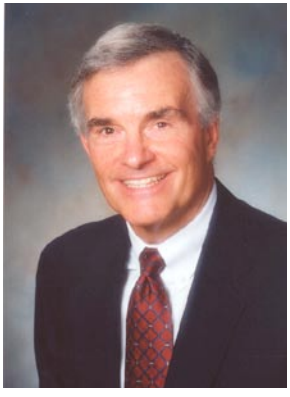
Report of the President



As the Academy's new president beginning on July 1, 2006, I am pleased to report that the state of the Academy is sound, both in pursuit of our mission and our financial status. Dr. Michael J. Werle just completed his two-year term as president. His skills, political acumen, energy, and dedication to the position have been invaluable and have contributed greatly to the direction of the organization and our financial strength. The Academy is certainly indebted to Dr. Werle for his many significant contributions. Fortunately, we will continue to benefit from his guidance, as he will serve as a member of the Academy's Council as past president. We will also benefit from the ongoing efforts of our excellent executive director, Richard H. Strauss.

The Special Act of the Connecticut General Assembly which created the Academy limited it membership to 200 individuals. This past year, in its 31st year of existence, the Academy secured approval of the General Assembly to raise its membership limit to 250. This will enable the Academy to continue to recognize Connecticut's outstanding scientists and engineers while preserving its heritage through its current membership. This year 25 new members were elected to the Academy, bringing its membership to a total of 215.

Fiscal year 2006 was challenging and active for the Academy in its role as a science and technology advisor and resource for the state of Connecticut. All matters under study were of high interest and concern for the state and its economic well-being. Four studies were undertaken on behalf of the Connecticut General Assembly, three of which will be completed in the next fiscal year. The topics of these studies are diverse, from energy alternatives and conservation to the impact of supplementary science, technology, engineering, and mathematics (STEM) programs. These topics were selected in consultation with the leadership of various committees of the General Assembly. Additionally, the Academy completed a study for Connecticut Department of Economic and Community Development and four studies on behalf of the Connecticut Department of Transportation. Details regarding these important projects are provided within this report.

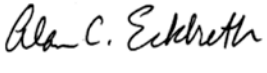
The Academy is pleased to participate in the selection of the annual winner of the Connecticut Medals of Science and Technology, which are awarded respectively in alternating years. In 2005, the Connecticut Medal of Science was awarded to Professor William C. Stwalley of the University of Connecticut for his pioneering research that helped pave the way for some

of the most exciting developments in physics today. This report also features the winner of the 2006 Connecticut Medal of Technology, Dr. Gene Banucci, founder and chairman of the board of ATMI, Inc., whose selection was in-process at the close of the fiscal year.

The Academy's quarterly Bulletin continues to inform the public and provide the leadership of the state with timely notice of developments of interest at both the state and national levels. This year the Bulletin's feature articles discussed a wide range of topics, including "Connecticut's Business Incubators Are Critical Links to Innovation," "Protecting the State's Diverse Habitats for Future Generations," "Who's Keeping Track of Long Island Sound…? The Long Island Sound Resource Center," and the "Connecticut Center for Advanced Technology: a Springboard of Technological Innovation." Also, the Academy continued its efforts to support science and technology initiatives in the state through its active participation in the Alliance for Connecticut Technology and as a member of the Exhibit Oversight Group of the Connecticut Science Center.

In a continuing effort to encourage interest in science, engineering and technology among the youth of Connecticut, the Academy's leadership participated in CONNvene: a platform to advance a statewide STEM dialogue and strategy initiated by Governor Rell. The goal of this effort is to create a coordinated and comprehensive plan to measurably improve —in every Connecticut school district and college/university—student interest and achievement in STEM to better meet Connecticut's 21st century economic development, quality of life, and workforce needs. Achieving CONNvene's goals will be key to Connecticut becoming a state of choice for companies and workers worldwide.

As incoming president of the Academy, I, along with Dr. Myron Genel, the Academy's new vice president/president-elect, will seek to have the Academy continue in its efforts to provide outstanding service and advice to the leadership of the state of Connecticut. We believe the Academy can make important contributions in key areas to enable the state to continue to enjoy economic well being and a high quality of life. We thank the individuals and organizations that have assisted us in the past year – our members, patrons, clients and colleagues — and look forward to working with old friends and new partners in the year ahead.



Alan C. Eckbreth
President
July 1, 2006

The property, affairs and activities of the Academy are managed by a Council of 11 Members, which serves also as the Board of Directors of the Corporation. In addition, the chairs of the ten Technical Boards serve as *ex officio*, non-voting members of the Council. The Council meets quarterly. There are three Standing Committees of the Academy: Finance, Membership and Nominating.

The members of the Council and chairs of the Standing Committees for the 2006 fiscal year were as follows:

Council of the Academy

Officers:
President: Michael J. Werle, TEaMS, Inc.
Vice-President/President Elect: Alan C. Eckbreth, Consultant & United Technologies Research Center (ret.)
Treasurer: Peter G. Cable, Applied Physical Sciences Corporation
Secretary: Gale F. Hoffnagle, TRC Environmental Corporation, Inc.
Past President: John P. Cagnetta, Northeast Utilities (ret.)

Councilors:
Myron Genel, Yale University School of Medicine
James C. Hogan, Jr., Connecticut Department of Public Health
Herbert S. Levinson, Transportation Consultant & University of Connecticut (ret.)
Louis A. Magnarelli, The Connecticut Agricultural Experiment Station
Sandra K. Weller, University of Connecticut Health Center
Gary W. Yohe, Wesleyan University

Chairmen of the Technical Boards:
(See pages 4-5 for a listing of the chairs.)

Council Advisors:
Anthony J. DeMaria, Coherent*DEOS LLC
J. E. Goldman, GB Energy Systems, Inc.
Harvey S. Sadow, Boehringer Ingelheim Corp. (ret.)

Chairmen of the Standing Committees

Finance:
Peter G. Cable, Applied Physical Sciences Corporation

Membership:
James C. Hogan, Jr., Connecticut Department of Public Health

Nominating:
Alan C. Eckbreth, Consultant & United Technologies Research Center (ret.)

Technical Boards

The Members of the Academy are divided into ten Technical Boards (TBs) that represent both their technical and public policy interests.

The TB responsibilities in their designated policy areas include: serving as a forum for examining science-based issues; providing the resources for assembling and overseeing ad hoc committees to respond to inquiries placed with the Academy; and generating guidance in instances where science and technology are expected to offer new opportunities or challenges for the development of sound state policy. In each of the above, the TBs may encourage the participation of expert non-members.

The Chairs and mission statements of the TBs for the 2006 fiscal year were:

AGRICULTURE, FOOD AND NUTRITION:
Louis A. Magnarelli, The Connecticut Agricultural Experiment Station
The production, distribution, safety, and nutrition of food, including development of biotechnology to improve the quality of food and the environment.

COMMUNICATION AND INFORMATION SYSTEMS:
Richard C. Barker, Yale University
All means of communicating voice, data, and other combinations of business and personal information, including the development of new hardware and software technologies, with special attention to complementarity and interchangeability with transportation systems.

ECONOMIC DEVELOPMENT:
Earl R. Thompson, United Technologies Research Center (ret.)
Economic opportunities afforded by Connecticut's technological base and its human and natural resources, with a special role in assessing the potential economic impact of new technologies.

ENERGY PRODUCTION, USE AND CONSERVATION:
Lee S. Langston, University of Connecticut
The production, use, conservation and distribution of energy with special attention to meeting future demand and environmental quality standards.

ENVIRONMENT:
William M. Carey, Boston University
The physics, chemistry, geology, biology, ecology and engineering of the environment as these relate to issues of economic development, energy use, transportation, public health and the quality and utilization of Connecticut's atmosphere, land, water and sea natural resources.

HEALTH CARE AND MEDICAL TECHNOLOGY:
Gualberto Ruano, GENOMAS, Inc.
The delivery, quality and cost of medical care and related problems, including preventative health care and the development of biotechnology for improving human health.

HUMAN RESOURCES:
Alan C. Eckbreth, Consultant & United Technologies Research Center (ret.)
The effective utilization of people in ways that will contribute to human development and economic growth, including applications of technology to improve both basic and advanced skills to make people more employable, and with attention to the impact of urban growth and development.

PUBLIC HEALTH:
Jan A. J. Stolwijk, Yale University School of Medicine
The impacts on the public health of communicable diseases and of materials and energy of man-made and natural origin in the environment.

TECHNOLOGY:
Frederick J. Leonberger JDS Uniphase Corporation (ret.)
The development and utilization of knowledge for the purpose of providing material goods and services, including the utilization of research results to design and manufacture of materials and products, with particular attention to developing effective means for transferring technology from the academic to the industrial community and within the industrial community, and for the improvement of manufacturing technology.

TRANSPORTATION SYSTEMS:
David E. Crow, Pratt & Whitney (ret.)
The movement of people and material within and across Connecticut, including vehicles and infrastructure, with special attention to complementarity and interchangeability with communication systems.

New Members

The membership of the Academy is limited by its State Charter to 250 persons. The Bylaws of the Academy provide that members must live or work in Connecticut and are to be elected by the current members on the basis of their accomplishments in science, engineering and/or technology. In particular, scientists and engineers may be considered for membership on the basis of fulfillment of either or both of the following criteria:

- Scientific distinction achieved through significant original contribution in theory or application;
- Unusual accomplishments in the pioneering of new and developing fields of applied science and technology.

In addition, members of the national academies are automatically considered for membership by resolution of Council.

At the close of the 2006 fiscal year the Academy had a total of 215 members, including this year's 25 newly elected Academy members, as follows:

Ammar, Reda A.
Professor & Head, Department of Computer Science & Engineering, University of Connecticut

Brownell, Kelly D.
Professor of Epidemiology and Public Health, Yale University School of Medicine
Chair, Department of Psychology; Director, Rudd Center for Food Policy and Obesity; and Professor, Institute for Social & Policy Studies, Yale University
Institute of Medicine – elected member

Dobrynin, Andrey V.
Associate Professor, Institute of Materials Science, University of Connecticut

Donkor, Eric
Associate Professor, Department of Electrical & Computer Engineering, University of Connecticut

Dukkipati, Rao V.
Professor and Chair of Mechanical Engineering & Director, MSME Graduate Program, School of Engineering, Fairfield University

Dunne, Gerald V.
Professor of Physics, University of Connecticut

Newly elected members of the Academy at the Annual Meeting on May 24, 2006. (Photo: Al Malpa)

Gardner, Phillip J.
Director, CO_2 Laser Commercial Engineering, Coherent, Inc.

Gould, Phillip L.
Professor of Physics, University of Connecticut

Grey, Margaret
Annie Goodrich Professor of Nursing Research & Dean,
Yale University School of Nursing
Institute of Medicine – elected member

Javanainen, Juha
Professor of Physics, University of Connecticut

Manzione, Lou
Dean, College of Engineering, Technology and Architecture,
University of Hartford

Matzie, Regis A.
Senior Vice President & Chief Technology Officer,
Westinghouse Electric Company

Murphy, Edmund J.
Chief Technology Officer, Components & Modules Product Group,
JDS Uniphase

Pattipati, Krishna R.
Professor, Department of Electrical & Computer Engineering,
University of Connecticut

Pitchumani, Ranga
Distinguished Professor of Engineering & Head,
Department of Mechanical Engineering, University of Connecticut

Radlinski, Ronald P.
Consultant, BBN Technologies

Rivkees, Scott A.
Professor of Pediatrics & Vice Chairman for Research,
Department of Pediatrics, Yale University

Shaw, Leon L.
Professor, Department of Materials Science & Engineering,
University of Connecticut

Shulman, Gerald I.
Professor of Medicine and Cellular & Molecular Physiology,
Department of Internal Medicine, Yale University
Institute of Medicine – elected member

Smith, Winthrop W.
Professor of Physics, University of Connecticut

Smooke, Mitchell D.
Strathcona Professor of Mechanical Engineering, Yale University

Snowdon, Jane L.
Senior Manager, Research Staff, T.J. Watson Research Center,
IBM Corporation

Stone, Alfred D.
Carl A. Morse Professor of Applied Physics & Physics, Yale University

Taylor, Geoffrey W.
Professor of Electrical Engineering, Department of Electrical &
Computer Engineering, University of Connecticut

Xiao, Danny T.
Chief Technology Officer, Inframat Corporation

One of the principal purposes of the Academy is to provide science and technology information and advice on public policy issues, upon request of a government agency or private organization. Information regarding inquiries received, continued, or completed during the fiscal year is listed below:

Information Technology Systems for Use in Incident Management and Work Zones: This study identified information technology systems that could be utilized to improve operations to facilitate the efficient movement of traffic through and around work zones and incident areas for the purpose of enhancing the safety of motorists and roadway workers, the mobility of the traveling public, and fuel conservation. Study Period: November 2004–March 2006. Final Report issued.
Source: Connecticut Department of Transportation

Assessment of a Connecticut Technology Seed Capital Fund/Program: This report provided guidance and advice relative to the potential for enhancing the state's economic base through initiation of and/or participation in a seed capital fund to promote the growth of Connecticut-based emerging technology companies. Study Period: June–November 2005. Final Report issued.
Source: Connecticut Department of Economic and Community Development

Demonstration and Evaluation of Hybrid Diesel-Electric Transit Buses: This study analyzed findings from CTTransit's diesel bus testing program for the purpose of identifying options for the next generation of transit vehicles for CTTransit's future fleet replacement program. Study Period: August–October 2005. Final Report issued.
Source: Connecticut Department of Transportation and CTTransit

I*mproving Winter Highway Maintenance: Case Studies for Connecticut's Consideration:* This study presented several case studies from other states and agencies to determine what alternatives Connecticut could employ to improve its overall winter highway operations given the conditions that exist. The suggestions not only considered alternative chemicals and technologies, but also considered the overall winter maintenance system including equipment, personnel, the decision making process and data collection tools. Study Period: April 2005–April 2006. Final Report issued.
Source: Connecticut Department of Transportation

An Evaluation of the Geotechnical Engineering and Limited Environmental Assessment of the Beverly Hills Development, New Haven, Connecticut: This study provided an independent analysis of the accuracy, completeness and verification of findings of an evaluation of a geotechnical engineering and limited environmental assessment that was conducted to determine foundation-related and environmental factors affecting the homes in

the Beverly Hills development in New Haven. The findings of the study indicated that additional investigations were needed to determine the accuracy, type, extent, and location of properties where structural damage reportedly has occurred do to settlement. Study Period: March–May 2006. Final Report issued.
Source: Connecticut General Assembly

Preparing for the Hydrogen Economy: This study identified the current state of knowledge regarding transitioning to and planning for a hydrogen-based transportation fueling system within the US or other countries. The findings identified that there are no fundamental barriers to hydrogen-fueled transportation and suggested two alternative policy pathways for consideration by Connecticut policy makers. It was also recommended that Connecticut consider action as part of a regional effort to amplify the effects of Connecticut efforts. Study Period: May 2005–June 2006. Final Report issued.
Source: Connecticut Department of Transportation

Advanced Communications Technologies: The objective of this study is to conduct an assessment of the benefits of creating a world-class digital/communications infrastructure for businesses and individuals in Connecticut; and to identify suggestions for accomplishing this goal. Preliminary project planning completed; Final Report will be issued in FY07. Study Start Date: May 2006
Source: Connecticut General Assembly

Energy Alternatives and Conservation: The objective of this study is to conduct an assessment of energy alternatives and conservation actions for reducing reliance on oil and fossil fuels over the next 10 years, which are applicable to Connecticut and would spur innovation, diversity and consumer choice, including but not limited to: providing an analysis of the state of emerging energy alternatives and renewable fuels and their applicability for use in Connecticut; assessing technological opportunities for supporting energy independence for current and future motorized transportation; and identifying new ideas to promote energy conservation. Preliminary project planning completed; Final Report will be issued in FY07. Study Start Date: May 2006
Source: Connecticut General Assembly

Impact of Supplementary Science, Technology, Engineering, and Mathematics (STEM) Programs: The objective of this project is to identify methodologies and tools for assessing the benefits and impacts of supplementary science, technology, engineering and mathematics (STEM) educational programs in an effort to assist the state in making program funding decisions. Preliminary project planning completed; Final Report will be issued in FY07. Study Start Date: May 2006
Source: Connecticut General Assembly

Most inquiries are referred to the Technical Boards for a response, or to the Academy Executive Director. One, or more, of the ten Technical Boards is selected to assemble appropriate experts to conduct a study and prepare the response to the Inquirer. The Academy provides technical support, prepares reports, and otherwise conducts the pertinent business of the Academy in these efforts.

The Academy also receives requests from state agencies, private organizations, and private inquirers for sources of technical information and technical experts on a variety of topics. While not a referral service, the Academy will provide or suggest resource persons in this state or elsewhere as appropriate.

The Academy continues to be funded by a plan under which the State of Connecticut and the private sector share a substantial portion of the general support of the Academy.

The following major sources of funding were recognized in fiscal year 2006 for a variety of studies and technical assistance (see Public Policy Inquiries):

- $85,714 from the Connecticut Department of Economic and Community Development (DECD) for an *Assessment of a Connecticut Technology Seed Capital Fund/Program Study*, which will be completed in fiscal year 2006

- $84,250 from the Connecticut Department of Transportation to complete work on the following studies that were started in FY2005: *Winter Highway Maintenance: Case Studies for Connecticut's Consideration* and *Preparing for the Hydrogen Economy – Transportation;* and participation in other activities. Additionally, *A Study of Information Technology Systems for Use in Incident Management and Work Zones,* which was funded in FY2005, was completed.

- $48,565 from the Connecticut General Assembly for *An Evaluation of the Geotechnical Engineering and Limited Environmental Assessment of the Beverly Hills Development, New Haven, Connecticut* completed in May 2006; and to begin work on the following studies which will be completed in FY2007: *Advanced Communications Technologies*; *Energy Alternatives and Conservation*; *Impact of Supplementary Science, Technology, Engineering, and Mathematics (STEM) Programs*.

- $10,000 from CTTransit for a study of the *Demonstration and Evaluation of Hybrid Diesel-Electric Transit Buses*

- $10,000 from Gerber Scientific, Inc. to manage and oversee the awarding of the H. Joseph Gerber Medal of Excellence as part of the Academy's Student Awards Program.

- $6,000 from the Connecticut Center for Science and Exploration, and $8,700 from the Connecticut Department of Education to oversee a hands-on science pilot program for elementary school students in the Hartford Public School System.

Patrons

In addition to support from the State of Connecticut (see the section on Contracts and Grants), the Academy seeks support and financial contributions from leading industrial and commercial institutions headquartered or having major operations in Connecticut. The total received in fiscal year 2006 was $18,905, for which the Academy is most appreciative.

The following Patrons of the Academy are recognized below for their support and financial contributions in fiscal year 2006. The Academy's Patrons receive all general literature and major reports of the Academy and are invited to its Annual Meeting.

Leading Patron

Northeast Utilities Service Company
Pfizer, Inc.

Annual Meeting Sponsors

Coherent, Inc.
Connecticut Economic Resource Center
Connecticut Innovations Inc.
Gerber Scientific, Inc.
University of Connecticut, School of Engineering
Yale University

Annual Meeting Contributor

Connecticut Technology Council, Inc.

Publications

In response to the provision of the Academy charter to "…encourage both specialized and interdisciplinary discourse among its members and with other members of the technical community by means of …publications…" the Academy undertakes the following activities:

The Bulletin
This quarterly publication of the Academy promotes the exchange of technical and research information among the various technical communities in Connecticut. The Bulletin generally includes a feature article, news from the National Academies, and information regarding science and technology developments of interest in the state of Connecticut.

Additionally an Executive Newsletter, a one-page summary of the Bulletin, is published quarterly. This newsletter provides busy industry, academic and government leaders with highlights of the most important issues presented in the Bulletin.

The Bulletin's editorial staff includes Martha Sherman, Managing Editor, and Executive Editors: Academy Members Dr. George Foyt, United Technologies Research Center (ret.) and Dr. Edward C. Monahan, University of Connecticut at Avery Point.

Copies of the Bulletin are sent to Academy members, other academic and industrial scientists, state legislators, commissioners of the state's executive departments, patrons of the Academy, as well as a variety of interested people.

Academy Web Site

The Academy's web site can be found at: www.ctcase.org. Information available on the web site includes:

- Home Page
- Technical Boards
- Science Fairs and Expositions
- Connecticut Medals of Science and Technology
- H. Joseph Gerber Medal of Excellence
- The Bulletin
- Executive Newsletter (an executive summary of the Bulletin)
- Other publications and reports
- Patrons
- Related sites

The Connecticut Medals of Science and Technology are awarded in alternate years by the State of Connecticut through the Board of Governors of Higher Education. The Connecticut Medals are modeled after the National Medals of Science and Technology, which are awarded annually by the president of the United States.

The Connecticut Medal of Science is awarded in recognition of extraordinary achievements in scientific fields crucial to Connecticut's economic competitiveness. The Connecticut Medal of Technology is awarded in recognition of extraordinary achievements by an individual in fields of technology that are demonstrated to have made a difference in Connecticut's industrial competitiveness.

Previous recipients of the Connecticut Medal of Science include Frederick M. Richards, Sterling Professor Emeritus of Molecular Biophysics and Biochemistry, Yale University, 1995; Ronald R. Coifman, Professor of Mathematics, Yale University, 1996; and William C. Stwalley, Board of Trustees Distinguished Professor and Head, Physics Department, University of Connecticut, 2005.

Previous recipients of the Connecticut Medal of Technology include H. Joseph Gerber, founder of Gerber Scientific, Inc., 1995; Charles H. Kaman, founder and CEO of Kaman Corporation, 1996; and Anthony J. Demaria, Chief Scientist, Coherent-DEOS, LLC, 2004.

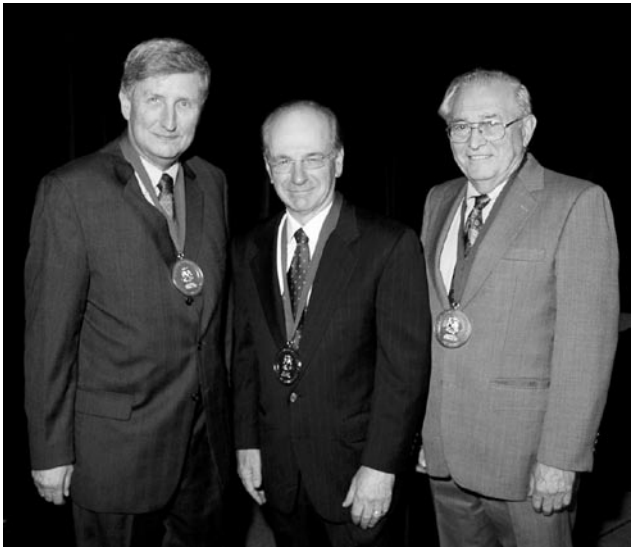
2006 Medal of Technology

Gene Banucci, PhD
Founder and Chairman, ATMI, Inc.

Gene Banucci, has led ATMI, Inc. as Chairman or CEO since co-founding the company in 1986. ATMI is a manufacturer of advanced materials used in the production of semiconductor chips. The Danbury-based company went public on Nasdaq in 1993, and has grown to over $300 million in annualized revenues with a market capitalization exceeding $1 billion.

Key to that growth has been Gene's creation of an innovation-driven culture at ATMI. This has resulted in the issuance of over 500 patents and created products that have redefined how materials are used in semiconductor manufacturing. Exemplifying this approach is the revolutionary SDS, or Safe Delivery System, which has become the standard in the semiconductor industry for the safe and environmentally friendly handling of hazardous gases.

Gene is a founding member of the Connecticut Technology Council, a member of the Board of the Program on Innovation and Technology of the National Academy of Sciences, a member of the Board of Directors of Zygo, Inc. (Nasdaq:ZIGO), SemEquip Inc., Primet, Inc. and a member of the Board of Trustees of Beloit College. He received his PhD in Organic Chemistry from Wayne State University, and his BA in Chemistry from Beloit College. Gene holds 21 issued US patents and is the author of numerous published articles.



William C. Stwalley, left, Board of Trustees Distinguished Professor and Head, Physics Department, University of Connecticut (winner of the Medal of Science in 2005) and Anthony J. DeMaria, right, Chief Scientist, Coherent-DEOS, LLC (winner of the Medal of Technology in 2004) flank 2006 Medal of Technology winner Gene Banucci at the Alliance for Connecticut Technology Award Dinner, which was held at the Connecticut Convention Center on October 19, 2006.

The Academy sponsors, supports, or participates in a number of special activities in response to the mandate of its Charter to: "...promote interest in science and engineering on the part of the public, especially young people". This year the Academy recognized student of the Connecticut Science Challenge, Connecticut Science Fair, Connecticut Junior Science and Humanities Symposium, Connecticut Invention Convention, and the National Siemens Competition in Math, Science and Technology at the Academy's Annual Meeting and Awards Dinner on May 24, 2006. Funding for all student and school awards is provided from contributions to the Academy's Student Awards Fund by the Members of the Academy and by Gerber Scientific, Inc for its sponsorship of the H. Joseph Gerber Medal of Excellence.

The H. Joseph Gerber Medal of Excellence – An Award of the Connecticut Academy of Science and Engineering Sponsored by Gerber Scientific, Inc.

This award is in recognition of H. Joseph Gerber's (1924-1996) technical leadership in inventing, developing and commercializing manufacturing automation systems for a wide variety of industries worldwide. An elected member of the National Academy of Engineering and the Connecticut Academy of Science and Engineering, Mr. Gerber received the National Medal of Technology in 1994 followed by the Connecticut Medal of Technology in 1995.

Joe Gerber's contributions to the technological capabilities of manufacturing were the result of a life grounded in genius, and shaped by vision and determination. As an inventor and as founder, Chief Executive Officer, Chairman of the Board and President of Gerber Scientific, Inc., Mr. Gerber was a leader for nearly half a century in inventing and producing factory automation equipment designed to solve global manufacturing problems. Mr. Gerber shaped his companies and the industries they served with a vision—of increasing human potential through technology; of eliminating tedious, time-consuming manual tasks through automation that increases productivity; and of creating technology that directly and immediately revolutionized manufacturing for companies both large and small. Today, Joe Gerber's genius continues to dominate in the manufacture of apparel and flexible materials, signs and commercial graphics, and lenses for eyeglasses.

Mr. Gerber made the following comments upon his receipt of the National Medal of Technology in 1994: "This award is more than a symbol of personal achievement as it is the highlight of a long and productive career

CASE member and Gerber Scientific, Inc., Chief Technology Officer Elaine Pullen, left, and CASE president Alan C. Eckbreth, right, with H. Joseph Gerber Medal of Excellence winners Pratistha Koirala and Jonathan Sellon. (Photo: Al Malpa)

for me. It is an affirmation that manufacturing automation has enhanced every aspect of human life and profoundly impacted the standard of living of every person and nation in the world. I am only one of the many who have contributed to our nation's rich technological heritage and one of the fortunate few to be recognized for his achievements."

The 2006 H. Joseph Gerber Medal of Excellence was awarded to the winners of the Connecticut Science Challenge and the Connecticut Science Fair's Life Sciences and Physical Sciences Senior Divisions. Each of the winners received a solid silver medal and a $1,000 honorarium.

Jonathan Sellon, Staples High School, Westport, CT
Connecticut Science Challenge — 1st Place
Project Title: *Modeling Auditory Attention by Implementing IHC Movement into Frequency Selectivity of the Inner Ear: A Novel Approach to Stimuli Separation*

Pratistha Koirala, E.O. Smith High School, Storrs, CT
Connecticut Science Fair — 1st Place, Life Sciences – Senior Division
Project Title: *Tracking the Localization of AVP1 in Arabidopsis Thaliana Tissue*

Jonathan Sellon, Staples High School, Westport, CT
Connecticut Science Fair — 1st Place, Physical Sciences – Senior Division
Project Title: *Modeling Auditory Attention by Implementing IHC Movement into Frequency Selectivity of the Inner Ear: A Novel Approach to Stimuli Separation*

National Intel Science Talent Search and the Connecticut Challenge

The national Intel Science Talent Search, administered by Science Service, is sponsored by the world's largest chipmaker, Intel Corporation. Formerly known as the Westinghouse Science Talent Search, the national contest is America's oldest and most highly regarded science competition for high

school seniors. Intended to stimulate student interest in science, math and technology, it has recognized some 3,000 finalists with $5 million in scholarships during the past seven decades. Alumni include 6 Nobel Laureates, 4 National Medal of Science & Technology winners, and 31 members of the prestigious National Academies of Sciences and Engineering. High school students from around the United States participate in this prestigious annual science project competition. Additionally, the projects of the state's finalists and semifinalists are subsequently judged for state honors in the Connecticut Science Challenge.

This year a total of 1,558 students representing 44 states, the District of Columbia, Puerto Rico, the Virgin Islands and an overseas school entered the national competition, including 18 students from Connecticut. A total of 40 students won honors as finalists and 300 students were selected as semi-finalist winners. Three students from Connecticut were awarded semi-finalist honors. Each of Connecticut's three national winners and their respective schools received awards of $1,000.

The 2006 Connecticut Science Challenge first place winner was **Jonathan Sellon** for his project *Modeling Auditory Attention by Implementing IHC Movement into Frequency Selectivity of the Inner Ear: A Novel Approach to Stimuli Separation.* He was also a winner of the H. Joseph Gerber Medal of Excellence. *(Please see the H. Joseph Gerber Medal of Excellence for a listing of the winners of this award.)*

Second place honors in the Connecticut competition, which included a $500 award from the Academy, went to national semi-finalists **Timothy Grejtak,** Darien High School, Darien, CT for his project *The Design and Construction of a Novel Hydrogen-Fueled Engine System*, and to **Kiran Pendri**, Choate Rosemary Hall, Wallingford, CT for his project *Macrocyclization Using Ring-Closing Olefin Metathesis: Synthesis of a 13-member Dithiolactone*. Also, honorable mention, which included an award of $250 from the Academy was awarded to **Raj Ranade,** East Lyme High School, East Lyme, CT for his project *A Computer Model for optimization of a Non-Isothermal Chlorination.*

In addition, these winners also received a Certificate of Recognition from the Academy and an Official Statement of recognition from Governor M. Jodi Rell.

Connecticut Science Fair

The 2006 Connecticut Science Fair was held March 14-18 at Quinnipiac College in Hamden.

To promote interest in science and engineering, and to recognize those high school students whose science projects are judged to be the best of the senior division in each of the two major categories, Life Sciences and Physical

Academy president Michael Werle, right, and vice-president Alan Eckbreth, left, accept an award from George Wisner, center, chairman of the board of the Connecticut Science Fair, recognizing 30 years of sponsorship of the Connecticut Science Fair by the Connecticut Academy of Science and Engineering. (Photo: Al Malpa)

Sciences, the Academy provides special awards each year to the top two winners of the Connecticut Science Fair.

The winners received the H. Joseph Gerber Medal of Excellence, including a solid silver medal and a $1,000 honorarium. In addition, they received a Certificate of Recognition from the Academy and an Official Statement of recognition from Governor M. Jodi Rell. *(Please see the H. Joseph Medal of Excellence for a listing of the winners of this award.)*

Connecticut Junior Science and Humanities Symposium

The Connecticut Junior Science and Humanities Symposium is sponsored by the University of Connecticut and is part of the national U. S. Army Junior Science and Humanities Symposia Program. The Academy joined with other corporations and institutions in support of this event.

The symposium was held March 6-7, 2006 at the University of Connecticut. The symposium has been effective in enhancing student motivation, stimulating original research and promoting the setting for exciting scientific meetings. It is intended to recognize students who have demonstrated intellectual achievement and promise. This event provides a forum for selected high school students to present a variety of technical papers and posters, meet in small discussion groups with leading scientists from Connecticut industries, and utilize special facilities at the university to explore technical and ethical

challenges of current science. The Academy recognizes the top five oral presenters and their respective schools. The winners are as follows:

Jonathan Sellon, Staples High School, Westport, CT
Topic: *Modeling Auditory Attention by Implementing IHC Movement into Frequency Selectivity of the Inner Ear: A Novel Approach to Stimuli Separation*

Kathleen Farley, Darien High School, Darien High School, Darien, CT
Topic: *Chronic Stress-Related Reduction of Microglial Proliferation in the Hilus of the Dorsal Hippocampus is Reversed by Topiramate*

Timothy Grejtak, Darien High School, Darien, CT
Topic: *The Design and Construction of a Novel Hydrogen-Fueled Engine System*

Jonathan Clain, Greenwich High School, Greenwich, CT
Topic: *The Diagnosis of Malignant Melanoma Using Visible Spectroscopy*

Nina Lintermans, Staples High School, Westport, CT
Topic: *Diagnosis of Asthmatic Reactions Through Protein Arrays and Luminex Technology*

These students and their schools were recognized by the Academy at the JSHS awards ceremony. The students received Certificates of Recognition, and books containing bookplates with the seal of the Academy were presented to both the students and their school libraries in the name of the Academy. Each high school was also recognized with a Letter of Commendation and a $300 donation to its science department to further science and mathematics education from the Academy. Additionally, Governor M. Jodi Rell issued an Official Statement to each high school in recognition of this outstanding achievement.

National Siemens Competition in Math, Science and Technology

The Siemens Competition in Math, Science and Technology recognizes remarkable talent early on, fostering individual growth for high school students who are willing to challenge themselves through science research. Through this competition, students have an opportunity to achieve national recognition for science research projects that they complete in high school. Students may submit research reports either individually or in teams of two or three members. Impartial panels of research scientists from leading universities and national laboratories judge the reports in an initial blind reading. Students whose projects are selected for further competition are invited to give an oral and poster presentation at one of six regional events. Regional winners also receive an invitation to participate in the National Competition in Washington, DC. In the national competition, students' presentations are judged by research scientists recruited for their specific expertise in the area of research for each project.

Young scientists are honored at the Academy's Annual Dinner. (Photo courtesy: Al Malpa)

Kiran Pendri, Choate Rosemary Hall, Wallingford, CT was named the 2nd place winner in the 2005 National Siemens Competition for his project *Macrocyclization Using Ring-Closing Olefin Metathesis: Synthesis of a 13-member Dithiolactone,* for which he received a $50,000 scholarship. He was also named the winner of the New England Regional Competition for which he received a $3,000 scholarship. Additionally, the Academy recognized this student winner with a $500 award and a Certificate of Recognition, as well as an Official Statement of recognition from Governor M. Jodi Rell.

Connecticut Invention Convention

The Connecticut Invention Convention is a program that seeks to provide students in grades K-8 with a meaningful opportunity to develop and encourage creative thinking and invention. The Invention Convention program is designed to integrate all aspects of a student's educational experience in an effort to solve real-life problems by understanding and using creative skills. The convention provides an opportunity for student inventors to participate in a friendly competition and to share their ideas with each other as well as adult inventors, engineers, patent attorneys and other professionals.

For 2006, the Academy recognized the 15 middle school student winners of the Invention Convention with Certificates of Recognition and monetary awards ($50 US Savings Bonds).

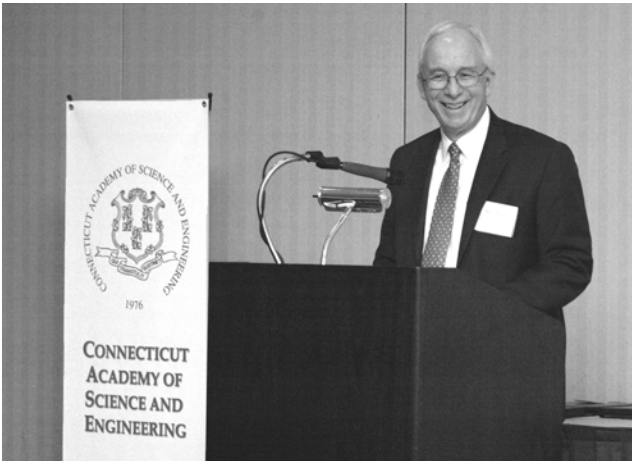
CPTV Family Science Expo

The 15th Annual CPTV Family Science Expo was held April 27-30, 2006 at the Connecticut Expo Center in Hartford. This innovative program, for children in kindergarten through eighth grade, encourages the understanding of science applications in our everyday lives and how science affects the future. The Academy participates in the development of the CPTV Family Science Expo as a member of the event's Science Advisory Committee.

Annual Meeting

The thirty-first Annual Meeting and Dinner of the Academy was held May 24, 2006, at the Crown Plaza Hotel, Cromwell, Connecticut. The event included a business meeting for members that provided a review of the activities and affairs of the Academy. Approximately 215 Academy members and guests had an opportunity to meet with student science competition award winners, who displayed their projects, during the event's reception. During dinner, the sixteen newly elected members of the Academy were recognized.

The keynote address, "Progress and Plans for the Connecticut Center for Advanced Technology," was delivered by Dr. Karl M. Prewo, Chief of Technology and Innovation of the Connecticut Center for Advanced Technology and a member of the Connecticut Academy of Science and Engineering. Dr. Prewo spoke about the mission of the Center, which was established in 2004 to work in partnership with industry, government and academia to strengthen economic competitiveness through its initiatives in technology, education and new enterprise creation.



Academy member Carl M. Prewo, Chief of Technology and Innovation of the Connecticut Center for Advanced Technology (CCAT) addresses the Academy's 31st Annual Meeting and Dinner on May 24, 2006.

(Photo courtesy: Al Malpa)

The Annual Meeting concluded with the Academy's celebratory Student Science Competition Awards Ceremony. The students and schools recognized by the Academy are listed under the "Special Activities" section of this report. Approximately $7,000 was awarded to this year's winning students and their schools.

The Academy recognizes and thanks the following companies and organizations for their generous donations in support of the Annual Meeting: Coherent, Inc.; Connecticut Economic Resource Center; Connecticut Innovations Inc.; Connecticut Technology Council; Gerber Scientific, Inc.; University of Connecticut, School of Engineering; and Yale University.

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING, INCORPORATED

Financial Statements

YEAR ENDED JUNE 30, 2006
(with comparative totals for 2005)

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING, INCORPORATED

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INDEPENDENT AUDITOR'S REPORT

BURNS, CLARK AND COMPANY, P.C.
CERTIFIED PUBLIC ACCOUNTANTS AND CONSULTANTS

JOHN C. BURNS, CPA
STUART K. CLARK, CPA

Independent Auditor's Report

Council of the Academy
Connecticut Academy of Science
and Engineering, Incorporated
Hartford, Connecticut

We have audited the accompanying statement of financial position of the Connecticut Academy of Science and Engineering, Incorporated (Academy) as of June 30, 2006 and the related statements of activities, cash flows, and functional expenses for the year then ended. These financial statements are the responsibility of the Academy's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Connecticut Academy of Science and Engineering, Incorporated as of June 30, 2006, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Information at June 30, 2005 and for the year ended June 30, 2005, is presented for comparative purposes only and was extracted from the financial statements prepared by net asset class for that year, on which an unqualified opinion dated October 24, 2005, was expressed.

In accordance with Government Auditing Standards, we have also issued our report dated November 14, 2006, on our consideration of the Academy's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in assessing the results of our audit.

Burns, Clark & Company, P.C.

Burns, Clark & Company, P.C.
November 14, 2006

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Statement of Financial Position

	2006	2005
ASSETS		
Cash, Including Interest-Bearing Deposits of $254,662 in 2006 and $219,770 in 2005 (Note 3)	$254,662	$223,203
Accounts Receivable – Contracts (Note 2)	70,000	23,800
Accounts Receivable – Other	0	150
Prepaid Expenses	1,213	35,491
Other Assets	852	704
Furniture and Equipment, Net of Accumulated Depreciation of $27,668 in 2006 and $26,612 in 2005 (Note 2)	2,710	- 3,766
TOTAL ASSETS	$329,437	$287,114
LIABILITIES AND NET ASSETS		
LIABILITIES		
Accounts Payable and Accrued Expenses	$12,384	$10,752
Contract Revenue Received in Advance (Notes 2 and 4)	101,436	85,714
TOTAL LIABILITIES	113,820	96,466
NET ASSETS (Notes 2 and 5)		
Unrestricted:		
Net Investment in Furniture and Equipment	2,710	3,766
Undesignated	192,051	179,672
TOTAL UNRESTRICTED NET ASSETS	194,761	183,438
Temporarily Restricted:	20,856	7,210
TOTAL NET ASSETS	215,617	190,648
TOTAL LIABILITIES AND NET ASSETS	$329,437	$287,114

Statement of Activities

	2006			2005
	Unrestricted	Temporarily Restricted	Total	Total
Revenues & Other Support				
Contracts (Note 4)	$253,229	$0	$253,229	$337,998
Contributions (Note 2)	18,905	17,540	36,445	25,730
Membership Dues	19,300	0	19,300	18,300
Interest Income	8,408	209	8,617	2,326
Report Fees and Miscellaneous Income	40	0	40	1,570
In-kind Contributions	0	0	-	17,835
Total	299,882	17,749	317,631	403,759
Net Assets Released from Restrictions (Notes 2 and 5):				
Satisfaction of Program Restrictions	4,103	(4,103)	0	0
Total Revenues and Other Support	303,985	13,646	317,631	403,759
Expenses (Note 2):				
Program Services:				
Science and Technology Collaborative	15,696	0	15,696	42,627
Publications	28,162	0	28,162	28,148
Technical Guidance and Information	96,141	0	96,141	134,239
Awards	7,309	0	7,309	5,670
Total Program Services	147,308	0	147,308	210,684
Support Services:				
Management and General	145,045	0	145,045	128,025
Fund Raising	309	0	309	267
Total Support Services	145,354	0	145,354	128,292
Total Expenses	292,662	0	292,662	338,976
Change in Net Assets	11,323	13,646	24,969	64,783
Net Assets at Beginning of Year	183,438	7,210	190,648	125,865
Net Assets at End of Year	$194,761	$20,856	$215,617	$190,648

Statement of Functional Expenses

	2006				
	PROGRAM SERVICES				
	Science & Technology Collaborative	Publications	Technical Guidance & Information	Awards	Total Program Services
Professional Services	$14,100	$19,470	$88,696	$ 0	$122,266
Professional Services - In Kind (Note 2)	0	0	0	0	0
Rent and Parking (Note 6)	808	795	819	0	2,422
Office Expenses	0	1,472	895	0	2,367
Insurance	172	172	172	0	516
Transportation	425	134	889	0	1,448
Council Activities	0	0	0	0	0
Membership Activities	0	0	0	0	0
Awards and Prizes	0	0	0	7,309	7,309
Printing	0	6,035	3,809	0	9,844
Symposium Expenses	0	0	0	0	0
Miscellaneous	107	0	777	0	884
Total Expenses before Depreciation	15,612	28,078	96,057	7,309	147,056
Depreciation (Note 2)	84	84	84	0	252
Total Expenses	$15,696	$28,162	$96,141	$7,309	$147,308

Statement of Functional Expenses

2006				
SUPPORT SERVICES				
Management & General	Rund Raising	Total Support Services	2006 Total Program & Support	2005 Total
$104,945	$0	$104,945	$227,211	$242,056
0	0	0	0	17,835
8,146	199	8,345	10,767	10,957
8,650	46	8,696	11,063	9,751
1,587	43	1,630	2,146	2,210
807	0	807	2,255	3,174
3,474	0	3,474	3,474	3,392
11,851	0	11,851	11,851	11,195
0	0	0	7,309	5,652
2,067	0	2,067	11,911	12,319
0	0	0	0	15,494
2,735	0	2,735	3,619	3,708
144,262	288	144,550	291,606	337,743
783	21	804	1,056	1,233
$145,045	$309	$145,354	$292,662	$338,976

Statement of Cash Flows

	2006	2005
Cash Flows from Operating Activities		
Change in Net Assets	$24,969	$64,783
Adjustments to Reconcile Change in Net Assets to Net Cash Provided by (Used) in Operating Activities:		
Depreciation	1,056	1,233
Change In:		
Accounts Receivable - Contracts	(46,200)	18,339
Accounts Receivable - Other	150	850
Prepaid Expenses and Other Assets	34,130	(33,090)
Accounts Payable and Accrued Expenses	1,632	(22,088)
Contract Revenue Received in Advance	15,722	84,170
Total Adjustments	6,490	49,414
Net Cash Provided by (Used in) Operating Activities	31,459	114,197
Cash Flows from Investing Activities		
Additions to Furniture and Equipment	0	(4,054)
Net Cash Provided by (Used in) Investing Activities	0	(4,054)
Net Increase (Decrease) in Cash	31,459	110,143
Cash - Beginning of Year	223,203	113,060
Cash - End of Year	$ 254,662	$ 223,203

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2006
(with comparative totals for 2005)

NOTE 1 – NATURE OF OPERATIONS

The Connecticut Academy of Science and Engineering, Incorporated (Academy) was established to foster science and engineering, to promote the application of science and engineering to human health and welfare, and to study and report upon any subject within its competence when appropriate.

The Academy is a not-for-profit organization established under Special Act No. 76-53 of the State of Connecticut and incorporated under the Non-stock Corporation Act of the State of Connecticut. The Academy is exempt from federal income tax under Section 501(c) (3) of the Internal Revenue Code and is also exempt from state income tax.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Net Asset Classes

The net asset classes of the Academy consist of the following:

Unrestricted Net Assets

Unrestricted net assets consist of net assets over which the governing board has control to use in carrying out the operations of the Academy in accordance with its charter and bylaws and are neither permanently restricted nor temporarily restricted by donor-imposed restrictions

Temporarily Restricted Net Assets

Temporarily restricted net assets consist of net assets whose use is limited by donor-imposed restrictions, which either expire with the passage of time (time restriction) or can be fulfilled and removed by actions of the Academy pursuant to the restrictions (purpose restriction). The Academy reflects contributions as temporarily restricted support based on the purpose of the restrictions stipulated by the donor. The Academy's temporarily restricted net assets consist of monies restricted for Endowment and Student Award purposes.

When donor-imposed restrictions expire, that is when a stipulated time restriction ends or the purpose of the restriction is accomplished,

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

temporarily restricted net assets are reclassified to unrestricted net assets and reported in the accompanying statement of activities as net assets released from restrictions.

Contributions

Contributions received or promises to give without donor-imposed restrictions are reflected as unrestricted support. Contributions received or promises to give with donor-imposed restrictions are reflected as either temporarily or permanently restricted support in the accompanying financial statements. Contributions or promises to give with donor-imposed conditions are not recognized as contributions or promises to give in the accompanying financial statements until the period when the conditions are met.

Contributed Goods and Services

Goods and services have been provided by various organizations and a number of unpaid volunteers have contributed their time. The members of the Academy and their peers have donated significant amounts of time to the Academy's program services. Contributions are recognized if the goods or services received create or enhance nonfinancial assets or require specialized skills, are provided by individuals possessing those skills, and would typically need to be purchased if not provided by donation. Contributed services that do not meet the above criteria are not recognized (Note 4).

For the years ended June 30, in-kind contributions and related in-kind expenses reflected in the accompanying financial statements consisted of the following:

	2006	2005
Contract Management Services	$0	$17,835

Furniture and Equipment

All acquisitions or donations of furniture and equipment are reflected at cost or their fair value at the date of gift. Depreciation is provided for over the estimated useful lives of the assets, which range from five to seven years, on a straight-line basis.

Accounts Receivable - Contracts and Contract Revenue Received in Advance

Accounts receivable - contracts consist of fees earned on contracts in progress, but not yet received. In the opinion of management, all accounts receivable at June 30, 2006 and 2005 are deemed collectible.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

Contract revenue received in advance consists of contract fees received, but not yet earned.

Functional Expenses

The costs of providing the various programs and other activities have been summarized on a functional basis on the accompanying Statement of Activities. Accordingly, certain costs have been allocated among the programs and supporting services benefited.

The Academy's Program Services are as follows: "Science and Technology Collaborative" represents the development, operation and management of the Connecticut Initiative for Science and Technology; "Publications" represents the production and distribution of quarterly bulletins; "Technical Guidance and Information" represents the providing of information and advice on science and technology to government, industry and citizens of Connecticut; and "Awards" represents a student awards program to recognize achievements related to science and technology.

The Academy's Support Services are as follows: "Management and General" represents expenses incurred in support of the general operation and management of the Academy; and "Fund Raising" represents expenses related to fund raising activities in support of the Science and Technology Collaborative and the operation and general affairs of the Academy.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NOTE 3 - CONCENTRATION OF CASH CREDIT RISK

The Academy maintains cash accounts at various local banks. Accounts at the banks are insured by the Federal Deposit Insurance Corporation (FDIC) up to $100,000. At June 30, 2006 and 2005, cash balances at banks covered by FDIC insurance aggregate approximately $254,662 and $223,203, respectively and amounts not insured aggregated approximately $153,993 and $1,028, respectively.

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2006
(with comparative totals for 2005)

NOTE 4 – CONTRACT ARRANGEMENTS AND SUBSEQUENT FUNDING RISKS

During the years ended June 30, 2006 and 2005 the Academy applied to the Connecticut General Assembly, other State Agencies and public companies for funding in the form of Personal Service Agreements. The Academy has obtained various contracts aggregating $199,700 and $286,724 during the years ended June 30, 2006 and 2005, respectively

Future similar operations beyond June 30, 2006 are dependent on continued funding from the State or other similar organizations.

Certain services are provided by the members of the Academy on a volunteer basis, but do not meet the criteria to be recognized in the accompanying financial statements (Note 2).

Contracts, accounts receivable - contracts and contract revenue as of and for the year ended June 30, 2006 consisted of the following:

Agency	Total Contract Amount	Accounts Receivable - Contracts	Contract Revenue Year Ended June 30, 2006
Connecticut State Department of Education thru EASTCONN	$ 8,700	$ 0	$8,700
Connecticut Department of Transportation thru CTTransit	10,000	0	10,000
Connecticut Department of Economic and Community Development	100,000	0	85,714
Connecticut Office of Policy and Management thru Connecticut General Assembly	150,000	0	48,565
Connecticut Department of Transportation	95,000	70,000	84,250
Gerber Scientific Products, Inc.	30,000	0	10,000
Connecticut Center for Science & Exploration	6,000	0	6,000
Totals	$ 399,700	$ 70,000	$ 253,229

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2006
(with comparative totals for 2005)

NOTE 5 - NET ASSETS

Net assets released from donor-restriction by incurring expenses satisfying the purposes of contributions restricted to various Academy programs or restricted as to time periods, amounted to $4,103 and $6,590 for the years ended June 30, 2006 and 2005, respectively. At June 30, 2006 and 2005, net assets of $20,856 and $7,210, respectively, were temporarily restricted.

Net assets temporarily restricted at June 30, 2006 consisted of $10,959 and $9,897 for the Endowment and Student Awards, respectively. Net assets temporarily restricted at June 30, 2005 consisted of $7,210 for Student Awards.

NOTE 6 – LEASE OBLIGATION

The Academy's lease for office space expired October 31, 2002. The Academy is currently operating on a month-to-month lease for its office space. The monthly rental is $828 and includes one parking space. Rent expense amounted to $9,932 for the years ended June 30, 2006 and 2005, respectively.

BURNS, CLARK AND COMPANY, P.C.
CERTIFIED PUBLIC ACCOUNTANTS AND CONSULTANTS

JOHN C. BURNS, CPA
STUART K. CLARK, CPA

Independent Auditor's Report on Compliance and Other Matters and on Internal Control over Financial Reporting Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards

Council of the Academy
Connecticut Academy of Science
and Engineering, Incorporated
Hartford, Connecticut

We have audited the financial statements of the Connecticut Academy of Science and Engineering, Incorporated (Academy), as of and for the year ended June 30, 2006, and have issued our report thereon dated November 14, 2006. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Academy's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under Government Auditing Standards

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the Academy's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide an opinion on the internal control over financial reporting. Our consideration of

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the internal control over financial reporting would not necessarily disclose all matters in the internal control that might be material weaknesses. A material weakness is a reportable condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses.

This report is intended solely for the information and use of the Council of the Academy, management, Connecticut Office of Policy and Management, Connecticut Department of Transportation, Connecticut Department of Economic and Community Development, Connecticut State Department of Education and state awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

Burns, Clark & Company, P.C.

Burns, Clark & Company, P.C.
November 14, 2006

BURNS, CLARK AND COMPANY, P.C.
CERTIFIED PUBLIC ACCOUNTANTS AND CONSULTANTS

JOHN C. BURNS, CPA
STUART K. CLARK, CPA

Independent Auditor's Report on Compliance with Requirements Applicable to Each Major Program, on Internal Control Over Compliance in Accordance with the State Single Audit Act and on the Schedule of Expenditures of State Financial Assistance

Council of the Academy
Connecticut Academy of Science
and Engineering, Incorporated
Hartford, Connecticut

Compliance

We have audited the compliance of the Connecticut Academy of Science and Engineering, Incorporated (Academy) with the types of compliance requirements described in the Office of Policy and Management Compliance Supplement that are applicable to each of its major state programs for the year ended June 30, 2006. The major state programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs. Compliance with the requirements of laws, regulations, contracts and grants applicable to each of its major state programs is the responsibility of the Academy's management. Our responsibility is to express an opinion on compliance based on our audit.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States; and the State Single Audit Act (C.G.S. Section 4-230 to 4-236). Those standards and the State Single Audit Act require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major state program occurred. An audit includes examining, on a test basis, evidence about the Academy's compliance with those requirements and performing such other procedures, as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion. Our audit does not provide a legal determination on the Academy's compliance with those requirements.

In our opinion, the Academy complied, in all material respects, with the requirements referred to above that are applicable to each of its major state programs for the year ended June 30, 2006.

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Internal Control Over Compliance

The management of the Academy is responsible for establishing and maintaining effective internal control over compliance with requirements of laws, regulations, contracts and grants applicable to state programs. In planning and performing our audit, we considered the internal control over compliance with requirements that could have a direct and material effect on a major state program in order to determine our auditing procedures for the purpose of expressing our opinion on compliance and to test and report on internal control over compliance in accordance with State Single Audit Act.

Our consideration of the internal control over compliance would not necessarily disclose all matters in the internal control that might be material weaknesses. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that noncompliance with applicable requirements of laws, regulations, contracts and grants caused by error or fraud that would be material in relation to a major state program being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over compliance and its operation that we consider to be material weaknesses.

Schedule of Expenditures of State Financial Assistance

We have audited the basic financial statements of the Connecticut Academy of Science and Engineering, Incorporated as of and for the year ended June 30, 2006, and have issued our report thereon dated November 14, 2006. Our audit was performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying schedule of expenditures of state financial assistance is presented for purposes of additional analysis as required by the State Single Audit Act and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

This report is intended solely for the information and use of the Council of the Academy, management, Connecticut Office of Policy and Management, Connecticut Department of Transportation, Connecticut Department of Economic and Community Development, Connecticut State Department of Education and state awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

Burns, Clark & Company, P.C.

Burns, Clark & Company, P.C.
November 14, 2006

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING, INCORPORATED — SCHEDULE 1

SCHEDULE OF
EXPENDITURES OF STATE FINANCIAL ASSISTANCE
YEAR ENDED JUNE 30, 2006

State Grantor Pass - Through Grantor Program Title	State Grant Program Identification Number	Expenditures
Connecticut Department of Transportation	None (Note A)	$ 94,250
Connecticut Office of Policy and Management: Connecticut Energy Advisory Board	None (Note A)	$ 48,565
Connecticut Department of Economic And Community Development	None (Note A)	$ 85,714
Connecticut Department of Education	None (Note A)	$ 8,700
Total State Financial Assistance		$ 237,229

See independent auditors' report and notes to schedule of expenditures of state financial assistance.

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

NOTES TO SCHEDULE OF EXPENDITURES
OF STATE FINANCIAL ASSISTANCE
JUNE 30, 2006

NOTE A - GENERAL

State of Connecticut funding is provided from the Connecticut Department of Transportation, the Connecticut Office of Policy and Management, the Connecticut Department of Economic and Community Development and the Connecticut State Department of Education, operating budgets through Personal Service Agreements and letters of agreement. Accordingly, the funds are not attributed to a specific State Department and do not have State Grant Program Identification Numbers.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies of the Academy conform to generally accepted accounting principles as applicable to not-for-profit agencies. The following is a summary of the more significant policies relating to the aforementioned programs:

Basis of Accounting

The financial statements contained in the Academy's annual audit report are prepared on the accrual basis of accounting. Expenditures are recorded when the obligations are incurred. Contract revenues and other revenues are recognized upon notification of unconditional contributions of donors or when services are performed.

Expenditures of State Financial Assistance

The Schedule of Expenditures of State Financial Assistance, contained in this report, is prepared based on regulations established by the State of Connecticut Office of Policy and Management. The aforementioned contract revenues are considered to be earned when the services are performed or reimbursed expenses are incurred. Accordingly, these contract receipts are reflected in the expenditures column of the Schedule of Expenditures of State Financial Assistance.

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED JUNE 30, 2006

SECTION I - SUMMARY OF AUDIT RESULTS

Financial Statements

The type of auditor's report issued was unqualified.

Internal control over financial reporting:
- Material weakness(es) identified - none
- Reportable condition(s) identified that are not considered to be material weaknesses - none
- Noncompliance material to financial statements noted - none

State Financial Assistance

Internal control over major programs:
- Material weakness(es) identified - none
- Reportable condition(s) identified that are not considered to be material weaknesses - none

The type of auditor's report issued on compliance for major programs was unqualified.

Audit findings disclosed that are required to be reported in accordance with Section 4-236-24 of the Regulations to the State Single Audit Act - none

- The following schedule reflects the major program included in the audit:

State Grantor and Program	**State Grant Identification Number**	**Expenditures**
ConnecticutDepartment of Transportation	None (Note A)	$ 94,250
Connecticut Department of Economic and Community Development	None (Note A)	$ 85,714

CONNECTICUT ACADEMY OF SCIENCE
AND ENGINEERING, INCORPORATED

SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED JUNE 30, 2006

SECTION II - SUMMARY OF FINDINGS RELATED TO FINANCIAL STATEMENTS REQUIRED UNDER GENERALLY ACCEPTED GOVERNMENT AUDITING STANDARDS

- We issued reports, dated November 14, 2006, on internal control over financial reporting and on compliance and other matters based on an audit of financial statements performed in accordance with Government Auditing Standards.

- Our report on compliance indicated no reportable instances on noncompliance.

- Our report on internal control over financial reporting indicated no reportable conditions.

SECTION III - FINDINGS AND QUESTIONED COSTS FOR STATE FINANCIAL ASSISTANCE

- No findings or questioned costs are reported relating to the Academy's State financial assistance programs.

MAJOR STUDIES OF THE ACADEMY

2006

- Preparing for the Hydrogen Economy: Transportation
- Information Technology Systems for Use in Incident Management and Work Zones
- Improving Winter Highway Maintenance: Case Studies for Connecticut Consideration
- An Evaluation of the Geotechnical Engineering and Limited Environmental Assessment of the Beverly Hills Development, New Haven, CT

2005

- Assessment of a Connecticut Technology Seed Capital Fund/ Program
- Demonstration and Evaluation of Hybrid Diesel-Electric Transit Buses
- An Evaluation of Asbestos Exposures in Occupied Spaces

2004

- A Study of Railcar Lavatories and Waste Management Systems

2003

- An Analysis of Energy Available from Agricultural Byproducts, Phase II: Assessing the Energy Production Processes
- Study Update: Bus Propulsion Technologies Available in Connecticut

2002

- A Study of Fuel Cell Systems
- Transportation Investment Evaluation Methods and Tools
- An Analysis of Energy Available from Agricultural Byproducts, Phase 1: Defining the Latent Energy Available

2001

- A Study of Bus Propulsion Technologies in Connecticut

2000

- Efficacy of the Connecticut Motor Vehicle Emissions Testing Program
- Indoor Air Quality in Connecticut Schools
- Study of Radiation Exposure from the Connecticut Yankee Nuclear Power Plant

1999

- Evaluation of MTBE as a Gasoline Additive
- Strategic Plan for CASE

1998

- Radon in Drinking Water

1997

- Agricultural Biotechnology
- Connecticut Critical Technologies

1996

- Evaluation of Critical Technology Centers
- Advanced Technology Center Evaluation
- Biotechnology in Connecticut

1994

- Science and Technology Policy: Lessons from Six American States

1992

- A State Science and Technology Policy
- Electromagnetic Field Health Effects

1990

- Biotechnology (Research in Connecticut)
- Economic Impact of AIDS Health Care in Connecticut

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