

# Innovations

News and insights to meet the needs of an evolving community of businesses, job seekers, and educators

## Studies in the Extremes of Science From Nanotechnology to Outer Space

As the global center of high technology, Silicon Valley is almost singularly recognized for the science and technology that occurs here at the scale of the semiconductor and the various products into which the computer chip is embedded. Counter to this “human-scale” innovation, NOVA has recently turned its attention to regional advances at both ends of the size spectrum: the microcosm of nanotechnology and the macrocosm of the space industry.

### Nanotechnology: The Next Great Wave of Innovation

In Silicon Valley, the potential for nanotechnology to become the next high-tech revolution is within reach. The existing high-tech infrastructure of the Valley has enabled some companies and universities to sustain their research and development efforts—the first stage necessary to product development in nanotechnology. It is still the case that the amount of funding currently available is insufficient for nanotechnology to move beyond seed-stage development in the Valley.

However, a concerted effort has been made to not only educate interested audiences about the need for sustained sources of investment, but also to leverage funding, particularly from the federal government, to ensure that organizations interested in moving nanotechnology development beyond the initiation stage to production have the resources required to proceed. Congressman Mike Honda stated at the recent Bay Area Nanotechnology Forum that, “In today’s business climate, the demand for short-term returns prevents companies from investing in long-term, high-risk work, which advancing nanotechnology will require. Therefore, the federal government is one of the few investors that can take a long-term view and make the sustained investments that are

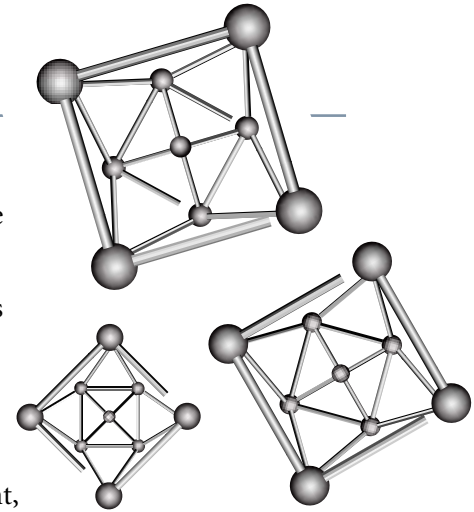
required to bring the field to maturity.”

As nanotechnology is projected to be a \$1 trillion international market in the next twelve years, businesses, the government, venture capitalists, and academic institutions must coordinate their efforts to ensure that Silicon Valley is positioned to benefit from this projected high-growth market. To read a white paper on this topic, go to [www.novaworks.org/lmi](http://www.novaworks.org/lmi).

### Space IT: The Sky’s NOT the Limit

While nanotechnology takes us to the furthest reaches of the microscopic, the space industry focuses us in quite the other direction. The U.S. space industry has been evolving for most of the last century—from early rocket innovations in the 1920s through the satellite launches of the ’50s, the moon landings of the ’60s and ’70s, the Space Shuttle, planetary explorations, and ubiquitous use of satellite technology since the early 1980s—Northern California has been involved almost from the start. Ames Research Center on the Moffett Field campus was the second of NASA’s field offices, opening in 1939. When Lockheed–Martin (né Lockheed Missiles & Space) established offices locally in 1956, the area became a center for space-related research and development.

Today, the vast majority of the national space industry is based near major operational facilities in Southern California, Texas, Florida, Virginia, and Maryland,





- Advanced Micro Devices
- Analog Devices, Inc.
- Applied Materials
- Biltmore Hotel & Suites
- Center for Continuing Study of the California Economy
- Center for Quality of Management
- Children's Discovery Museum
- County of Santa Clara
- Crest Financial Services
- Department of Rehabilitation
- Emergency Housing Consortium
- Employment Development Department
- Foothill-De Anza Community College District
- Hewlett Packard Company
- Housing Authority of the County of Santa Clara
- Intel Corporation
- Intuit
- Kaiser Permanente
- Lockheed Martin Missiles & Space
- Microsoft Corporation
- Molecular Medicine Research Institute
- NASA Ames Research Center
- National Council on the Aging
- Network Appliance, Inc.
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undoubtedly for greater access to the federal government, the industry's primary funding source. The San Francisco Bay Area, meanwhile, continues to play a crucial role and is home not only to such major industry figures as Lockheed-Martin, NASA Ames, and Space Systems/Loral, but also a great number of companies specializing in the design and manufacturing of electronic components—representing the Valley's strengths.

In an effort to better communicate the regional workforce needs of the space industry, NOVA has been conducting research into a wide variety of information

technology careers within the space sector. The findings will be published in report format and distributed at a community forum scheduled for December 17 at the NASA Ames Conference Center. As the nation's economy and the market for space technology begin their pendulum swing back to positive growth, opportunities may become more available for programmers and engineers interested in exploring careers that are out of this world.

Watch for more information on the Space Industry report and community forum on NOVA's website, [www.novaworks.org](http://www.novaworks.org).

## **"Reflections" on how Business & Community CONNECT!** *Local Leadership Mirrors Nothing Short of Excellence*

The NOVA Workforce Board celebrated its 13th Annual CONNECT! Awards Luncheon, "Reflections," at the Crowne Plaza Cabaña in Palo Alto on September 24. This event highlighted the outstanding contributions of local public and private partnerships, as well as the achievements of nine successful graduates of CONNECT! services. Hosted by veteran local newsman Fred LaCosse, the awards luncheon was an emotional, yet inspirational event attended by an audience of over 250 businesses, social service organizations, and local dignitaries.

Community Partner awards were presented to Career Closet Santa Clara & San Mateo and the County of Santa Clara. An Individual Achievement award was presented to Silvia Montoya for her work through Adelante Familia—a Neighborhood Self-Sufficiency Center located in Gilroy. Of the Community Partner awards presented, the award bestowed to Network Appliance raised the bar of community support. In an era where Silicon Valley companies are decreasing their corporate spending, it was refreshing to see a major corporation honored for their continued support of the local community. Demonstrating strong civic leader-

ship, Network Appliance was instrumental in assisting the NOVA Youth Employment Office secure furniture and office equipment, as well as coordinating the youth service provider's move to a new location. Sharing the praise and appreciation were several vendors who helped Network Appliance perform the small miracle: Graebel Van Lines, Air Systems, Ad-In, Magnum Drywall, Pyramid Painting, R.E. Cuddie, and Applied Materials. In addition, John Anderson from SASCO was recognized for contributing the voice and data cabling; John Stice from Frank Electric was commended for rewiring the Youth Employment Office; Dave Jarka from JEI was praised for his commitment to assemble the furniture; and Andy Schatzman and Kara Cynar from Devcon were saluted for managing the internal demolition and remodel of the new location.

The CONNECT! Awards Luncheon is an annual event that serves as a measurement of the state of civic leadership. It gives the community an opportunity to appreciate the availability of local quality services and encourages both businesses and local service providers to continue their commitment to social responsibility.

## NOVA Product Helps Individuals Prioritize Work Values



Since June 2002, NOVA has been selling Values-Driven Work™, a career assessment tool that helps individuals find clarity in career choice by identifying the values that drive their work satisfaction and performance.

This fall NOVA introduced a new and improved online version of the Values-Driven Work tool at the International Career Development Conference held in Oakland. This online version joins the product's two other values assessment methods: a card sort and a self-report inventory. A facilitator's manual supports all three assessment methods.

Targeted customers include educational institutions, career service practitioners, outplacement firms, and private and public organizations. Applications include career development, job transition, and employee retention and development.

One educational institution that has purchased the print and online version of Values-Driven Work is Stanford

University. Just recently, the university's Training & Organizational Development Department renewed its online license for staff. Individual career service practitioners from around the world have also purchased this product. Within the past year NOVA has sold the print product to practitioners in Japan, New Zealand and Spain.

When the Career Action Center ceased operations in June 2002, it donated the product's rights to NOVA. NOVA gives a percentage of all Values-Driven Work sales to the Career Action Center Fund, an endowment fund managed by Community Foundation of Silicon Valley.

For more information on Values-Driven Work, contact Rhonda Pryor at NOVA (408) 730-7249, or email [valuesdrivenwork@novaworks.org](mailto:valuesdrivenwork@novaworks.org). Check out the Values-Driven Work website: [www.novaworks.org/valuesdrivenwork](http://www.novaworks.org/valuesdrivenwork).

## Businesses Support Local Youth

The mission of the NOVA Youth Employment Office is to ensure that opportunities exist for youth to build the knowledge, skills, and attitudes necessary for employment and future economic independence. The Youth Employment Office expresses sincere appreciation and heartfelt thanks to both Synopsys Corporation and Cisco Systems for the donation of

funds that contribute to the expansion of job-readiness and career exploration services to high-school youth in Mountain View, Santa Clara, and Milpitas. To learn how your company can support the Youth Employment Office call (408) 522-9845. To learn more about NOVA's programs and services available to youth, visit [www.youthatwork.org](http://www.youthatwork.org).

## Bulletin Board



### CSA Forum, Groundhog Job Shadow Day

Join the California Space Authority, in partnership with NOVA, on December 17, 2003 for an intriguing discussion regarding the space industry in Silicon Valley. This event marks the release of a unique and informative publication that explores specific topics such as: regional market trends, education and skills required for jobseekers of space-adapted IT occupations, and general thoughts on the future of the space industry in the Bay Area. Save the date and stay tuned for more details to be released soon!

Mark your calendars for Groundhog Job Shadow Day, on February 2, 2004. This is the perfect opportunity for local businesses to get involved in supporting youth in

the community. Locally, Junior Achievement of Silicon Valley & Monterey Bay and Workforce Silicon Valley collaborate to send middle and high-school students to shadow a workplace host in order to give them a realistic view of a typical day on the job. By volunteering your company's participation, you not only help students become familiar with various career options, but also help them discover skills and workplace behaviors necessary for future success. To register, visit Junior Achievement's website at [www.jascc.org](http://www.jascc.org), or call (408) 988-8915. Don't miss out on this rewarding opportunity to have fun while giving students a work experience they will never forget!

## Nanotechnology Funding

Nanotechnology is projected to be a \$1 trillion international market by 2015. More than 30 countries have, therefore, launched nanotechnology research and development programs in order to benefit from this projected market. Funding-wise, how well is the United States competing in the worldwide race to become the nanotechnology world leader? Here is the funding distribution for the largest nanotechnology locations:

Western Europe:	\$3.6 billion US over the next four years (or about \$1 billion per year)
Japan:	\$1 billion US (2003 estimate)
United States:	\$847 million (2004 budget)

## Featured Website

### Northern California Nanotechnology Initiative Website

[www.ncnano.org](http://www.ncnano.org)

Want to find out the latest nanotechnology news and issues? Interested in supporting nanotechnology initiatives, or playing a role in making Silicon Valley the world leader in nanotechnology? Then check out the Northern California Nanotechnology (NCnano) Initiative website. This comprehensive site provides current nanotechnology news, information about programs, initiatives designed to support Northern California's efforts to become the nanotechnology leader, and a calendar of upcoming nanotechnology forums. This site is perfect for businesses and groups who want to be part of the next "Big Thing," a tiny technology that will impact all industries in the next few years and is projected to be a \$1 trillion market worldwide by 2015!



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