

**HTDC
2004
Annual Report**

Enter



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Profile of HTDC

The mission of the High Technology Development Corporation (HTDC) is to facilitate the aggressive growth of the high technology industry in Hawaii. Created by the State Legislature 21 years ago, HTDC's programs have contributed to over 300 jobs and over \$19.3 million in revenues via its incubation programs, facilitated Hawaii applications for SBIR and other federal research and development (R&D) monies for small business innovation in excess of \$43 million dollars, and administered over \$44 million in federal R&D funds for alternative energy development. HTDC continues to deliver a broad range of services and programs for Hawaii's technology entrepreneurs. HTDC takes advantage of local, national and international resources to fulfill its statutory duties to:

- develop industrial parks and high technology innovation centers;
- provide managerial, administrative, financial and support services for high technology companies;
- promote and market Hawaii as the preferred site for high technology commerce;
- collect and analyze information on new and evolving commercial high technology activities; and
- make recommendations on policy and plans for new technology-based economic development.

HTDC is an agency of the State of Hawaii and is administratively attached to the Department of Business, Economic Development and Tourism (DBEDT).

HTDC Strategic Plan for 2000 – 2005

In 2004, HTDC completed the fourth year of a five-year strategic plan that focuses on four goals:

- create more high technology business opportunities in Hawaii;
- increase the marketing and promotion of Hawaii's high technology industries;
- develop, manage and assist technology centers statewide, and
- increase information gathering and support activities for Hawaii high technology businesses.

HTDC Strategic Objectives for 2004

HTDC moved toward its strategic goals in 2004 by meeting operational objectives to:

- enhance high-tech incubation programs;
- leverage federal funding to increase technology R&D and commercialization;
- develop additional incubation facilities, especially on the neighbor islands; and
- deliver relevant information and support activities.

Board of Directors HTDC Staff

Chair

Jay M. Fidell, Esq.
(term expires 6/30/07)
President
Bendet, Fidell, Sakai & Lee

First Vice Chair

Brian J. Goldstein
(term expires 6/30/07)
President
Kona Bay Marine Resources, Inc.

Second Vice Chair

Russell T. Yamane, CPA
(term expires 6/30/05)
Russell T. Yamane & Associates

Secretary / Treasurer

Sharon M. Wong
(term expires 6/30/07)
President
IMS, Inc.

Stacey C. G. Hee, Esq.

(term expires 6/30/06)
Attorney at Law
McCorriston Miller Mukai MacKinnon

Gail Honda, Ph.D

(term expires 6/30/06)
President & CEO
Global Optima, Inc.

David Lassner, Ph.D

(term expires 6/30/05; Representative for UH)
Director of Information Technology
University of Hawaii

Stanley T Shiraki

(Ex-Officio Representative for B&F Director
Georgina Kawamura)
Deputy Director
Dept. of Budget & Finance

Maurice H. Kaya

(Ex-Officio Representative for DBEDT
Director Theodore Liu)
Chief Technology Officer
Dept. of Business, Economic Development & Tourism

Philip M. Johnson, Ph.D

(Representative for Hawaii Strategic Development
Corporation)
Professor of Computer Science
University of Hawaii

Tony Saguibo

(Interim Representative for HSDC)
Recording Secretary
Laborers' International Union of North America, Local 368

Carl L. Simons

(Representative for Natural Energy Laboratory of
Hawaii Authority)
President
Hawaiian Cement

HTDC Staff

Philip J. Bossert, Ph.D, Executive Director & CEO

Kay Yamada, Assistant Director & Project Development
Manager

Coleen Yoshina, Executive Secretary

Steve Sakuda, Controller

Yvonne Isobe, Senior Account Clerk

Gail Yamasaki, Account Clerk

Laura Noda, Client Services Manager

Nancy Hiraoka, Client Services Specialist - Service Provider
Program

Sandi Kanemori, Client Services Specialist - Business
Development

Sandra Park, Client Services Specialist - Workshops & Seminars

Janice Kato, Federal Programs Manager

Robert Mon, Federal Programs Specialist

Mary Ann Lee-Matsui, Manufacturing Extension Partnership
Program Assistant

William Wiedmann, Manufacturing Extension Partnership
Senior Project Consultant

Martin Parisien, Manufacturing Extension Partnership Project
Consultant

Nina Ann Tanabe, Manufacturing Extension Partnership
Project Consultant

Thomas Quinn, HCATT Manager

Marigold Orbita, HCATT Secretary

Sylvia Bollmeier, Contracts Administrator

Steven Asaumi, Network Services Administrator

Marsha Mochizuki, Web Services Administrator

A Message from the Board Chair



2004 has been an important year for HTDC – which is now completing its 21st year as the primary State agency tasked with developing Hawaii’s technology industry – and marks a number of significant developments. HTDC continues to wear many hats, as it has since it was created by the Legislature in 1983, including the development and

operation of incubation facilities and programs, and the management of a variety of federal programs for the benefit of Hawaii’s technology businesses.

HTDC recently opened an impressive new business incubator in Hilo (the Hawaii Innovation Center at Hilo), and has been exploring the possibilities of partnering with the University of Hawaii in the development of a landmark biotech innovation facility in Kakaako. HTDC is also researching the possibility of leasing space in or near downtown Honolulu for a new international business and technology incubator. We are hopeful that these efforts will come to fruition soon; they are very exciting and portend a new era for HTDC in its role as the State’s lead tech development agency.

In September 2004, HTDC organized a visit to China for local business executives. The trip, which involved visits and meetings with officials of a number of tech parks in China (including those in Shanghai, Xian, Beijing and Tianjing), was very successful and resulted in many new contacts with China and the prospect of new visits and collaborations with a number of the Chinese parks involved.

It was also a year of important gatherings. In January 2004, HTDC was a co-sponsor with DBEDT of the Sony Technology Expo. In April, HTDC celebrated its 20th year with a well-attended anniversary party at the Manoa Innovation Center. In October, HTDC co-sponsored the Flavors of Technology Program for more than 900 at the Sheraton Waikiki. And in December, HTDC co-sponsored the Governor’s Celebration of Technology reception for more than 600 on the grounds of the State Art Museum. Gatherings of this nature have afforded extremely valuable networking opportunities to members of Hawaii’s tech industry.

As in the past, HTDC has pursued initiatives to market the State’s high tech industry on national and local levels as part of Team Hawaii’s “Hawaii Open for Business” campaign, and continues to support the Global Pau Hana website to keep Hawaii expatriates informed about tech developments here. HTDC also continues to support tech workforce development with the Holiday Tech Fair and the TechJobsHawaii.org web site, and to develop information resources for that purpose (HiTechHawaii.com, Tech Business Directory and the Hawaii Technology Industry Survey).

You will see in the report that follows that much has been accomplished this past year, but also that there is much to be done to promote and develop our tech industry to the point where it is recognized in Hawaii and elsewhere as an important component of the State’s economy. HTDC’s directors and staff are more than ever aware of the need to develop this industry and are more than ever committed to that task. They look forward to working with each other and with our Executive Director, Dr. Philip Bossert, to carry out HTDC’s priorities and improve and expand its various projects and services in 2005 within applicable budgetary constraints.

Jay M. Fidell
Board Chair

A Report from the Executive Director & CEO



During 2004, the High Technology Development Corporation (HTDC) celebrated its past 20 years of accomplishments and helped to set the stage for what is to be accomplished during the next 20 years. There were a variety of programs and celebrations devoted to recognizing the events and especially the people who helped create and grow HTDC,

and with it the tech industry in Hawaii, over the years. But HTDC's staff and strategic partners also increased the size and scope of HTDC's efforts to create a viable technology industry sector as a way of diversifying Hawaii's economy.

HTDC continued to improve both facilities and programs at its two existing incubators, the Manoa Innovation Center (MIC) and the Maui Research & Technology Center (MRTC). At the same time, HTDC partnered with the University of Hawaii at Hilo to launch a third incubator in the State, the Hawaii Innovation Center at Hilo (HICH), and signed an agreement with University of Hawaii central administration to partner in an alliance to build a world class wet-lab biotech facility, including a new biotech incubator, in Kakaako. This facility, most likely a part of the new John A. Burns School of Medicine, will significantly increase the core facilities available at the heart of Hawaii's growing biotech industry.

HTDC also partnered with the High Technology Trade Association (HTTA) and the four county economic development boards – Enterprise Honolulu (EH), Maui Economic Development Board (MEDB), Kauai Economic Development Board (KEDB), and Hawaii Island Economic Development Board (HIEDB) – to launch on a statewide basis the Tech Ohana networking breakfasts that MEDB pioneered with HTDC on Maui. HTDC also established a CEO Forum to bring together on a regular basis the CEOs of Hawaii's tech startups to discuss common areas of opportunity and concern.

HTDC was in the media and on the Internet more than ever before. Dozens of stories appeared about HTDC in both the print and the electronic media. HTDC was a major sponsor of tech expos and a wide variety of seminars and workshops. And HTDC's web sites – HiTechHawaii.com, TechJobsHawaii.org

and HTDC.org – all received significant increases in hits from people around the world looking for information about technology in Hawaii.

HTDC expanded the reach and scope of its virtual incubation program, adding new services such as the resource access agreement with the Gartner Group and, with the help of a generous grant from the U.S. Department of Commerce's Economic Development Agency (EDA), expanding both the quantity and the quality of services and facilities available to virtual incubator tenants on all islands. The Professional Service Provider program now includes more than 60 professionals to assist new and growing tech companies. And the Manufacturing Extension Partnership (MEP) program has expanded the FastTrac Entrepreneurship Training program while at the same time expanding the range of consulting services its management consultants are able to offer small companies.

The Hawaii Small Business Innovation Research (HSBIR) program saw increased success in its grantees, including a \$49.6 million Phase III grant to multiple SBIR award winner and HTDC incubator tenant Oceanit. The Hawaii Electric Vehicle Demonstration Program (HEVDP) became the Hawaii Center for Advanced Transportation Technologies (HCATT) to reflect the expansion of its scope to include both water-borne and airborne transportation vehicles.

HTDC's new Chair, Jay Fidell, has said that he wants HTDC to be known as the "go to" agency for tech in Hawaii. HTDC will continue to undertake the nitty gritty work of tech-based economic development that helps new tech businesses succeed, but it will also seek to take on a larger role in tech policy development and tech industry leadership.

Philip J. Bossert, Ph.D.
Executive Director & CEO

HTDC Programs & Services

Incubation Programs & Facilities

Incubation Programs

HTDC provides an array of client services, facilities, and equipment for new and early stage technology companies. HTDC's incubators are designed to nurture and develop entrepreneurial ventures. Its Tech Center Program provides referrals to private sector business experts and service providers; business and technology workshops; business reviews by trained management consultants; subscription to electronic newsletters; and access to facilities and equipment.

Start-up companies that do not require office space at an incubation facility can still benefit from HTDC's client services through the Virtual Incubation Program.

Virtual Incubation

In 2004, HTDC launched its Virtual Incubation Program, which provides companies the opportunity to utilize the programs and facilities of HTDC's statewide incubation program, even if they are not leasing office space in one of HTDC's technology centers. Virtual incubation clients can:

- be referred to private sector business experts in HTDC's Professional Service Provider (PSP) Program;
- participate at reduced rates or at no cost in HTDC's workshops and networking events;
- take advantage of business reviews by trained management consultants;
- utilize conference rooms, training rooms, and office equipment at HTDC's technology centers on the islands of Oahu, Kauai, Maui and Hawaii
- have a mailbox and a mailing address at one of HTDC's technology centers.

Currently, HTDC has virtual incubation clients on Oahu, Maui, and Kauai. Virtual clients are featured on the HTDC web site, and can participate in all of the incubation programs offered by HTDC. The current virtual incubation clients are:

List of Tenants

ATCO

ATCO Software Inc. offers a web-based software suite for the Attractions Industry. ATCO software provides for real-time online connectivity for activity provider or restaurant sales and reservation transactions. It includes most accounting

functions, including online payment reconciliation and the use of barcodes to facilitate transactions, and has two versions: the standard activity version and a timeshare version.

Flycor USA

Flycor, founded in 2003, is a technical management team of professional system and software engineers with backgrounds in modern high performance supercomputing and defense department subcontracting.

Smart House Control

Smart House Control provides innovative home entertainment and technology solutions for exceptional custom built homes. Smart House Control's design professionals are specially trained and certified in all areas of home systems integration including whole house entertainment, smart home wiring, lighting control, multiroom audio, computer networking, home automation, home theater, remote Internet control solutions, and much more.

XMLstar LLC

XMLstar is a global technology company focused on online software solutions and information technology development projects. XMLstar's Online Collaboration Suite is a private workspace on the Web that gives a company's employees the ability to organize information, readily access that information, manage documents, share calendars and enable efficient collaboration, all in a familiar, web-based environment.

Environmental Waste Management Systems, Inc.

Best Industries USA and Environmental Waste Management Systems, Inc., are pioneers in the creation of the "ESIS" (Environmental Sewage treatment Innovation System), a modular "on-site" wastewater treatment system that treats wastewater and preserves our greatest natural resource... clean water.

Preview Hawaii

Preview Hawaii is a digital marketing firm for the travel industry of Hawaii. The company provides full service marketing campaigns, web development, search engine optimization, streaming video, and more.

Oceanic Imaging Consultants, Inc.

Oceanic Imaging Consultants, Inc. provides seafloor mapping solutions for the world's military, commercial and academic markets.

HTDC Programs & Services

Incubation Programs & Facilities

Professional Service Providers

HTDC's Professional Service Provider (PSP) Program is designed to provide HTDC's client companies with the business support and consulting resources needed to accelerate their transition from incubator companies into vibrant and successful businesses. The PSP program is based on public-private sector partnerships between HTDC and experienced business professionals who have agreed to provide value-added services at reduced costs to support the success of our client companies. Through a matchmaking process, HTDC's client companies can access these consultants and professionals for assistance in such areas as law, accounting, marketing, human resources, and business plan development.

Noteworthy Activities

Through the year, our clients were able to meet or phone HTDC's PSPs on intellectual property issues, Act 221 clarification, and business strategies. Our clients also took advantage of various no cost workshops offered by providers such as Grant Thornton, Craig Miyamoto, Seth Reiss, Robert Hunter, and Leighton Chong. The service providers presented brown bag workshops and seminars in their areas of expertise (see Workshops & Seminars) on Oahu and on some of the neighbor islands.

We expect to see many more mutually beneficial matches as analysis of business reviews results in better identification of client needs and as more of our clients take advantage of this program.

The HTDC Manufacturing Extension Partnership (MEP) team held business mentoring hours weekly during which our clients were able to get advice regarding options on strategy, finance, marketing and sales, operations, and general management issues. The aim was to help clients work *on* their business (instead of just *in* it).

List of PSPs

HTDC is honored to have over 40 high caliber service providers from diverse disciplines participating in our Professional Service Provider Program. We appreciate our service providers' commitment and dedication to helping our companies succeed. For the most up-to-date listing of providers, please visit <http://www.htdc.org/incubation/psp/providers.html> or to view providers by category, visit <http://www.htdc.org/incubation/psp/>.

- Attitude & Response Management Systems – Denny McDonough
- Business Plans Hawaii – Valerie Koenig

- Carlson Communications – Doug Carlson
- Ching, Yuen & Morikawa – William W.L. Yuen
- Code8 Communications – Shirley Gines
- Dean Choy, A Limited Liability Law Company
- Dreammasters, Inc. – Ryozo Ariyoshi
- Susan K. Eichor
- Fujita & Miura Public Relations
- Furniture Plus – Charles M. Black
- Godbey Griffiths Reiss – Seth Reiss
- Goodsill Anderson Quinn & Stifel – Lori Hiraoka and Ric Galindez
- Grant Thornton – Bob Doeringer
- Hawaii Business Research Library – Ruth Corn
- Lester J. Hee, CPA - Accountant
- High Technology Development Corporation – Manufacturing Extension Program (HTDC-MEP)
- Robert M. Hunter, PLLC
- INETS – Anthony “Jae” Chong
- KMH LLP – Alan M.L. Yee
- Law Offices of Jack R. Naiditch, Inc.
- The Limtiaco Company – Diane Peters-Nguyen
- Madskill Productions – Ray Carbullido
- Mauka Makai Web Services – Bruce Campbell
- Mindwind Labs – Burt Lum
- Miyamoto Strategic Counsel – Craig Miyamoto
- Net Enterprise – Benny Mateo
- NipponBC – Ryozo Ariyoshi
- NISHI Inc. – Ron Nishi
- Oceanit Information Technology Solutions (ITS) Division
- Ostrager Chong Flaherty & Broitman – Leighton K. Chong
- Pacific Business Services, Inc. – Russell Seeney
- The Pacific Law Group – Darryl M. Taira
- PricewaterhouseCoopers LLP – Patrick H. Oki
- Preview Hawaii – Shawn and Carrie Riley
- Pacific Light Studios – Raymond Wong
- RevaComm – Keith Ito
- Starr Tech Interactive, a subsidiary of Starr Seigle Communications - Mary Fastenau
- Kevin T. Wakayama – Attorney
- West Island Productions – Paul Y. Nishijima
- XMLstar – Debasis Bhattacharya
- Russell R. Yamada, Attorney at Law, A Law Corporation

HTDC Programs & Services

Incubation Programs & Facilities

Workshops & Seminars

HTDC now sponsors seminars and training events statewide. These sessions are held throughout the year for the benefit of our client companies at the Manoa Innovation Center, at the Maui Research and Technology Center, at the Hawaii Innovation Center at Hilo, and at sister locations in Kauai and Kona. This program features local experts speaking on topics of interest to our client companies to increase their knowledge of issues critical to their success. It also offers an opportunity to network and build relationships within the Hawaii technology community. HTDC client companies are encouraged to attend each month.

These events are also available for a nominal fee to non-client individuals who are interested in educating themselves and addressing their business needs.

List of Workshops & Seminars

January 14

"British Consulate of LA" - presented by Dr. Malcolm McLean and Dr. Sharima Rasanayagam, 11 attendees; 2 tenants; 9 non-tenants

January 16

"Creating a Fundable Startup" (Maui) - presented by Dennis Fernandez, 16 attendees; 5 tenants; 11 non-tenants

January 21

"ACHIEVE" - presented by Denny McDonough, 17 attendees; 5 tenants; 10 non-tenants; 2 HTDC staff

February 12

"Selling Workshop" - presented by Denny McDonough, 26 attendees; 6 tenants; 20 non-tenants

February 13

(Maui) *"Selling Workshop"* - presented by Denny McDonough, 13 attendees; 7 tenants; 6 non-tenants

April 16

"Commercial Leasing" - presented by Sheila Chong/Jamie Brown, 9 attendees; 6 tenants; 2 non-tenants; 1 graduate

May 14

"Working with the Media" - presented by Craig Miyamoto, 5 attendees; 1 tenant; 4 non-tenant

July 22

"Defining and Distribution of HATS" - presented by Bill Wiedmann, 17 attendees; 7 tenants; 5 non-tenants; 5 staff

August 24

"Understanding Federal R&D Credits" - presented by Mark Andrus, 44 attendees; 3 tenants; 34 non-tenants; 7 staff

September 1

"Defining and Distribution of HATS" (Maui) - presented by Bill Wiedmann, 5 attendees; 2 tenants; 3 non-tenants; 1 staff

September 16

"Globalize Your E-Business" presented by Debasis Bhattacharya, 9 attendees; 4 non-tenants; 5 staff

September 21

"Intellectual Property" (Kauai) - presented by Leighton Chong, 22 attendees; 1 tenant; 16 non-tenants; 5 staff

October 27

"SBIR/Patents" (Kona) - presented by Bob Hunter, 21 attendees; 18 non-tenants; 3 staff

October 29

"Intellectual Property" (Hilo) - presented by Seth Reiss, 18 attendees; 15 non-tenants; 3 staff

October 29

"SBIR/Patents" (Hilo) - presenter Bob Hunter, 18 attendees; 15 non-tenants; 3 staff

Business Reviews

HTDC offers business reviews by its MEP management consultants to incubation and virtual incubation clients. The consultants assess the company and offer guidance in marketing, financing, business planning, business growth, and other business areas. HTDC client companies can take advantage of this program every six months. Clients have found the objective views and comments of the business review to be invaluable in steering their companies toward greater efficiency and prosperity.

HTDC Programs & Services

Incubation Programs & Facilities

Support Services

HTDC offers a variety of other programs and services to support its client companies:

Information Technology Research and Analysis Through Gartner Inc.

Gartner, Inc., is an independent provider of research and analysis on IT, computer hardware, software, communications and related technology industries. The company provides coverage of the IT industry to approximately 10,000 client organizations.

Gartner client companies typically pay a monthly fee to access industry reports, competitor analyses, and customized research. Because HTDC has a special agreement with Gartner Inc., HTDC client companies are able to use the services of Gartner Inc. at discounted fees. HTDC clients have found that Gartner Inc. is the source of a wealth of information related to their company's products and services, and have been able to use the research results to develop strategies and steer their company appropriately.

Networking Lunches

HTDC provides companies at its incubation facilities with an opportunity to meet and get to know each other at informal lunches. Held every quarter, these HTDC sponsored networking lunches bring people out of their offices to socialize other incubator tenants in a casual setting. These networking events have been very well attended and sometimes result in business deals and collaborations as well.

On-Line Reservation System

HTDC clients use an Internet-based on-line reservation system to reserve conference rooms, Office for a Day, projectors, and other facilities and equipment at any of the facilities in HTDC's statewide incubation program. By using the on-line system, clients can quickly and easily reserve a conference room, view a summary of the company's conference room usage for the month, and get an update on any charges that have been incurred for facility or equipment usage. This efficient system provides an up-to-date snapshot of conference room schedules and eliminates the need to place phone calls to see if a facility is available or to reserve a conference room.

Tech Ohana

HTDC began sponsoring Tech Ohana networking events on Oahu in 2004. These events are jointly sponsored with the Hawaii Technology Trade Association and Enterprise Honolulu. Tech Ohana events provide a chance for people in the local technology industry to hear from an industry leader on a timely subject as well as to network with others in the tech community. The inaugural event featured Henk Rogers, President and CEO of Blue Lava Wireless, LLC, who entertained the audience with an interesting presentation on how he grew his gaming software company into a multi-million dollar business.

Looking Forward - Incubation Programs

As this report goes to press, HTDC staff are working on the development of additional tech support programs and facilities including an international tech and business incubator in Honolulu and a possible HTDC subsidiary office in China – both intended to support the role of Hawaii in the increasingly global business community.

Manoa Innovation Center (MIC)

Best Practices Incubation Program

The flagship of HTDC's Incubation Program, the Manoa Innovation Center, located near the main research campus of the University of Hawaii in verdant Manoa Valley, brings together the best of Hawaii's intellectual and physical resources. MIC's primary role is to serve as an incubator for new and early-stage technology companies. Tenants enjoy advanced connectivity, state-of-the-art facilities and shared support services in an environment that is especially designed to promote the continuous exchange of ideas and information. Seminars and workshops take place in conference rooms and shady courtyards in a subtropical climate with gentle tradewinds, and even frequent rainbows. MIC began its 12th year of operations in 2004, facilitating the growth of technology companies by providing business development services, synergistic and strategic partnerships, extensive networking activities and professional marketing opportunities.

The Client Services Program, launched at the end of 2003, enhances the incubation experience at all HTDC facilities. By providing incubation tenants and virtual clients statewide access to business development services, strategic partnerships, networking and marketing opportunities, shared support services, and business mentoring, the Client Services team helps support our growing businesses.

HTDC Programs & Services

Incubation Programs & Facilities

Noteworthy Activities & Infrastructure Improvements

2004 U.S. Small Business Administration Awards
Small Business Exporter

Oceanic Imaging Consultants, Inc.
Thomas B. Reed IV, Owner/President
Sponsor: Carolyn Ching, CPA

Oceanic Imaging Consultants, Inc. (OIC), was founded in 1993 and was a spin-off from research developed at the University of Hawaii at Manoa. The company started in MIC and blossomed. OIC develops seafloor imaging software and systems that acquire side-scan sonar, interferometric, multi-beam bathymetry, sub-bottom and navigational data to map the ocean bottom for navigational and research applications.

OIC has successfully marketed this technology to the Department of Defense, as well as entities in Korea, United Kingdom, Japan, Germany, Denmark, and China. Much of its success has been a tried and true process of consistently marketing products at key technology trade shows, including those sponsored by the State of Hawaii's Ocean Resources Branch.

2004 4th Annual Flavors of Technology
Hawaii's Top High Tech Leaders Awards
Blue Lava Wireless

John K. Morris, VP of Development and Technology
Blue Lava Wireless is a game publishing company focusing on third generation cellular phones and wireless communications devices. It has an in-house team of designers, artists and programmers to create games for the casual game market.

GuideNet, Inc.
Richard P. Halverson, Jr., President
GuideNet develops and hosts Internet database and data acquisition systems for both military and commercial applications. GuideNet was selected by the National Defense Center of Excellence for Research in Ocean Sciences (CEROS) to develop software agents to acquire and visualize environmental information for anti-submarine warfare surveillance. GuideNet's commercial and corporate Internet and Intranet database applications include the Hawaii Visitors and Convention Bureau's Calendar of Events web site.

Inovaware
Bruce Kim, Founding Partner /
Chief Technical Officer
Inovaware Corporation is an award winning software development company that produces tools to integrate and automate all facets of online customer transactions including service sign-up, billing, customer care, and account management. Inovaware sells

its software to businesses online, including "DOT.COMs" and traditional companies such as Morningstar.

List of Current MIC Tenants

21st Century Systems – decision support system software development
Adaptive Technologies* — signal and imaging processing, system prototyping
Amagata U. S. A^^ – software
Aquasense* – electro-optical engineering and research
Atco~ — activity desk software development
Best Places Hawaii* — software
Blue Lava Wireless — gaming software
Blue Planet Software — gaming software
Computer Assurance* – computer networking
Environmental Waste Management Systems ~ – wastewater engineering
GL Scientific – instrumentation fabrication
GuideNet — software, Internet
High Technology Development Venture^^ – federal grant program
ITS Solutions* – DoD consulting
Hoolaupai^^* — online archiving
Inovaware Corporation* – online customer management software, internet
Kamakura — risk management software
Kuenhle Agro Systems — biotech – plant/animal
Manoa Research* — smart chip
Mauna Kea Infrared — infrared instrumentation
Mobicore^ – gaming software
Oceanic Imaging*~ — deep sea mapping
Pacific Area Network* — Internet
Primal Cause* — data management software development
Safe Water Systems, LLC – wastewater engineering
Sanjole^ – WiMax test equipment development
Tropical Ventures — energy efficiency solutions
Quantum Leap Interactive^ — collaborative software

^ indicates a new tenant in 2004
+ indicates virtual client
* indicates successful graduate
^^ indicates Phase-In Clients
~ indicates a new virtual client in 2004

Anchor Tenants
OTTED, RCUH

UH Projects
Psychosocial Rehabilitation, PanStarrs

HTDC Programs & Services

Incubation Programs & Facilities

Maui Research & Technology Center

A Hybrid Research & Development/Incubator Program MRTC is an engine for high-tech growth in the Maui Research & Technology Park, Maui County and Hawaii. While Maui's tech industry is comparatively small by mainland standards, it continues to grow at an aggressive pace. Since private-sector Internet/dot com startups, telecommunications, and information technology were generally not able to make a strong business case for locating on Maui during the 1990s, the island missed much of the fallout from the overall decline in those industries. Technology industry sectors where Maui is seeing continued growth include: astronomy, supercomputing, sensors, lasers, optics, agri-biotech, Dept. of Defense information technology services, and dual use R&D. Significant Maui growth is projected in these areas for at least the next five years.

Noteworthy Activities

\$49.6 Million Air Force Contract
Oceanit Laboratories

Dr. Patrick Sullivan, Founder/CEO

On September 8, 2004, Oceanit received a five year \$49.6 million Air Force contract to design and build a network of ground stations aimed at tracking space debris and low-orbiting satellites. Oceanit is a locally based engineering, science and research company that focuses in four areas: Biotech, Information Technology, Environmental and Industrial Technology, and Solutions.

2004 4th Annual Flavors of Technology
Hawaii's Top High Tech Leaders Awards
MOSAIC

Dan O'Connell, Sr. Optical Engineer

MOSAIC's mission is to support the development of state-of-the-art laser and optical components and instruments in Hawaii by delivering design, fabrication, assembly, and testing services, as well as supporting optics and laser education in Hawaii. Mosaic is Hawaii's only locally based professional laser and optical design, fabrication, assembly and testing center.



List of Tenants

Client Companies

Aloha Mobile.net LLC* — portable information technology solutions through proprietary proximity enabled 802.11/WiFi networks

Flycor — proprietary information technology products and applications for use in the travel industry and high performance computing/massively parallel processing products

Hawaii Wave High Speed Wireless Networks LLC*— wireless networks, digital guest services

Homeschool Learning Network* — delivery of home school curriculum to subscribers via the Web

Loea Communications — ultra-high bandwidth wireless Internet connectivity

Maui Gateway-Local — Internet service provider

Maui Scientific Research Center — scientific research in a wide variety of fields

Maui Sky Fiber — first broadband 3G wireless Internet service provider in the United States

Mosaic Optical Laboratory — designer and manufacturer of custom and proprietary optics

NBT 168 Technik LLC — travel and hospitality services

Oceanit Laboratories, Inc. — engineering, scientific and technical services

Pacific Disaster Center — federally supported information processing center for federal, state and local emergency managers in Hawaii, Asia, and the Pacific and Indian Ocean regions

Smart House Control — design, systems integration, and proprietary solutions in the home automation field

TC Kokua — multi-mode customer contact center

TREX Enterprises — R&D in laser radar, remote sensing and advanced imaging applications

XMLstar LLC~ — Online software solutions and IT development projects

^ indicates a new tenant in 2004

~ indicates new virtual tenant in 2004

* indicates successful graduate

HTDC Programs & Services

Incubation Programs & Facilities

continuation of MRTC tenants

Anchor Tenants

Hawaii Small Business Development Center (SBDC) Network — Business counseling, training and education.

Hawaii SBDC Network Business Research Library — Business research and technical information services for firms at the MRTC.

Maui Economic Development Board (MEDB) — Provides leadership and vision in the Maui community for the responsible design and development of a strong and diversified economy, and a strong proponent for the development of technology on the island of Maui.

University of Hawaii Center, Maui Community College — Delivers higher education programs (Associate, Baccalaureate, and Graduate levels), customized training, and videoconferencing facilities.



Hawaii Innovation Center at Hilo

In late 2004, HTDC partnered with the University of Hawaii at Hilo to open the Hawaii Innovation Center at Hilo (HICH). Located in the downtown Hilo business district, HICH is just minutes from the University of Hawaii at Hilo campus and the University of Hawaii at Hilo's University Park of Science and Technology. Big Island entrepreneurs and start-up companies at HICH have access to valuable incubation facilities, programs and services, including two fully equipped conference rooms with Internet access, photocopier/fax/ scanner, mail and copier room, projector and other presentation equipment, and onsite building maintenance and janitorial services. Client companies also have access to HTDC's value-added programs and services, including:

- Professional Service Provider (PSP) Program
- workshops and seminars;
- business reviews; and
- Tech Ohana networking events.

Looking Forward

The completion of the University of Hawaii John A. Burns School of Medicine (JABSOM) in downtown Honolulu (Kakaako) opened the door for HTDC to embrace a new partnership — assisting the university in creating synergy with Hawaii's biotechnology niche industry. The JABSOM opens in Spring 2005 and will become a rich resource of talent and energy to spin off new ideas and opportunities in medical and information technologies into new research and development activities, and eventually into spin-off technologies and companies. HTDC will assist these research and development opportunities and their spin-offs through its incubation programs and facilities.

With the geometric growth of the Maui High Performance Computing Center (MHPCC) program under the management of the University of Hawaii at the Maui Research and Technology Park, HTDC has again entered into an agreement with the university to provide needed laboratory and office space at the Maui Research and Technology Center. This growth of high tech in Maui has resulted in new high tech facilities inside and outside the Park at Kihei. To accommodate the growth at its center, HTDC received special facility revenue bond funding from the State Legislature to develop a third facility in the Park that would create space for high tech companies displaced by the growth of the MHPCC. With the availability of State funding, HTDC has been seeking a private developer to build this facility.

HTDC Programs & Services

Federal Programs

In 2004, HTDC attracted a record amount of federal dollars to increase research and development activities in Hawaii, and to provide technical assistance services to local tech and other value-added businesses in Hawaii

SBIR and HSBIR

Hawaii Small Business Innovation Research (HSBIR) Matching Grant Program

The Hawaii SBIR matching grant program was created by Hawaii State Legislature in 1989 under Act 196. This program encourages local companies to participate in the federal SBIR program, which provides research and development grants and contracts to small businesses. The Hawaii matching grant provides up to \$25,000 to Hawaii companies that have won federal SBIR Phase I awards, and have good potential to expand the project, create quality jobs, and increase R&D activities in Hawaii.

HOW THE FEDERAL SBIR PROGRAM WORKS

The federal SBIR program is a three-phase program to help firms conduct research and development that addresses critical national needs. The federal government funds the first two phases. In Phase I, the company explores the technical merit or feasibility of an idea or technology. SBIR agencies generally award up to \$100,000 for a six-month effort. In Phase II, the company expands upon Phase I results and generally receives up to \$750,000 over a two-year period to perform R&D work and evaluate the project's commercial potential. In Phase III, the small business is responsible for securing funding from industry or other non-SBIR federal sources to further mature and commercialize the project. The likelihood of projects transforming into commercial applications is an important consideration.

The eleven U.S. agencies with the largest extramural research and development budgets participate in SBIR. They are the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security and Transportation, NASA, NSF and the Environmental Protection Agency. Over two billion SBIR dollars are awarded to small businesses annually.

The purpose of the Hawaii SBIR Matching Grant program is to help Phase I companies better compete for Phase II awards, in order to increase the amount of research and development activities in the state, create quality job opportunities for Hawaii residents, and ultimately advance commercialization.

Basic eligibility requirements for the matching grant include:

- the company is registered to do business in Hawaii
- the research work for Phase I and II is conducted in Hawaii
- the company can show the probability of positive economic return if the project is successful

Matching grants of up to \$25,000 will be awarded depending upon the availability of funds and application score. Each of the following criteria are equally weighted:

- 1) importance of the project's innovation and research activity to Hawaii's economic future;
- 2) potential for job creation in Hawaii;
- 3) expected overall positive economic impact for Hawaii;
- 4) likelihood of the project's commercial success; and
- 5) importance of the HSBIR matching grant to the project's success.

In FY 2004, the Hawaii SBIR matching grant program awarded nearly \$260,000 to ten local companies that won 11 Phase I awards worth \$1.2 million. Since 1989, 50 Hawaii companies have won 220 SBIR awards worth over \$43 million from the federal SBIR program, and have received \$3.4 million from Hawaii's SBIR Matching Grant Program. \$61 million in Phase III (non-SBIR program) funding and revenue has been attracted by the firms as a result of their SBIR work. For every State dollar invested in the program, Hawaii companies have attracted over \$12 in federal SBIR funds.



HTDC Programs & Services

Federal Programs

SBIR Hawaii Matching Grant Awardees, July 2003 – June 2004

SBIR Project Summaries (companies that have won their first ever SBIR award are denoted with an asterisk)

- * Cates International (Kailua, Oahu): To design and build a spar shaped vessel that contains large volumes of fish feed and can be programmed to feed fish submerged in cages.
- Hawaii Biotech (Aiea, Oahu): To develop a safe and efficacious vaccine based on recombinant subunit proteins for TBE (tick-borne encephalitis) virus, a NIH high-priority biodefense project;
- High Health Aquaculture (Kailua-Kona, Hawaii): To initiate a selective breeding program with marine shrimp to enhance their growth potential in low salinity water for the benefit of inland aquaculture farms.
- Kuehnle AgroSystems Co. LLC (Honolulu, Oahu): To demonstrate the feasibility of economical production of dietary supplements, animal feed and plant pigmentation from natural sources, such as microalgae, rather than from chemical synthesis of petrochemicals.
- Innovative Technical Solutions (Honolulu, Oahu): Two awards—To develop a comprehensive data analysis system consisting of geostatistical modeling, spatial visualization modeling, pattern recognition modeling and geographic data integration to improve remediation system design and cleanup actions; and, to develop a robust and compact optical communication turret for establishing stable free-space optical communication links between two aircrafts, aircraft and ground, or between two ground locations.
- * Kolaka Noeau Inc. (Volcano, Hawaii): To improve software security by means of breaking the binary sequence of instructions into two or more fragments, and to execute the fragmented code by an element of a synchronized, distributed virtual machine.
- * Lohea Audio (Kualapuu, Molokai): To develop a lucrative small business in Molokai based on the diversified uses of red seaweeds that are abundant on Molokai and other Hawaiian Islands.
- * Mauna Kea Infrared (Hilo, Hawaii): To develop an infrared imager with complex imaging modes to increase sensitivity and performance for use in an anti-missile seeker head.
- Oceanit Laboratories Inc. (Kihei, Maui): To develop a near-field optics technology to image DNA material within living cells that may enable the diagnosis of cancer and other diseases.
- * World Health Innovations (Honolulu, Oahu): To develop a new lidar detector system that increases the measurement of lidar signals over seven orders of magnitude and bridges the gap between analog, digital converters and photon counting systems in near and far ranges.

ATP & FAST

HTDC continued to provide technical assistance training to encourage companies to compete in research and development programs such as SBIR and ATP (Advanced Technology Program), and conducted outreach in the area of university tech transfer. The following activities were conducted and/or subsidized by FAST (Federal And State Technology Partnership) grants awarded by the U.S. Small Business Administration, Office of Technology, in 2002 and 2004:

HTDC Programs & Services

Federal Programs

SBIR Phase I Proposal Writing Workshops and Training

In the last quarter 2004, HTDC became third-year recipients of the U.S. Small Business Administration's Federal And State Technology Partnership (FAST) award. The \$95,000 grant will greatly assist HTDC in the upcoming year to increase promotion of the SBIR/STTR program in Hawaii, and educate and train local firms in competing for federal R&D funding. Additionally, HTDC will be working more closely with UH OTTED and other stakeholders seeking to increase technology spin-offs from the university.

- 3/8 Advanced Technology Program (ATP) Proposers Workshop: Briefing by ATP Director Marc Stanley
- 3/9 Oahu Tech & Internet Expo: SBIR trade booth promotion
- 4/6 Maui Tech & Internet Expo: SBIR trade booth institute for Astronomy (IFA) Intellectual Property workshop
- 4/19 SBIR USDA-focused workshop in Hilo: presentations by Dr. William Goldner, USDA program coordinator—SBIR overview, USDA opportunities and one-on-one meetings with companies; Dr. Robert Hunter—SBIR Intellectual Property
- 6/17 Honolulu Japanese Chamber of Commerce, Economic Development committee: SBIR briefing by Janice Kato
- 9/21 Kauai Tech & Internet Expo: SBIR presentation by Janice Kato
- 9/28 High Tech Hawaii TV show: SBIR and federal programs briefing by Janice Kato and Executive Director Dr. Philip Bossert
- 10/27 Kona Tech & Internet Expo: SBIR Intellectual Property presentation by Dr. Robert Hunter
- 10/28 FastTrac Entrepreneurship New Venture class: SBIR briefing by Janice Kato
- 10/29 Hilo Tech & Internet Expo: SBIR Intellectual Property presentation by Dr. Robert Hunter
- 11/19 SBIR DoD-focused presentation and mentoring session: 21st Century Systems CEO Jeff Hicks

One-on-One SBIR Consulting

HTDC staff responded to 93 SBIR inquiries in 2004, and provided assistance in helping the firms understand the SBIR program, assess whether the innovations were a good fit for SBIR, research SBIR topics and solicitations, and make introductions to potential SBIR partners or other resources. HTDC continued to contract with PBC, Inc., a nationally renowned SBIR consulting firm, and with Dr. Robert Hunter, registered patent agent, engineer and SBIR peer reviewer for NSF. The consultants conducted intensive one-on-one education and training of proposal writing with seven companies this year to help them submit competitive proposals. Two firms received SBIR funding as a result of the assistance provided.

Hawaii Center for Advanced Transportation Technologies (HCATT)

The Hawaii Electric Vehicle Demonstration Project (HEVDP) officially became the Hawaii Center for Advanced Transportation Technologies in 2004 to better reflect its evolution in the transportation technology industry. HTDC established HEVDP in 1993 to represent the Hawaii Consortium in the Defense Department's Electric and Hybrid Vehicle (EHV) Technology Program, sponsored by the Defense Advanced Research Projects Agency (DARPA). DARPA established the EHV Program with seven regional consortia to accelerate the development of dual use, clean fuel technologies for both the military and commercial transportation sectors. Success under the DARPA Program led to continuing collaboration with the other six consortia in the Department of Transportation (DOT) Advanced Vehicle Technologies Program (AVP). Currently, HCATT continues its work with the U.S. Air Force Advanced Alternative Power Technology Transformation Office (AAPTTO) through its development of advanced alternative fuel vehicles and supporting infrastructure for evaluation at the National Demonstration Center at Hickam Air Force Base (AFB). These efforts are aimed at production and commercialization of advanced transportation technologies with military and commercial applications.

HTDC Programs & Services

Federal Programs

Ongoing Projects

National Demonstration Center at Hickam Air Force Base - In pursuit of dual use technologies, HCATT collaborated with the U.S. Air Force AAPTTO and created a National Demonstration Center to evaluate advanced transportation technologies at Hickam AFB and other military installations on Oahu. Initially the project evaluated light- and heavy-duty electric drive vehicles and battery charging systems. Following this, HCATT delivered the first hydrogen fuel cell vehicle to go into operation in the entire Air Force. This fuel cell/battery hybrid electric shuttle bus was the first fuel cell powered vehicle developed in Hawaii and operates within the transportation fleet at Hickam. The next major project for Hickam is the installation of an on site hydrogen generation system to support the operation of the bus and future fuel cell vehicles. Other projects completed this past year include a hybrid electric aircraft loader and a turbine powered hybrid electric tow tractor.

Hydrogen Powered Fuel Cell Electric Bus - HCATT converted an El Dorado National hybrid electric bus to a battery/hydrogen powered fuel cell bus which incorporates an Enova Systems 120 kW electric drive system, a Hydrogenics 20kW proton exchange membrane (PEM) fuel cell power system, two Dynatek 5000 psi hydrogen storage tanks, and advanced batteries that are compatible with the rapid-charging stations installed around Oahu under the EV Ready State Project. The bus provides shuttle service on Hickam Air Force Base and transports air crews to hotels in Honolulu. This bus is a battery dominant hybrid electric drive system that has triple the range capability of the earlier battery only electric drive bus that HCATT provided to the Air Force under the National Demonstration Center initiative.

Ground Support Equipment - Development of new hybrid propulsion systems to support flight line operations continues at the National Demonstration Center. AeroVironment developed a multi-vehicle charging station and upgraded a hybrid electric aircraft loader; and Enova Systems retrofitted an aircraft tow tractor with a hybrid electric propulsion system, that includes a 30kW turbine. This equipment will undergo evaluation with the Hawaii Air National Guard at Hickam.

Lithium Battery Technology - HCATT continues to investigate advanced battery technologies in pursuit of a battery system that will meet consumer demands for greater range on a single charge in light-duty vehicles. The battery chemistry that will most likely meet this requirement is lithium, and HCATT is collaborating with the Electrochemical Power Systems Laboratory at the University of Hawaii in the evaluation of lithium-ion batteries provided by two different manufacturers.

Arizona Memorial Tour Boats - HCATT previously completed a feasibility study under the AVP, which led to the appropriation of funding for the replacement of the aging Arizona Memorial Passenger Ferry Boats. The goal is to have these boats designed and developed with advanced hybrid electric propulsion systems. This project is a partnership with the U.S. DOT, the State DOT, the U.S. Navy, and the National Parks Service.

Future Initiatives

Step Van - HCATT will develop a fuel cell / battery hybrid electric propulsion system for a step van for operation at Hickam. Unlike the fuel cell bus mentioned above, this system will be fuel cell dominant, with a 65kW fuel cell power module.

Hydrogen Station - Initial hydrogen re-fueling for the fuel cell bus was accomplished by dispensing hydrogen into the bus tanks directly from a tube trailer provided by Air Liquide. A project is underway which will provide an on-site hydrogen production, storage, and dispensing station at Hickam AFB.

Fleet Expansion - HCATT will continue to grow the fleet of vehicles and equipment at the National Demonstration Center with the introduction of a lithium battery powered vehicle and a fuel cell powered light cart for flight line support.

Hydrogen Economy Development - HCATT is collaborating with the Hawaii Natural Energy Institute at the University of Hawaii to support the transition to a hydrogen-based economy in Hawaii. Planned projects include stationary and transportation applications for fuel cells, and hydrogen generation, storage, and distribution.

HTDC Programs & Services

Federal Programs

EDA

On July 1, the Department of Commerce's Economic Development Administration (EDA) awarded a \$300,000 grant to HTDC, under its National Technical Assistance (NTA) Program, to support HTDC's efforts to establish a statewide virtual business incubation program. These funds allow HTDC to pursue the program with greater confidence and speed.

The mission of EDA is to lead the Federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy. Through the NTA Program, EDA works toward fulfilling its mission by funding research and technical assistance projects to promote competitiveness and innovation throughout the United States. By working in conjunction with its partners, EDA helps states, local governments, and community based organizations to achieve their highest economic potential.



HTDC-MEP (Manufacturing Extension Partnership) Program

In July 2004, HTDC entered its second year of a cooperative agreement with the Department of Commerce's National Institute of Standards and Technology (NIST) to manage the Manufacturing Extension Partnership (MEP) program.

HTDC-MEP is part of a nationwide network of business and manufacturing specialists whose purpose is to provide small- and medium-sized businesses with the help and solutions they need to succeed. There are centers in all 50 states, linked together through the NIST national network. This makes it possible for even the smallest firms in Hawaii to have access to more than 2,000 business specialists - including the staff of the HTDC-MEP and its knowledge of doing business in Hawaii in both the manufacturing and services industries. HTDC-MEP clients are businesses that add value and have the following business needs:

- locating the proper resources or technologies needed;
- receiving expert, impartial advice to help evaluate alternative solutions;
- solving a specific problem, such as determining the cause of product defects, or modifying plant layouts;
- improving work flow, or establishing employee training;
- reversing negative business situations such as sales decreases, loss of market share, and cost increases;
- implementing new technologies or processes that will help establish greater market share; and
- reaching peak performance.

The national program faced significant federal budget cuts in fiscal year 2004 but support was rallied in the U.S. Senate and the U.S. House of Representatives. The program now appears to be well positioned to receive full funding in the coming fiscal year. The Hawaii program attracts \$437,066 in federal funds to which HTDC provides a two-to-one cash and in-kind match. HTDC-MEP has three full-time project managers, including a project manager in Hilo, and a program assistant.

In the last 12 months the MEP program worked directly with 63 clients. Projects included Lean Manufacturing and Value Stream Mapping training, product development assistance, feasibility studies, business planning and other business consulting services. In addition, the MEP program completed the delivery of a \$90,000 Department of Agriculture grant in March 2004 in which five Hawaii companies received direct one-on-one assistance in developing and/or marketing value-added locally grown products.

HTDC Programs & Services

Federal Programs

HTDC-MEP Success Story (excerpt from the Honolulu Star-Bulletin, 6/13/04)

“The two partners who make up **Kahuku Farmers Inc.** had dreams of expanding but didn’t even know how much it cost to produce each fruit or which was their most profitable. But with the help of a nimble federal program that aids small businesses, they’re implementing custom-designed software that helps them track the cost of everything that goes into their business.

“We knew we had to do something to get more information and technology, otherwise we’d remain really small fry,” Matsuda said.

The program, called the Manufacturing Extension Partnership, helps small businesses obtain the services of top-notch, hands-on business consultants by splitting the cost three ways between federal funds, the state, and the business being mentored.

“The goal is to bring expensive consulting down to the small business level,” says Marty Parisien, a small business marketing specialist and owner of several small businesses who is Kahuku Farms’ MEP consultant. “

HTDC-MEP also increased the number of Kauffman Foundation FastTrac™ entrepreneurial training courses offered in Hawaii in 2004. FastTrac™ is a practical, hands-on business development program designed to help entrepreneurs hone the skills needed to create, manage and grow a successful business. Five HTDC staff members are now certified facilitators for the Entrepreneurship program. Classes have been underway since April 2004, with six courses offered this year.

Looking Forward

Attracting federal dollars has become a very effective means to fulfill HTDC’s mission of growing Hawaii’s tech industry. An additional \$832,066 of federal technical assistance dollars effectively leverages HTDC’s state general fund budget, which continued to shrink this year to a low of less than \$1.2 million. The overall expansion of federally funded programs has greatly enhanced HTDC’s ability to deliver new business services to the growing high tech market, other high value firms, and increase research and development activity in Hawaii.

In 2005, HTDC’s EDA-funded Statewide Virtual Incubation program will shift into high gear and will provide services to an increasing number of new clients who live and work beyond the walls of its Tech Centers. Also very exciting is the prospect of securing additional federal funding and staff to expand the HTDC-MEP program, to provide specialized consulting services to the growing number of HTDC’s incubation clients and other high growth companies.



HTDC Programs & Services

Tech Business Support Programs

Through its technology business support programs, HTDC continually works to increase awareness about its programs and services, as well as about Hawaii's tech industry.

Tech Jobs Hawaii

The Tech Jobs Hawaii Consortium was formed in 2000 in response to the private sector's desire to organize a workforce development initiative specifically targeting former Hawaii residents in the technology sector living in the continental United States. The Consortium utilizes a website, www.techjobshawaii.org to attract technology workers from both in and out of the state. The website and the Consortium are sponsored by HTDC in partnership with the private sector.

The Consortium also hosts an annual Holiday Science and Tech Fair and partners with K-12 schools for career days and mentoring programs.

2004 Activities

April 22, 2004
Career Day at Aina Haina Elementary School

October 15, 2004
UH College of Engineering Career Fair

October 22, 2004
Mililani Middle School Career Day: HTDC provided guest speakers for the Business class at Mililani Middle School. The guest speakers were MIC clients Gabe Kwok and Lawrence Nash of Blue Lava Wireless. The students were given a taste of real world experiences and what it takes to be successful through Gabe and Lawrence. The program also stressed the connection between school and the skills needed in the workplace.

December 27, 2004
5th Annual Holiday Science & Tech Fair partnered with the Global Pau Hana program at the Japanese Cultural Center of Hawaii. This annual event is sponsored by private schools — Punahou, Iolani and Kamehameha — and HTDC. The event continues to raise awareness about the technology industry in

Hawaii among recent graduates and expatriates coming home for the holidays. Technology companies showcased their products, research and developments, and job opportunities.

At the end of the fair, attendees and companies were able to network in a social atmosphere with the Global Pau Hana group.

Information Dissemination

In 2004, HTDC made significant cosmetic updates to all of its web sites, creating a consistent look and feel for its entire web presence. HTDC also strove to increase awareness of its programs and services through a variety of web site enhancements and e-newsletter campaigns.

HiTechHawaii.com Portal

HiTechHawaii.com is Hawaii's high-tech portal web site for marketing and promoting high technology in the Islands. As the central access point for technology industries, HiTechHawaii.com brings information about technology industry resources, news, events, businesses, and jobs under one virtual roof. HiTechHawaii.com's use doubled in 2004, averaging well over 300 visits per day, compared to an average of less than 160 per day in 2003.

In addition to cosmetic upgrades, HTDC enhanced the site's search function. Through a simple keyword search, visitors can easily locate relevant news stories, events and web pages on HiTechHawaii.com, HTDC.org and TechJobsHawaii.org. HTDC also enhanced the connection between the HiTechHawaii.com and TechJobsHawaii.org web sites by adding a "Featured Job" section to the HiTechHawaii.com home page. Each time the home page is loaded, this section displays a randomly selected job drawn from TechJobsHawaii.org's current job announcements.

HTDC continues to utilize the HiTechHawaii.com mailing list to disseminate information about Hawaii tech industry news and events. Through its weekly HiTechHawaii.com newsletters, HTDC stays in touch with upwards of 1,000 subscribers.

HTDC Programs & Services

Tech Business Support Programs

HTDC.org

With the expansion of HTDC's incubation and business services and federal programs, HTDC.org has likewise expanded. New information and features that were added to HTDC.org in 2004 include:

- HTDC client access to a statewide conference room reservations system and Gartner research
- Access to an on-line client services application form using IncuTrack business incubation tracking software
- Listings of all HTDC virtual and tenant clients, including logos, descriptions and links to client web sites
- A listing of HTDC Professional Service Providers including logos, descriptions and links to provider web sites
- A continually updated listing of current and past HTDC-sponsored conferences, workshops and events, including access to slides and other presentation materials
- Cosmetic upgrades to all of HTDC's program web sites, including:
 - o Hawaii Small Business Innovation Research & Assistance Program (www.htdc.org/sbir)
 - o Hawaii Center for Advanced Transportation Technologies (www.htdc.org/hcatt)
 - o HTDC Manufacturing Extension Partnership (www.htdc.org/mep)

Use of HTDC.org has increased from an average of 195 visits per day in 2003 to more than 280 in 2004.

TechJobsHawaii.org

Hawaii's expanding technology industry is creating a demand for technologically skilled employees. Four years ago, the Tech Jobs Hawaii consortium formed and created TechJobsHawaii.org to provide a no cost, direct connection between job seekers, interns and employers. HTDC developed, maintains and enhances the website.

Several functional enhancements accompanied the cosmetic updates TechJobsHawaii.org received in 2004:

- Enhanced Employer Interface
Employers are now able to include a company description in their profile when they sign up for membership on TechJobsHawaii.org. The description an employer provides appears in every job announcement posted by the employer. Also,

employers are now able to edit their profiles, allowing them to update description and contact information.

- Featured Jobs

To increase awareness about individual job announcements, HTDC has implemented a tool allowing it to feature select jobs on both the TechJobsHawaii.org and HiTechHawaii.com home pages. Each time either home page is visited, a different job is selected at random from the pool of Featured Jobs and displayed with a link to the full description.

- Participating Companies

Companies that regularly post their job announcements on TechJobsHawaii.org, or that participate in events such as the Tech Jobs Hawaii Holiday Science and Tech Fair are eligible for inclusion on the Participating Companies list. A Participating Company has its name, logo, description and link to its web site included on TechJobsHawaii.org.

In partnership with the Kauai Economic Development Board and Team Tech Kauai, HTDC also implemented an island specific jobs web site for Kauai. *Tech Jobs Hawaii – Kauai* (www.TechJobsHawaii.org/Kauai) utilizes the same features as TechJobsHawaii.org, but filters information for companies and jobs located specifically on Kauai.

In mid-2004, HTDC also began using the HiTechHawaii.com mailing list to send weekly Tech Jobs Hawaii Job Notification newsletters to interested job seekers. Since then, the list of subscribers to this group has grown to more than 300 job seekers. Following the implementation of this newsletter, the average of visits to TechJobsHawaii.org has soared from just under 200 per day to nearly 300.

Tech Company Directory

The Hawaii Technology Business Directory is an on-line guide to Hawaii's technology companies. HTDC publishes the directory to encourage networking among Hawaii's high technology companies and to help them sell their products and services. You can find the directory by visiting <http://www.htdc.org/directory.asp>.

Tech Survey

HTDC has partnered with the Hawaii Institute of Public Affairs (HIPA) to jointly update both HIPA's excellent study of Hawaii's New Economy and HTDC's ongoing Survey of Technology in Hawaii. This combined report will provide a new Technology Index and updated figures for Hawaii's technology industry sector and new economy initiatives.

HTDC Programs & Services

Tech Business Support Programs

Tech Expo

The High Technology Development Corporation and Oceanic Time Warner Cable presented an opportunity for technology companies and organizations to present their innovations in high technology throughout the State of Hawaii at the 2004 Technology & Internet Expo, which began on March 9, 2004, at the Ala Moana Hotel on Oahu. This was followed by additional Technology & Internet Expo events in Kihei, Lihue, Hilo, and Kona.

HTDC featured its various programs and also included Manoa Innovation Center clients ATCO Software, Inovaware, Blue Lava Wireless and graduates Laser Barcode Solutions, Nova-Sol and Hoku Scientific on Oahu, the Pacific Disaster Center, TC Kokua and Maui Gateway on Maui, ATCO Software and Preview Hawaii on Kauai and ATCO Software in Kona.

HTDC 20th Anniversary Event: June 10th

HTDC celebrated its 20th anniversary this year with a backyard reunion event on June 10th at the Manoa Innovation Center. The event brought together graduates, current clients, former staff and executive directors, key legislators and state officials, the University community and technology companies.

China Tech Tour

HTDC organized a high-tech trade mission to some of the largest technology parks in China, September 4-18, 2004. Biotech, information technology, research and development, and software companies were invited to join the tour, which included visits to three of China's most important, state-level science and technology parks in Shanghai, Xian, and Beijing. The tour included a stop in Tianjin, where the Pacific Telecommunications Council (PTC) Mid-Year Seminar and Exhibition 2004 took place.

At each location, participants received economic and technology briefings, had opportunities to make presentations about their companies to Chinese companies, saw presentations by Chinese companies located at the tech parks, and held one-on-one follow-up meetings with prospective clients and business partners.

Flavors of Technology Event: Oct 17, 1004

HTDC partnered with the Technology News Network and the Pacific Technology Foundation for the 4th Annual HTDC Flavors of Technology diiner. The yearly event is a celebration of the achievements of Hawaii's high-tech companies and supporters. This year's event also marked HTDC's 20th anniversary.

Various awards were presented to the Tech Company of the Year, Top High-Tech Leaders, Technology Hall of Fame, Tech Educator of the Year and Technology Community Service Award.

5th Annual Holiday Science & Tech Fair

The annual Holiday Science & Tech Fair was held at the Japanese Cultural Center. This annual event is sponsored by private schools Punahou, Iolani, and Kamehameha, in conjunction with HTDC. The event continues to raise awareness about technology activities here in Hawaii among recent graduates and expatriates coming home for the Christmas holidays. Technology companies showcased their products and research and developments and job opportunities. Also, this year's event included a networking mixer with the Global Pau Hana group.

Media

HTDC's relationship with PacificNews.Net and KHON-TV continues to be a strong strategic marketing partnership. This partnership provides HTDC with media exposure on bi-monthly TV show Tech Buzz, KHON Morning News on Tuesday mornings, Flavors of Technology on Oceanic Cable 16, Dot.Biz Talk radio and in a column in the PacificNews.Net publication.

Tech Buzz

In its 3rd season, HTDC continues to showcase MIC, MRTC, virtual clients and its other programs. Companies benefit from the on-camera experience and hone their marketing presentations. The following companies and programs were featured this year:

February 2004	ATCO Software
April 2004	MOSAIC/PDC in Maui
June 2004	Inovaware
August 2004	Primal Cause
October 2004	Oceanit/Waimea Visitors & Tech Center on Kauai
December 2004	Mauna Kea Infrared

HTDC Programs & Services

Tech Business Support Programs

Tech Buzz Hawaii Morning Show on Fox 2 Morning news with Kirk Matthews featured interviews with HTDC CEO Phil Bossert on legislative updates, publicity on HTDC's participation in the 2004 Roadrunner Tech & Internet Expo, on the FastTrac™ entrepreneurial training courses, on the China Tech Tours, on MIC tenant Inovaware, and on the Holiday Tech Fair.

Flavors of Technology-OC 16

Flavors of Technology on Oceanic Time Warner Cable's Channel 16 features locally available technologies in a fun & fast paced approach. This season HTDC showcased the Pacific Disaster Center and Mosaic, tenants at MRTC.

Dot.Biz Talk Radio on KHVH AM 830 discusses Hawaii's tech businesses and products. Topics presented were legislative updates and information about the China Tech Tour by HTDC CEO Phil Bossert, presentation of the new fuel cell bus at Hickam by HCAT's Tom Quinn, and information about the FastTrac™ entrepreneurial training courses by Bill Wiedmann.

KITV 4 appearance by CEO Phil Bossert

Opportunity to publicize Tech Expo and HTDC's 20th anniversary with description of new programs and past accomplishments in March.

Press

January

Jan/Feb. Issue: Pacific News.Net, "HTDC Renames Its Alternative Energy Development Division"

January: Flavors of Technology, Oceanic Cable 16, segment on MIC tenant 21st Century Systems (aired 16 times during one week period).

1/12: Honolulu Advertiser, "The Power of Fuel Alternatives"

February

2/3: KHON Tech Buzz Segment on Tech Quest and Partnership with Tech Industry

2/11: Honolulu Advertiser Editorial, "Biotech Companies Need The Lab Space"

2/13: Pacific Business News, "Biotech Wins \$5.6 Mil To Block Anthrax" (SBIR)

2/19: News Coverage on KGMB, KHON, KITV and KHNL on Air Force Fuel Cell Vehicle (HEVDP)

2/20: Pacific Business News, "Hawaii's First Fuel-Cell Vehicle Hits The Road" (HEVDP)

2/21: KHON, Tech Buzz Segment on MIC tenant ATCO Software

2/24: KHON Tech Buzz Segment on Senate Bill 3091

2/26: KHVH Dot Biz Segment on HTDC Sponsors Tech Expo
2/29: Honolulu Star-Bulletin, "Hickam Bus Makes History"

March

March/April, PacificNews.Net, "HTDC Co-Sponsors 2004 Technology & Internet Expo"

March/April, PacificNews.Net, "P. Bossert Keynote Speaker For Tech Expo"

March/April, PacificNews.Net, "State Partners With Air Force to Develop Hawaii's First Fuel Cell Vehicle" (HEVDP)

3/2: KHON Tech Buzz Segment on HTDC Sponsors Tech Expo

3/4: KHVH Dot Biz Segment on HTDC Sponsors Tech Expo

3/7: Honolulu Star-Bulletin, "HTDC Sponsors Expo"

3/8: Downtown Planet, "High-Tech Expo This Tuesday"

3/8: KHON Tech Segment on HTDC Marks 20 Years

3/9: Honolulu Star-Bulletin, "Kamehameha High-Tech Event To Learn From Reinvigorated Expo" (HTDC Keynote Speaker At Expo)

3/12: Pacific Business News, "High-Tech Competition Joins Students and Businesses" (Recap of HTDC Sponsored Expo)

April

4/9: Pacific Business News, "Small Hybrids Flourish In a World of Big Road Machines" (HEVDP).

4/9: Hawaii Tribune Herald, "Ag-Biz Workshop" (SBIR).

4/9: Pacific Business News, "HTDC Helps Veterans Develop New Business Strategies" (FastTrac Veterans Program)

4/9: Pacific Business News, "New Research Facility Proposed" (Townsend project)

4/11: Sunday Advertiser, "Making a Game Of It" (MIC tenant Blue Lava)

4/12: Honolulu Advertiser, "HTDC SBIR Workshop"

4/13: Honolulu Star-Bulletin, "HTDC SBIR Workshop"

4/13: KHON Tech Buzz Segment on FastTrac Veterans Program

4/15: KHVH Dot Biz Segment on FastTrac Veterans Program

4/17: KHON Tech Buzz Segment on MRTC tenants PDC and Mosaic

4/18: Honolulu Star-Bulletin, "HTDC SBIR Workshop"

May

May/June issue: PacificNews.Net, "HTDC Expands Offerings To Hawaii's Veterans"

May/June issue: PacificNews.Net, "4th Annual Hawaii's Top 50 High Tech Leaders" (HTDC Sponsorship)

May: Flavors of Technology, Oceanic Cable 16, Segment on MRTC tenants Mosaic and Pacific Disaster Center (aired 16 times during one week period)

5/6: KHVH Dot Biz segment on HTDC China Tech Tour

5/7: Pacific Business News, "HTDC Workshop At MIC"

5/8: Honolulu Star-Bulletin, "HTDC Workshop At MIC"

5/11: Honolulu Star-Bulletin, "HTDC Workshop At MIC"

HTDC Programs & Services

Tech Business Support Programs

5/13: Honolulu Star-Bulletin, "HTDC Workshop At MIC"
5/25: KHON Tech Buzz segment on HTDC China Tech Tour

June

June: Flavors of Technology, Oceanic Cable 16, Segment on MRTC tenants Mosaic and Pacific Disaster Center (aired 16 times during one week period — rerun)
6/13: Honolulu Star-Bulletin, "Entrepreneurs Get Helping Hand" (MEP)
6/18: Maui News, "Entertainers Help To Promote Hawaii in China" (HTDC China Tech Mission)
6/19: KHON Tech Buzz Segment on MIC tenant Inovaware
6/22: West Hawaii Today, "State OKs High-Tech Trade Mission To China"
6/22: Garden Island, "High-Tech Trade Mission On Way To China"
6/22: Maui News, "Hawaii To Send High-Tech Trade Mission To China In Fall"
6/22: Hawaii Tribune-Herald, "Hawaii Announces Trade Mission To China"

July

7/2: PBN, "HTDC Will Sponsor Trade Mission To China"
7/15: West Hawaii Today, "HTDC Brings Business Presentation to NELHA"
7/15: Hawaii Tribune Herald, "There's High Hope For High Technology On The Big Island" (Profile article on HTDC)
7/18: Hawaii Tribune Herald, "High Hope For High Technology On the Big Island"
7/20: West Hawaii Today, "High Hope For High Technology On The Big Island"
7/22: Pacific Business News, "HTDC Seeks Participants For China Tech Trade Mission"
7/27: KHON Tech Buzz Segment on MIC tenant Inovaware

August

August/Sept. Issue, PacificNews.Net, "HTDC To Lead Tour To China"
8/4: Garden Island, "High-Speed Expo Coming To Kauai" (HTDC Sponsors Expo, longer version article)
8/5: Garden Island, "High-Speed Expo Coming To Kauai" (HTDC Sponsors Expo)
8/9: West Hawaii Today, "Chamber/HTDC Co-Sponsors Tech & Internet Expo"
8/21: KHON Tech Buzz Segment on MIC tenant Primal Cause
8/22: Garden Island, "HTDC Co-Hosts Workshop On Act 221"
8/22: Hawaii Tribune Herald, "UH-Hilo's Outreach Touches One And All In Community" (HTDC Manages Hilo Incubator)
8/27: PBN, "Young Tech Firms Expand at MIC"
8/27: PBN, "High-Tech Companies Get State and Federal Funds for Research" (SBIR)

September

9/1: Honolulu Advertiser, "Research Grants Go To 6 In Hawaii" (SBIR)
9/2: Honolulu Star-Bulletin, "Hatching a Business" (Profiles on MIC tenant Safe Water Systems and other MIC tenants)
9/3: Honolulu Star-Bulletin, "Tech Help Program Is Doing Right Things" (MEP)
9/17: Pacific Business News, "Belief In Itself Helped Oceanit Land \$49M Contract" (SBIR)

October

October: Flavors of Technology, Oceanic Cable 16, segment on MIC tenant Primal Cause (aired 7 times during one week period).
October: Flavors of Technology, Oceanic Cable 16, segment on SBIR winner/MRTC tenant Oceanit (aired 7 times during one week period)
Oct/Nov Issue, PacificNews.Net, "HTDC Reports Increase In Jobs Posted"
10/3: Sunday Advertiser, "Isles' Tech Job Growth Outpacing U.S." (SBIR graph and information on recent grants)
10/6: Honolulu Star-Bulletin, "Servco Puts \$1M Into Tech Firm" (MIC former tenant Hoku)
10/9: Honolulu Advertiser, "\$95,000 To Aid High-Tech Efforts (HTDC Receives SBA Grant)
10/29: Pacific Business News, "HTDC To Host Productivity Workshop"
10/31: Honolulu Advertiser, "The real world of business - UH entrepreneurs are required to make their venture profitable by the end of the semester."

Looking Forward

HTDC will continue its work to increase awareness about its own programs and services, as well as about Hawaii's tech industry, through its technology business support programs. HTDC is planning further improvements to its web sites, including a sortable, searchable database for its Professional Service Providers program, and an enhanced Hawaii Technology Business Directory.

Workshops and seminars will become more robust as Client Services expands to the neighbor islands. Staff will continue to build awareness of HTDC and its programs through technology events, expos, workshops and seminars, through partnerships with Oahu and neighbor island organizations.

Media and PR will also continue to play an important part of building awareness of HTDC. We look forward to more successful events and opportunities to showcase our clients and programs on television, radio and print.

HTDC Programs & Services

Financial Summary

The 2004 Financial Summary

Statement of Funding, Expenditures and Encumbrances for fiscal year July 1, 2003 through June 30, 2004

SOURCES OF FUNDING

Federal Funds	
Hawaii Center for Advanced Transportation Technologies (HCATT)	\$1,427,845.00
Manufacturing Extension Partnership (MEP) Program	\$ 342,773.00
General Funds	\$1,160,517.00
Special Funds	\$ 870,039.00
Total Funds	<u>\$3,801,174.00</u>

EXPENDITURES AND ENCUMBRANCES

Hawaii Small Business Innovation Research (SBIR) Grant Program	\$ 249,985.00
Administration	\$ 484,696.00
Federal Programs	\$1,770,618.00
State Programs	<u>\$1,295,875.00</u>
Total Expenditures & Encumbrances	<u>\$3,801,174.00</u>



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