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U.S. Congresswoman Zoe Lofgren Visits NASA Research Park

U.S. Congresswoman Zoe Lofgren with NASA Ames Center Director Pete Worden and Bloom Energy's Josh Richman, Vice President of Business Development, toured Bloom Energy's facility at NASA Research Park March 13, 2012. Lofgren represents California's 16th district which encompasses most of San Jose, the capital of Silicon Valley.

N-CITE Set to Enhance NASA-NRP Collaborations

by Ingrid Desilvestre
Program Executive
Office of the Center Chief Technologist

The NASA Ames Center for Innovation and Technology Enhancement (N-CITE) has been established to facilitate communication and enable more collaboration between NASA Ames Research Center (ARC) and residents of NASA Research Park (NRP). One reason companies locate in the NRP is that they want the opportunity to collaborate with one of Silicon Valley's innovation engines, NASA's energetic, most out-of-the-box center. Ames, in turn, welcomes the proximity of companies who are doing interesting, cutting-edge R&D. Many NRP

John Hines, Chief Technologist at NASA Ames Research Center: "We hope that N-CITE will provide a forum to facilitate these potential teamings, and maximize the potential and efficiencies of all involved."

N-CITE cont'd on page 3

Photozig–New Apps, Training Programs and a Webnovela

by NRP Staff

Bruno Kajiyama,
Founder and CEO, Photozig, Inc.

CEO Bruno Kajiyama founded Photozig, Inc. in March 2002 with a vision to empower users through great products that save, organize and share lifetime memories. One of the earliest industry partners in NASA Research Park, Photozig has been doing research and development in Bldg. 19 since 2002.

Photozig's projects include developing products inspired by NASA missions, like the new PepBlast Galaxy gaming app with space themes, and Pepcast web site (www.pepcast.com), a unique photo sharing service open to the public in 2009, after initially hosting pictures for Yuri's Night Bay Area 2008. In 2008 Pepcast provided a virtual community for thousands of attendees celebrating our space heritage at NASA Ames Research Center and around the world. Pepcast photo sharing allows personalized skins, easy album organization, community capabilities and elegant slideshows.

Photozig cont'd on page 3

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NRP Welcomes

All One Quantum Energy Research, Inc.

Bldg. 19, Room 2025
Commencement 2/1/12

All One Quantum Energy Research, Inc. performs research and development in the field of Quantum Medicine. Their mainline product, QRS (Quantum Resonance Spectrometer), is a device to automatically gather information from cells in the human body and determine environmental changes before diseases strike. Their concept is to combine research in quantum physics and medical fields to develop preventive medicine. This technology has been extensively used in hospitals in Japan, Taiwan and China to study the predetermination of cardiovascular, cancer, heart and other diseases.

Neerim Corporation

Bldg. 19, Rm. 2089
Commencement 4/1/12

Neerim Corporation relocated their Mountain View headquarters to NRP for collaboration with NASA. Neerim provides systems engineering services for numerous NASA projects, including support for Lockheed Martin's prime contract to build the Orion spacecraft, a crewed vehicle for exploration beyond Earth orbit. Neerim is involved in the design and manufacture of Orion's thermal protection system. Neerim also supports GSFC and Ames in a study to reconstruct the ViTAL mission, requiring an end-to-end mission design. This study is partly funded by Center Innovation Funds under Ames Office of Chief Technologist.

CMU Expands into Building 19

CMU-SV continues their campus expansion in NASA Research Park, adding 6,406 s.f. in Bldg. 19 on March 1, 2012. Over the last 6 months they have acquired 12,418 total s.f. in Bldg. 19.

N-CITE cont'd from page 1

collaborations have already led to technology acceleration for a number of companies, bringing their products to market sooner and creating new jobs for the American people. In fact, five companies that started in the NRP with a piece of paper and some IP are now employing thousands in Silicon Valley.

N-CITE, by physically locating in the NRP (Bldg. 19 Room 2069), aims to make it easier to increase mutually beneficial collaborations between NASA ARC researchers and the NRP partners, both academic and commercial sectors. The result will both contribute substantively to the NASA mission and foster increased private sector innovation. N-CITE will pursue multidisciplinary, product-oriented technology development and applications through collaborations. Areas of interest include but are not limited to space biology and life sciences research and associated technologies, green technologies, small spacecraft and science instruments for small missions, high-confidence software and systems, and cyber-physical systems modeling and analysis.

Led by Ames Chief Technology Officer John Hines, N-CITE will explicitly attempt to break down organizational barriers and encourage multi-disciplinary and cross-disciplinary collaboration. This will be done via technology interchanges and invited seminars to gauge the suitability and interest of selected parties for a particular collaboration or simply to boost the visibility of certain technology activities. Where specific areas of mutual interest are identified, N-CITE plans to translate these into concrete, practical collaborations allowing for the focused transfer of technology and the joint development of new technologies. In some cases, interested parties can partner on proposals in response to NASA and other opportunities. Informal meetings (drop by) are encouraged by CTO Hines and the co-location in NRP Building 19, home to many start ups, was selected for that opportunity.

CTO Hines perceives the NRP as a key enabler of NASA's new technology focus, that continues to disseminate NASA technology and ideas, while welcoming the best ideas from industry and universities through collaborations in the NRP. Ultimately, N-CITE will create enabling technologies that advance NASA's bold new missions, infuse aeronautics and space technologies into the commercial sector, and help drive the next wave of aerospace innovation.

Silicon Valley Campus Celebrates Ten Years of Developing Software Leaders

2012 Marks the 10th Anniversary of CMUSV!

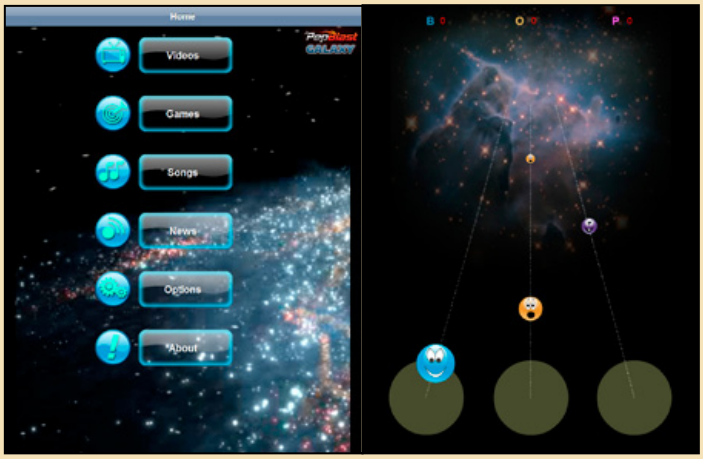
Join us on Saturday, June 9, 2012 to celebrate the rich history of CMU and its impact on the west coast! We will host the 10th anniversary event on the campus at Moffett Field beginning at 3:30 PM.

All attendees are welcome to participate in the festivities:

3:30-4:15 ***Looking Back and Moving Ahead with CMU President Dr. Jared L. Cohon and Provost Dr. Mark Kamlet***
4:15-4:30 ***Time Capsule Ceremony***
4:30-5:30 ***Technology Showcase***
5:30-7:00 ***Reception***

Register at http://alumni.cmu.edu/s/1410/alumni/index.aspx?sid=1410&gid=1&pgid=765&content_id=452

Photozig cont'd from page 1



PepBlast Galaxy App, developed by Photozig, has been released to Apple App Store and Android Market/Google Play.

PepBlast Galaxy is an educational casual gaming app, featuring videos created by NASA about galaxies and space exploration, music games and cool songs. Featured NASA videos have educational information on galaxies, research and space exploration. The app combines short easy games with space themes and music, where users hit objects following song beats. PepBlast Galaxy App is available at Apple App Store (for iPhone and iPad) and Google Play (for Android smartphones and tablets).

Photozig cont'd on page 4

Singularity University Brings in Gabriel Baldinucci, Former Virgin Group Executive and Entrepreneur, to Lead Overall Strategy and New Venture Development, Including SU Labs

Mountain View, CA
February 7, 2012

Singularity University (SU) has announced the appointment of Gabriel Baldinucci, an experienced entrepreneur, investor, and former Virgin Group executive, as Vice President of Strategy and New Venture Development.

Mr. Baldinucci will be responsible for the development and leadership of a new venture, SU Labs, while also working closely with CEO Rob Nail to direct overall strategy for Singularity University. SU Labs will be the center for SU's work "after the classroom" and will encompass faculty and alumni research, new company generation and incubation, and innovation services for larger companies around the world.

"We are very excited to have Gabriel as a senior member of the Singularity University team. His experience developing new ventures is a perfect fit for SU as we expand our offerings beyond education and into the realm of catalyzing and mentoring projects and companies around the globe to tackle the grand challenges that face humanity," said Singularity University CEO Rob Nail. "Gabriel also brings a passionate, entrepreneurial spirit that is great to addition to the SU community."

"Creating, incubating and financing companies able to positively affect the lives of a billion people is a central element of SU's vision. We call this 10^9+ impact," said Dr. Peter H. Diamandis, Executive Chairman and Co-Founder. "This will be Gabriel's key focus at SU Labs. His previous experience at Virgin is perfect to expand our successes during the past three years and help take this University to scale."

"This is not going to be a typical incubator," said Baldinucci. "We are building an innovative platform that will put our new SU companies alongside leading R&D teams from around the world, along with our incredible faculty. We will work across a company's full life cycle in a way that helps people at different stages bring unique value to each other."

Baldinucci was most recently a Managing Director at Palm Ventures in Greenwich, CT, where he focused on a broad range of industries with an emphasis on consumer services.

Previously, Mr. Baldinucci was a Vice President of Corporate Development at Sir Richard Branson's Virgin Group, where new Virgin companies are developed and launched. During his five years with Virgin, Baldinucci often worked directly with Mr. Branson and conceived and developed new business opportunities in health & wellness, travel, retail, IT services, and media. Prior to joining Virgin, Mr. Baldinucci consulted for several startup companies and also spent two years with Goldman Sachs' Investment Management Division in New York.

Baldinucci started his entrepreneurial career in high school by founding and successfully selling a local pizza restaurant chain. He has been quoted in Forbes Magazine and his work on entrepreneurship has been published by the Family Office Association. He is personally an investor or advisor for several startup companies and he holds a BA in Economics from Duke University and an MBA from the Stanford Graduate School of Business.

Photozig cont'd from page 3

Celebrating its tenth anniversary this April, Mr. Kajiyama shares a few exciting projects and products from the company: "We began developing digital image systems to organize photos back in 2002, and saw the potential for applying digital pictures and videos to many areas. We have completed projects in special education, training programs, consumer software and online systems. We are fond of NASA themes, such as space exploration, Kepler's extrasolar planet discoveries and other missions. Recently, we have been doing more media production, online services and mobile apps."

"Photozig has also worked on healthcare-related products /services with the goal of helping families around the country. With Stanford University and the Alzheimer's Association, we are developing more applications for Alzheimer's care. Some of our research projects on healthcare applications have been funded by the National Institute of Health (NIH), such as LifeZig and iCare. LifeZig was our first NIH-funded project, which allowed us to determine appropriate technologies, user interfaces and design factors to develop programs for Alzheimer's

Photozig cont'd on page 13

NASA Awards Moon Express New Task in $10M Commercial Lunar Data Contract

by Bob Richards
Mountain View, CA
March 5, 2012

The Moon Express team

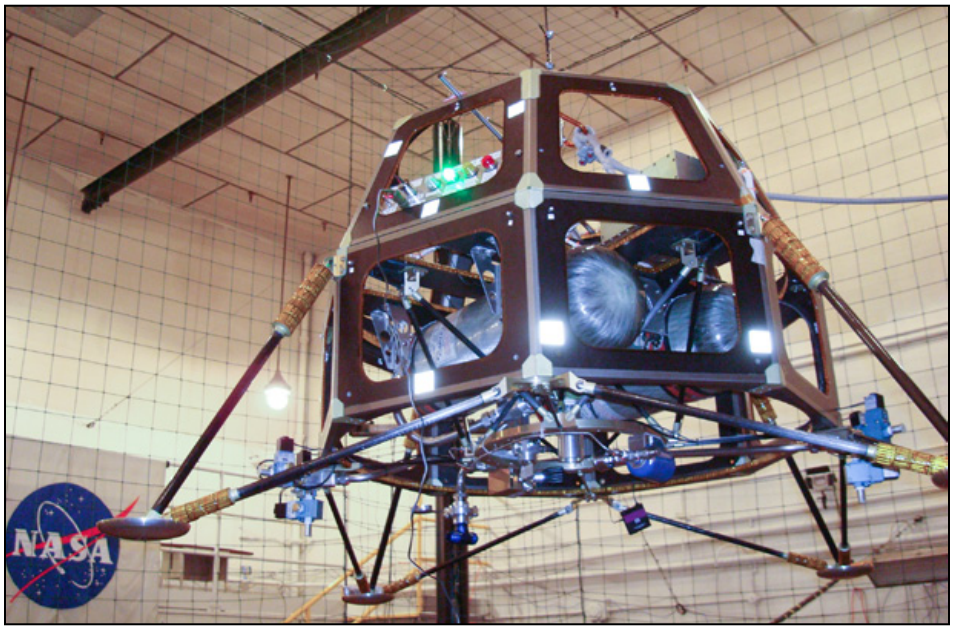
Moon Express, a Google Lunar X PRIZE contender, announced March 5 that it has won an additional task order from NASA under its Innovative Lunar Demonstration Data (ILDD) Program contract. The newest task order in the $10M ILDD contract calls for Moon Express to provide NASA with data about the company's progress through a Preliminary Design Checkpoint Technical Package that documents details of mission operations, spacecraft development, payload accommodations and Planetary Protection Plans.

Silicon Valley-based Moon Express was one of only three U.S. companies awarded the first $500K Task Order under NASA's ILDD program. Successful completion of the newest task order will bring the company's ILDD awards to $610,000. Although an important substantiation of NASA's interest in commercial lunar providers, the ILDD contract represents a fraction of the investment needed to execute a commercial lunar mission. The majority of Moon Express funding is coming from private investors and is supplemented by revenues from payload customers.

"We are very pleased to receive another ILDD contract award from NASA," said Bob Richards, co-founder and CEO of Moon Express. "NASA is an important partner in our reach for the Moon."

Moon Express is the first company to flight test a prototype lunar lander system designed for the Moon, developed in partnership with NASA. The company plans to send a series of robotic spacecraft to the Moon for ongoing exploration and commercial development focused on benefits to Earth. In the near future, Moon Express will not only be delivering important payloads to the Moon, but will also be exploring the Moon for the potential mining of precious elements we need here on Earth like platinum group metals, rare earth elements and Helium-3 (used to create a second generation fusion fuel for electrical generation).

Moon Express is adapting NASA's Common Spacecraft Bus for use in small, low cost spacecraft designed to deliver payloads to a variety of locations, including lunar orbit and the lunar surface, Low Earth Orbit (LEO), Earth-Moon Lagrange points, and Near Earth Objects (NEOs). The Common Spacecraft Bus allows the company to design low-cost missions, launch on a variety of commercial rockets and deliver flexible payloads to the lunar surface and various orbits. Moon Express signed a Reimbursable Space Act Agreement with NASA in 2010 to invest over $500K into the commercialization of the agency's technology in return for technical assistance.

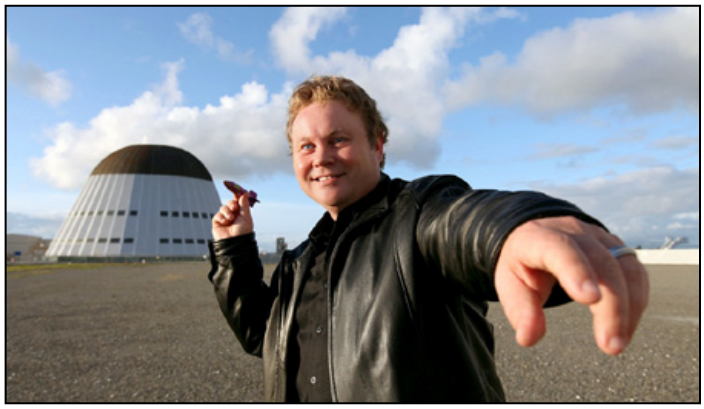


Lunar Landar Vehicle (LTV)

Mountain View's Moon Express Introduces a New Breed of Space Explorers

Mountain View's Moon Express is a new breed of space explorers.
They are sending a craft to the Moon because they think they can.

by Rod Bastanmehr
Metroactive
February 15, 2012



Moon Express CEO Bob Richards

At 22, Brandon Plaster finds himself part of a project that could, in theory, redefine how we view not only lunar research and space travel. And where the buttoned-up Houston control engineer of yesteryear, with his black-framed, horn-rimmed glasses and pocket protector firmly in place, pulled off one of the greatest human accomplishments of the 20th century, the next great American hero may look nothing like them. They may just look like Brandon.

If successful, Brandon and his cohorts wouldn't just be revitalizing America's lunar relationship; they could also help make the dream of clean energy an actual reality. They could finally bring about the seemingly eons-touted concept of commercial flights to the nether regions of space. And in doing so could make America a dominant presence in space exploration and innovation—again.

The company that Brandon finds himself in (or, more accurately, that found Brandon) is Moon Express, located in Building 19 in the NASA Research Park. MoonEx, as it is often called, is one of 26 companies currently vying to win the Google Lunar X PRIZE (GLXP).

Moon Express cont'd on page 10

Ames' First Plug-and-Play Compatible Spacecraft built on NRP's AAC Microtec Framework

by AAC Microtec Staff

NASA Ames Research Center (ARC) and the Swedish National Space Board (SNSB), with NRP Partner AAC Microtec, presented the outcomes of the first bilateral nanosatellite cooperation between the two entities at the 9th Annual Spring CubeSat Workshop held April 18-20 at San Lois Obispo, CA.

The collaboration resulted in ARC's first plug-and-play compatible spacecraft, an 1U CubeSat called TechEdSat which is built around AAC Microtec's Rapid Integration Architecture™ (RIA) framework. The RIA framework is compatible with the AFRL developed Space Plug-and-Play Avionics (SPA) standard. AAC Microtec developed and supplied the spacecraft avionics and supported the software development throughout the execution.

AAC Microtec North America is now established at NASA Research Park and is gearing up to bring state-of-the-art, radiation tolerant, and affordable small space systems to the global market based on successful collaboration with ARC, the US Air Force Research Laboratory, and a fast growing customer base.

In addition, AAC has delivered many Rapid Integration Architecture™ (RIA) plug-and-play compatible subsystems to the Tohoku University built micro-satellite RISESAT, including onboard computers (OBC Lite™ 52X), 8 payload interfaces (DPCU-221X, µRTU™ 31X), 16 GB non-volatile mass memory (M16E1), and the main payload power system (MPDU 151X).

"AAC Microtec North America is in getting many requests on our space systems capabilities and unique products. We expect to see a significant growth of the company in the coming year," says Jorge Freyer, CEO of AAC Microtec North America Inc.

Jorge Freyer, CEO of AAC Microtec North America Inc., provided strategic guidance on expanding businesses globally through alliances and product expansion. He has been an executive of several companies; amongst them GE and Sony, as well as co-founder of startup companies that debut in the public markets in the US and in Europe. He headed several M&A activities as a partner at Hultquist Capital. He holds a graduate degree in Engineering from Stanford University.

Ray Kurzweil Talks About 'Singularity' and Theory's Critics

by Vauhini Vara
The Wall Street Journal
February 22, 2012

Dr. Ray Kurzweil, Chancellor and co-founder with Dr. Peter H. Diamandis, of Singularity University. Kurzweil is an American author, scientist, inventor and futurist involved in fields such as optical character recognition, text-to-speech synthesis, speech recognition technology and electronic keyboard instruments.

Ray Kurzweil believes computers will soon think like humans and ultimately merge with us, a notion he has dubbed "the singularity."

That idea persuaded the former inventor in 2007 to form Singularity University, an institution housed at the NASA Research Park on Moffett Field in Mountain View, which teaches students about artificial intelligence and other topics straight out of science fiction.

While the institution isn't accredited and offers short programs rather than a four-year degree, it has attracted lecturers and advisers such as Autodesk Inc. Chief Executive Carl Bass and Google Inc. Chief Internet Evangelist Vint Cerf. The notion of the singularity previously spawned the Singularity Institute, an artificial-intelligence research group in San Francisco.

Mr. Kurzweil's artificial-intelligence theories have made him something of a lightning rod among Silicon Valley technologists. He draws praise and funding from the likes of Google co-founder and CEO Larry Page and investor Peter Thiel. But others such as Microsoft Corp. co-founder Paul Allen and Lotus 1-2-3 designer Mitch Kapor dismiss Mr. Kurzweil's ideas, arguing, in part, that the way humans process information may not be analogous to how computers do so, which means human consciousness can't necessarily be reproduced digitally.

Mr. Kurzweil, 64 years old, who lives in the suburbs of Boston and regularly travels to the Bay Area for his work at the university and institute, discussed his predictions and his status as a polarizing figure in a recent interview:

WSJ: There are plenty of universities in the Bay Area that teach computer science, neuroscience, all the fields you're exploring at Singularity University. What kind of gap does Singularity University fill?

Mr. Kurzweil: There are lots of universities that teach this subject matter in a traditional way, basically looking at the current state of knowledge. Singularity University is really devoted to understanding the phenomenon of exponential growth and how that is transforming one field after another. Computation and communication are obvious ones, but biology, health and medicine are others. The point is that health and medicine are now information technologies, and once an area becomes an information technology it progresses exponentially and not linearly.

The other key difference is that the students learn primarily through learning: The students self-organize into teams and take on some world challenge and start a project intended to last a long time. One project is to provide inexpensive housing for the developing world by building houses Lego-style using three-dimensional printing.

WSJ: What do you expect the most prominent companies in Silicon Valley to be making in 20 years?

Mr. Kurzweil: There are several different fields that are quite revolutionary. One area is biotechnology technologies to really change the information processes underlying our bodies to program our bodies away from diseases and aging. You and I are walking around with outdated technology in our bodies. Twenty years from now, we'll really have a way to radically change those processes.

Another area is artificial intelligence. Twenty years from now you won't have to ask computers for help. The computer will be listening in on you and determining what you need. And we'll have virtual reality you and I could have sat together in a virtual living room or taken a virtual walk on a Mediterranean beach.

WSJ: You have some famous proponents in the Bay Area, but you also have some vocal critics like Mitch Kapor and Paul Allen. Can you respond to the idea that the brain's workings are so different from

Singularity cont'd on page 8

Carnegie Mellon University alumni and NASA HQ Chief of Staff David Radzanowski, visited CMU-Silicon Valley on February 9, 2012. (L-R) Steven Rosenberg, Associate Director, CMUSV; David Radzanowski, NASA Chief of Staff; Ole Mengshoel, Associate Research Professor, Director of the Intelligent and High-Performing Systems Lab, CMU-SV; Sylvia Leong, CMU-SV; Director of External Relations and Admissions, CMU-SV; Hector Rastrullo, Director Business and Finance.

Singularity cont'd from page 7

that of a computer that they would be impossible to simulate?

Mr. Kurzweil: My critics are thinking linearly and imagining continued linear progress, but that's not true. [Progress will be] exponential: It makes an enormous difference. People also say the brain is too complex. Well, it's a complicated area, but there's a tremendous amount of redundancy—the complexity is more apparent than real. It's a level of complexity that we can handle.

WSJ: Where is the most interesting artificial-intelligence research taking place?

Mr. Kurzweil: This type of research is being done all over the world. The most sophisticated is being done in the United States, most significantly in Silicon Valley. Larry Page has a strong personal interest in AI. Search engines are going to understand what you mean and not just look at words. Look at Watson [the IBM computer that won Jeopardy]. It dealt with questions that were extremely subtle, dealt with puns, innuendo and metaphors.

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GaryAir in Single Pilot Operations Technical Interchange Meeting

By Dave Guerrieri,
V.P. Business Development, GaryAir

Ames' Flight Deck Display Research Lab hosted a Technical Interchange Meeting April 10th–12th to ask industry, academic, and research experts how best to improve the safety of aircraft operated with one pilot. Attendees also considered when, if ever, further advances might permit additional operations of this type in other categories of aircraft. Large air transport passenger aircraft might never be flown with less than two pilots. Cargo aircraft might have a reduced number of aircrew sooner than passenger planes. Some believe cargo planes might someday fly without a pilot at all. Today many small aircraft are flown with only one pilot. Therefore research in this area will improve the safety of those operations right away. Many military aircraft are also flown with only one pilot. System improvements to help single pilot operations, as they are called, will likely improve the systems for multi pilot crews too, because automation for one pilot must be very easy to use. Dave Guerrieri of GaryAir Air Taxi, a NASA Research Park Partner, contributed to the meeting as an industry participant and subject matter expert.

Break Out Group 3 at Ames' Flight Deck Display Research Lab Technical Interchange Meeting including (L-R) Josh Kraut, San Jose State University; Greg Potter, Cessna Aircraft Company; Leigh-lu Prasse, ARINC; Dave Guerrieri, GaryAir; Mike Feary, NASA Ames; Fred Rudolph, Rockwell Collins; Joel Lachter, San Jose State University; and Sergio Pizziol, SUPAERO.

NASA and CMUSV Host "Big Data Management for Energy and Smart Grid"

by Michael Marlaire

(L-R) Krishna Bheemanadham, VP CMU Alumni Association and Arvind Jain, Director, Oracle Corporation, organizers of the event, with guest speakers Drs. Martin Griss, Director CMU-SV and Steve Zornetzer, NASA Ames Associate Center Director.

On April 5, 2012, NASA Research Park (NRP) hosted a NRP partner Carnegie Mellon University-Silicon Valley (CMU-SV) led event in NRP Building 152 Conference Center. Over 300 guests attended the "Big Data Management for Energy and Smart Grid—Creating the Real-Time Utility Enterprise" evening presentations. The organizers' goal was to encourage collaboration between companies, Ivy League engineering and business schools to explore opportunities to build relationships and companies to address challenges faced by energy and smart grid sectors.

According to event organizer Krishna Bheemanadham, California's electric grid is getting a 21st century facelift. The three biggest utilities, PG&E, SDG&E and SCE (with more than 11 million customer accounts) released smart grid deployment plans outlining roughly between $2.4 and $3.6 billion of new investments to make the smart grid a reality by 2020.

With storage, analytics, virtualization and security on the cusp of a big data boom in the energy sector, CMU-SV and CMU Alumni association organized the evening focused on big data management in the energy sector. Presenters discussed the rapid changes and opportunities in the domestic and international energy data market, gathering leaders in software technology as well as energy. These leaders are dedicated to creating the big data management solutions needed to convert smart grid into success stories around the world.

Through presentations and panels the audience was informed about regulation, economics, technology and innovation, investments, business, markets and players in energy-related big data management today; and the expected development within the next decades. Dr. Steven Zornetzer, NASA Ames Associate Center Director, briefed the guests on NASA Ames' new "smart building" named Sustainability Base, which recently received its official Platinum LEEDS designation. Dr. Nancy Ryan, Deputy Executive Director, California Public Utilities Commission and Bradley Williams, VP Industrial Strategy, Oracle Utilities gave keynote presentations, and an expert panel led by CMU-SV Distinguished Research Fellow Dr. Steven Ray, discussed wide-ranging potential impacts. Dr. Martin Griss also briefed attendees on the overall CMU-SV program and NRP Director Michael Marlaire presented the NRP partnerships and purposes.

Speakers and attendees discussed the role of policies and incentives in building the big data management market for the energy sector, the definition and advancement of best practices in smart grid data management operations and R&D, and what is needed to truly deliver valuable big data management solutions to the stakeholders from power generation via transmission and distribution to power consumption. According to Bheemanadham, "NASA and CMU-SV received great respect from all attendees for having organized such a great event. Participants gave good feedback, formed new friendships, and most stayed well after the event discussing details and exchanging information."

NASA's Dr. Steve Zornetzer presents Ames' new smart building, Sustainability Base.

Bob McDonnell, the Governor of Virginia, speaks with Bloom Energy's Josh Richman, Vice President of Business Development, while touring NASA Research Park on March 26, 2012.

(R-L) NRP's Tim Collins, KleenSpeed President/Founder and Chairman, briefs VA Governor Bob McDonnell and Ames Center Director Pete Worden March 28, 2012 on KleenSpeed's all electric Miata, dubbed the EIATA.

US-Russia Bilateral Commission Innovation Working Group visited NRP on March 26, 2012.

Moon Express cont'd from page 6

The GLXP is organized by the X PRIZE Foundation and sponsored by Google, and carries with it a secondary moniker—"Moon 2.0"—which speaks volumes about the intention of both its participants and the project. The competition itself comes with a fairly specific set of rules: Teams win $20 million if they are the first to land a robot on the Moon and have it travel 500 meters and transmit data and high-definition images back to Earth. Second-place teams win $5 million, and all teams have the chance to win additional prizes by completing tasks beyond the competition's basic requirements—tasks such as photographing the hardware remains of prior Apollo missions and other man-made objects currently residing on the Moon, or surviving a lunar night.

The contest will award $1 million to teams that display purposeful ethnic diversity, and an additional $2 million to teams that launch the mission from the state of Florida. These incentives give every startup team a chance to nab a cool $30 million if it meets the competition's 2015 deadline.

The journey started for Brandon when he was a student at the University of Rochester. His chance knowledge of the Open Scenes Graph software nabbed him a summer internship with NASA at the Langley Research Center in Virginia. The internship led to a NASA-prompted iPhone app-making contest, which he won, which led to an internship spot at Ames Research Center in Mountain View. It was at Ames that Brandon would first begin to work with the Moon in mind. "The basic idea of the summer program was to make a Moon rover that went along with this landing system that NASA was working towards a while ago, that they stopped working on and was eventually taken over by a private company," he explains.

Still, even Brandon wasn't entirely confident that the seemingly regular folks (which is to say, anyone who isn't, quite literally, a rocket scientist) would be able to craft anything on par with Apollo. "We were just developing this rover for that project, and that was honestly it. It never occurred to me, nor anyone else on the project, that it would make it to the Moon."

Moon Express arrived on Aug. 17 [2011]. "We had this demo for this company, and it was the first time I'd ever heard of them," Brandon says. "And they loved [the rover], and what we were doing with it, with the project."

"Within two days, they had come to us and offered every member of the project a job." Brandon is one of around 20 employees currently stationed at Moon Express, and

Moon Express cont'd on page 13

Is Vasper Really the Exercise of the Future?

by Chris O'Brien
Mercury News Columnist

Get 2 hours of exercise in just 20 minutes.

It sounds like a dream come true for anyone who has struggled with weight loss, churned through countless diets, and spent hour after hour at the gym. It also, no doubt, sounds like something you'd hear a cheesy pitchman claiming on an informercial at 2:30 a.m. as you nibble another Oreo cookie.

But wait: There's more! A lot more. Because this claim is being made by the founder of a company called Vasper, based at Moffett Field. And it's taken seriously enough that it's being used by a range of Bay Area professional athletes, and is even under consideration by NASA for use on the International Space Station.

NASA Astronaut Richard Linnehan tries the Vasper system in Bldg. 566, NASA Research Park

Intrigued? I was the moment I heard about it. So, for the sake of serving the noble causes of science and journalism (and to satisfy my curiosity), I decided to offer up myself as a human exercise guinea pig.

Before I describe my experience, let's meet the founder of Vasper, Peter Wasowski, a serial entrepreneur who gave me a history of the company and explained the science behind it. Wasowski had previously been founder and CEO of a company called Cool Systems, which made a cooling panel that athletes could use instead of ice packs, and which he sold in the late '90s.

After that, Wasowski decided to retire to his home in Hawaii. But he found himself haunted by a notion he had for a new fitness product. The idea was based on a couple of exercise concepts that had been kicking around medical and scientific circles for decades but had never found their way to the mainstream.

"I just kept thinking it would be a shame to have this technology in my head and not do anything with it," Wasowski said. "So I decided to go for it."

Vasper—from "vascular performance"—combines three elements: blood flow restriction; compression exercise; and grounding.

When you exercise, your muscles generate a kind of waste product called "lactic acid." Vasper cools and compresses your muscles during the workout to keep the lactic acid building, which tricks the body into releasing extra doses of natural growth hormones that build muscle and bone. At the same time, Vasper reduces your core body temperature, which allows you to work harder without sweating or getting winded, which increases the metabolic and fat burning rate. Finally, Vasper has a grounding system to reduce static electricity in your body, which increases the release of serotonin, allowing for a deeper sleep and the release of more growth hormones.

And so, if that works as advertised, your body experiences the impact you'd normally get from a two-hour workout in just 20 minutes.

Wasowski has spent eight years developing his system. And a couple of years ago, he shipped the prototypes to San Jose, where he began testing with the San Jose Sharks. The results were apparently impressive enough that Patrick Marleau, the team's all-time leading scorer, invested and appears on the Vasper website's home page offering his endorsement.

"Within 20 minutes of my first use, I had the endorphin rush that you can usually only achieve after a much longer workout," Marleau is quoted as saying. "It helps with my recoveries after strenuous workouts on and off the ice during training."

Last August, NASA signed a three-year agreement with Vasper to evaluate the system for possible use on the International Space Station. Astronauts have to exercise at least four hours a day in space to keep their muscles from atrophying, so anything that dramatically cuts that time would obviously be useful for long-term space missions.

"Vasper has a unique exercise technology and protocol that is now being developed for maintaining top physical

Vasper cont'd on page 12

Vasper cont'd from page 11

fitness of athletes and for improved rehabilitation after injury," reads the agreement NASA signed with Vasper.

And so, with some trepidation, I recently visited Vasper's modest offices at the NASA Research Park at Moffett. Dressed in gym shorts and sneakers, I greeted Wasowski's son, Sebastian, who would take me through the Vasper regimen.

Sebastian began by strapping a blue vest around my chest, followed by four cuffs around my thighs and upper arms. Each of these had tubes running out of them attached to a control unit. I then sat on something that basically resembled a typical elliptical trainer. Sebastian turned some knobs on the control panel, and the cuffs and vest began to lightly squeeze my body, sort of like a blood pressure cuff, as they filled with a cold liquid. I placed my bare feet on the pedals, which were covered with copper plating to create the "grounding" effect.

When I began pedaling, the bike was set with minimal resistance, and yet within a minute my thighs felt like I had been climbing a mountain for two hours. That was the feeling of the lactic acid building up, Sebastian explained.

But even stranger: During the ensuing 20 minutes, my heartbeat never elevated, and I didn't sweat, even toward the end when Sebastian increased the resistance and I was pumping my arms and legs as fast as I could.

After the session, I didn't feel winded or tired, and not a drop of sweat.

At the Vasper offices that night, I met Erica McLain, 26, a Stanford graduate who competed in the triple jump at the Beijing Olympics in 2008. Last March, during a practice, McLain overshot the landing pit and hit the pavement, which caused her foot to flip 180 degrees backward, leaving leg bones sticking out.

"When it first happened, I thought my foot would have to be amputated," she told me. "I felt like a cartoon character. There was no way my foot should be able to flip upside down. I thought my career was done."

Two surgeries later, her doctors said she'd be lucky to walk normally, and to forget jumping. Two months after the accident, one of her coaches put McLain in touch with Wasowski.

McLain began doing the Vasper regimen five days a week, and says within a few months, her doctors were astonished at her recovery. Last fall, she began running and training again. In January, she competed in her first triple jump event and is on track for the U.S. Olympic trials in June.

While miraculous sounding, such stories are still anecdotal. Wasowski, Vasper, and a team from NASA are gathering more rigorous data to confirm the effects. In the short term, Vasper serves limited clients in its offices, though anyone can book a session for $35.

Wasowski is hoping to begin selling some machines to corporate clients and is in the process of raising his first round of venture capital after primarily funding development by himself and a handful of angel investors.

As for me, can I attest that I truly got a two-hour workout in 20 minutes? No, not after one session. But it was truly unlike any exercise sensation I've ever had. That night I sleep soundly, woke up feeling refreshed and hoping that if this was the future of exercise, it couldn't get here fast enough.

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Congresswoman Lofgren, with Ames Director Pete Worden, is briefed by Peter Wasowski, CEO, Vasper Systems, LLC.

Photozig cont'd from page 4

patients and their families. The LifeZig system designed by Photozig enables caregivers to create personalized videos for individuals with dementia based on their personal life stories, which may contribute to reducing their agitation, increasing relaxation, and enhancing quality of life," Mr.Kajiyama said.

iCare is an online video training and collaborative web site for family caregivers of individuals with Alzheimer's disease and related dementia. The iCare program is designed to help families cope with the difficulties of dementia caregiving, alleviate related stress and enhance quality of life. This informative program was developed by Photozig, Inc. in collaboration with Stanford University and the Alzheimer's Association, and funding from the National Institute on Aging.

Photozig is now completing field tests of the iCare program involving 150 caregivers in Spring 2012. Preliminary results suggest that the iCare program can effectively reduce stress and improve quality of life for caregivers, among other positive outcomes. The complete set of materials including DVD, workbooks and website is expected to be available to the public in Summer 2012, when users will have full access to the online video training at www.icarefamily.com (informative stress management program for dementia caregivers).

Mr. Kajiyama received a research grant award in April 2012 to develop and evaluate a new online behavioral intervention for dementia caregivers specifically for Latino families. The new project will create a novel Webnovela, a short online Telenovela, blending typical drama plots of Telenovelas (a very popular video programming for Latino communities) and a training program on dementia caregiving. The new Webnovela production in Spanish will implement a culturally appropriate intervention to show coping skills, decrease stress and alleviate related depression. It is expected to attract and engage Latino caregivers belonging to the fastest growing ethnic group in US (16% of US population, corresponding to 50 million people).

"We are very excited about bring new products to the market, such as the iCare program, which has the potential to help millions of families struggling with Alzheimer's and related dementia," said Mr. Kajiyama. "At the same time, we are looking into new strategies to create great products, e.g. gaming techniques in PepBlast Galaxy app. We are blessed to be in NASA Research Park, an exceptional environment for research and development of new ideas in Silicon Valley, which inspires our creative R&D team to implement many cool projects. We look forward to developing new exciting applications, such as our Webnovela production and upcoming mobile apps."

Besides doing large special projects, the company launched Photozig Albums (a software to organize digital pictures with over 500,000 downloads), developed the Photozig Digital Photo Station (a dedicated box to visualize, organize, and share pictures on a television set), created Photozig Web Albums with communities and special themes, and released the PepBlast Galaxy app in the Apple App Store and Android Market/ Google Play.

More information about Photozig digital photo projects and products can be found at www.photozig.com.

Photozig free mobile app "PepBlast Galaxy" can be downloaded at http://itunes.apple.com/app/pepblast-galaxy/id502215170 (Apple App Store) or https://play.google.com/store/apps/details?id=air.com.pepblast.PBG10g10 (Google Play).

Moon Express cont'd from page 10

one of many science-crazed dreamers the company shipped from the East Coast and beyond to a post-bubble-burst Silicon Valley. "It wasn't the best financial offer," Brandon says of Moon Express, "but, I mean, I couldn't believe it. The idea is that by 2013 we're sending something to the Moon. How do you say no to that?"

Bob Richards would have been the man to say no to. The Canadian-born space entrepreneur has been orbiting a company like Moon Express for some time, having founded and served as CEO of Odyssey Moon Limited, a commercial lunar enterprise that was also the first team to join the Google Lunar X PRIZE as an official competitor.

In 1986, Richards was one of the co-founders of the International Space University in France, as well as the Singularity University located in the NRP in 2008. For Richards, looking forward is a simple matter of looking upward. "The health of our home planet and the survival of our species will only be secured through the use of space resources and the expansion of Earth's economic sphere to the Moon and beyond," says Richards, speaking like a true big-picture thinker, which is just another way of saying he sounds like a walking press release.

What Richards is doing is aiding in the not-so-silent shift that the space industry has seen take place in the last five years. While murmurings of a commercial and private form of space travel have circulated for years now, never before have we seen such a massive shift to the privatization of aerospace itself. Bob Richards, Brandon Plaster and the entire Moon Express operation stand at the forefront of this change. And the fear, of course, is that nothing is more dangerous than the unexpected, and trying to get somewhere far away often proves

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NRP LECTURE SERIES HOSTS DISASTER RESILIENCY PANEL

by Kathleen Burton

(L-R): Robert Dolci, Steve Jordan, Dr. Martin Griss, Tore Andre Nilsen, Paul Callahan

On January 31, the NRP held its 14th Lecture Series event, a Disaster Resiliency Panel in Bldg. 3, with five experts from the U.S. and European public and private sectors and a Moderator from the Environmental Protection Agency (EPA) in San Francisco.

The Disaster Resiliency Panel Discussion is the fourteenth in the NRP Exploration Lecture Series, which has hosted Nobel Prize Laureates, astronauts, scientists and authors. The Disaster Panel is one example of the many R&D and education collaborations ongoing between many of the 80+ NRP partners from industry, universities, non-profits and NASA Ames Research Center.

The panelists presented their individual disaster-related themes, while highlighting joint collaborative activities and how their NRP location and relationships have enhanced their ability to provide critical assistance before, during and after disasters.

Panelists topics ranged from providing more resilient communities to platforms of opportunity for collaboration and harnessing disaster mitigation technologies.

An enthusiastic audience of students, citizen disaster mitigation teams, military personnel and representatives from city and county governments attended the one hour presentation.

"Disaster resiliency is measured by the amount of time required for a community to return to a sense of normalcy following a disaster," said panelist Steve Jordan, CEO of the National Disaster Resiliency Center (NDRC) at the NRP, defining the core concept.

"The NRP is the best location for the NDRC", said Jordan, citing the 38 populous counties which surround Moffett Field, the Moffett Federal Airfield, which allows relief flights in and out during disasters and the NDRC's partnership with CMU, which provides the Silicon Valley community with state-of-the-art technical disaster monitoring and surveillance tools.

A major challenge faced by the NDRC he noted, is widespread public complacency. According to a recent Red Cross preparedness survey, in the 1200+ densely populated square miles surrounding the NRP, only 5% of the population have stockpiled disaster basics, such as enough water to last for 3 days. "People shouldn't wait for a disaster to be the wake-up call," he said.

While just gaining traction in the U.S., in countries like Switzerland, Chile and Israel, disaster resiliency training and operations are built into their national service obligations, something the U.S. might consider to popularize the concept among the general public, Jordan noted.

To improve the public's "don't think about it" mentality, said panelist Martin Griss, Director of Carnegie Mellon University, Silicon Valley, "Research shows that social pressure can change behavior. But, the question is", he said, "how to get people to work together and bring government and the community together to solve disaster-resiliency problems."

One major goal ahead, Griss noted, is to move toward more tightly coordinating multiple participants in a disaster— including neighborhood Community Emergency Response Teams (CERTS), non-government organizations (NGO's), ordinary citizens, 911 dispatchers and Emergency Operations Centers.

Griss outlined a futuristic vision for a "next-generation emergency operations Center", (to be located at NASA or the NRP) that would include wifi, UAVs that would be deployed as surveyor scouts during disaster recovery efforts, a shared "Situational Awareness Hyperwall" to display real-time data during a disaster, and a delay-tolerant "smart-phone mesh", that would kick in when everyday telecommunications equipment and cellphone cells are down. Something people can do now, he said, is to register for Santa Clara County's Emergency Alerts and to sign up to join a neighborhood CERT.

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Disaster Lecture cont'd from page 14

Panelist Bob Dolci, Director of NASA Ames Center Operations (now retired), outlined the history and life-saving deployments nationwide of the NASA DART (Disaster Assistance Recovery Team), whose tasks include search and rescue, emergency communications and medical assistance, structural assessments, and deployment of their search and rescue dogs. The DART team, which trains at Ames at the collapsed structure and "debris pile" on the perimeter road, played a major role in disaster recovery following the 1989 Loma Prieta earthquake, the Oklahoma City bombing, Hurricane Katrina, and September 11th. The DART team is supported by NASA technologies such as remote sensors, astro-bionics (to read vital signs), air monitoring systems, UAVs, and micro-power impulse radar.

Tore Andre Nilsen, Founder and Vice President of Research and Innovation at IntraPoint, an NRP tenant who focuses on crisis management platforms and solutions, outlined IntraPoint's disaster resiliency mission and technologies, which are aimed at today's global marketplace. "The key to crisis management is to try and prevent or minimize the crisis and to handle it locally whenever possible," he said. One key challenge, from Nilsen's international perspective (IntraPoint is based in Norway), is "keeping control of information and maintaining (global) information security in a crisis."

IntraPoint's central mission, Nilsen said, is to devise resilient solutions for government agencies and global clients in the steel, oil and gas, airline and security industries. According to Nilsen, current research areas for IntraPoint include early warning signals, information security, rapid communications and developing global standards and best practices for the disaster resilience industry.

Panelist Paul Callahan, director of Homeland Security Programs at SRI International, focused on the theme of "doing more with less," and harnessing new technologies for Homeland Security. Callahan noted that the Department of Homeland Security is uniquely positioned for this purpose, as it gathers the science directorates of 18 different agencies under one DHS umbrella.

Robert J. Dolci, Director of NASA Ames Center Operations (now retired)

After the formal presentations by the five panelists, panel moderator Daniel Meer fielded questions from the audience during the Q&A. After a slow start, long lines formed at the microphones with questions from disaster amateurs and 'the pro's' about how to form a neighborhood CERT, about getting elementary and middle school students involved in disaster resilience early and about forging a tighter bond between military and civilian disaster entities. MC Meer is Assistant Director of the Superfund Division, Emergency Response and Preparedness, Environmental Protection Agency (EPA), Region 9.

Useful Websites:

For information about the NASA Research Park and past lectures, visit:
http://researchpark.arc.nasa.gov/

For information about the NDRC, call 800-941-0986 or email info@The NDRC.org

For information about Homeland Security Programs at SRI International:
http://www.sri.com/focus areas/defense.html

For information about CMU Silicon Valley:
http://www.cmu.edu/silicon-valley/

For information IntraPoint:
https://www.intrapoint.com/index

For information about EPA Pacific Southwest Region 9:
http://www.epa.gov/region9/disaster/emergency-disaster.html

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Moon Express Robotics Lab for Innovation (MERLIN) launch team (L-R): EJ Sabathia Jr., Krystine Thoroughman, Matt Carberry, Marco Chacin (Lead), Guy Chriqui, Mike Stewart, Cory McBride (not pictured: Brandon Plaster, Kevin Huang)

more dangerous than one can predict. Says Michael Vergalla, one of the company's Projects and Aerospace Engineers, "One of the key things [we're interested in] is Space Policy, and we plan to use the precedent laws of international waters. If you use your own personal resources to obtain something like oil, fish or minerals, they are yours—but you can't claim the land as your land."

MoonEx sees the Moon not just as a grandiose political statement or a fledgling symbol of faded Americana but also as an untapped resource with the ability to fundamentally drive innovation forward—namely the push for clean energy. "One of our biggest limitations for having clean energy is that there is only 30 kilograms of Helium-3 on Earth," Vergalla says. "The Moon has a lot of it, and that would be able to facilitate all of this research on clean energy. And suddenly, clean energy pockets start popping up everywhere because the resources have arrived."

Vergalla says that every last mineral we could ever need is available in mass up on the Moon, just waiting to be mined. "There is just no reason to destroy our planet," he explains. "We can figure out how to go get it elsewhere and have machines do it. We have the technology."

In order to win the Google Lunar X PRIZE (and a healthy dose of bragging rights), the rover has to land successfully, drive 500 meters and send back high-definition photos and video footage back to the MoonEx headquarters. There are challenges, as one should expect, in hurtling through the sky and getting to the Moon. Vergalla insists that the journey is the least of MoonEx's concerns. "Getting to the Moon is not as difficult as you may think—it's landing that's tricky. You need to know how high you are, you need to be able to look out for rocks, and you need to be able to do that all without someone driving."

Luckily, NASA has proven quite the passenger, serving as mentors from a distance and aiding Moon Express as it works toward its steadily nearing launch date. Because NASA had a bevy of projects underway before funding was cut and the lunar missions all but permanently cancelled, Moon Express has managed to find use of all the disregarded, half-projects that almost never were.

"[NASA] had a plan to go to the Moon, with a lot of projects and satellites to go and support that plan. They'd collected data and everything," Vergalla says, citing NASA's leftovers as a great starting point for MoonEx. "They have a lot of expertise; a lot of good standards," Vergalla adds. "They've been with us for a long time, and they'll review or comment on what we're doing, but they won't give us answers." Brandon agrees: "It's a helpful process, because at the same time Moon Express is learning, and the facilities that NASA has should be utilized." For example, MoonEx's partnership with NASA Ames, and aided by the Reimbursable Space Act Agreement, has given the company access to a fantastic test bed that NASA had built.

But even though Moon Express is aiming to help bring America back to the forefront of the space industry, it's the more immediate setting that speaks most loudly about not just where the project is going, but perhaps what it means.

Its headquarters are more than just a place to get started, more than just a setting close to NASA. Silicon Valley, the starting point of the tech boom, is now helping foster a new lens with which to view a previously government-specific project. And this defining symbol of old America—the Moon as a grand statement of hope, possibility and, perhaps, an overly utopian vision of a brighter immediate future—is now being revisited through the parameters of new America.

A new entrepreneurial and individualistically focused generation sees progress as being dependent on the works of the collective, no longer weighed down by vague notions of nationalism, competition and one-upmanship. Here, in the valley, the future involves everyone.

"History will show that Silicon Valley was the springboard for the privatization and industrialization of space necessary for the long-term perpetuation of the species," Richards foresees. "This is not an accident. The power and wealth of visionaries who transformed our mainframe world into the personal computing world are now working to transform and democratize the space frontier and open up its infinite wealth and opportunity to change the world."

Brandon sees it a similar way. "It's going to have an enormous impact on everybody. Even if there is no gain immediately, the concept of it happening is going to change everything." For him, the journey to Moon Express has been so vastly interconnected with a seemingly endless series of events that viewing the possibility of actually succeeding is now simply a matter of faith.

"What do you imagine it changing?" I ask.

"Possibility."

Edited by Michael Marlaire and printed with permission of Metro Newspapers of Silicon Valley. For full story see Silicon Valley Metro, http://www.metroactive.com/features/moon-express.html

Science and Technology Corporation (STC) Innovates at NASA Research Park

by STC Staff

STC's Science and Technology International Education Program

STC's Science and Technology International Education Program (STIEP, www.stiep.org) has been working with the nation's leading research facilities since 1993 to provide research opportunities for university students under mentor and manager Dr. Amar Choudry. In 2012 STIEP worked with NASA ARC's Adriana Cardenas and Dr. Phil Luna to bring ten students from four international universities in Mexico, Singapore and the Netherlands. Each student is interning under a NASA mentor for six months, while networking with regional university students/faculty, attending Taksha University Seminars, ARC Symposia and other local outreach events. STC is providing support to NASA Ames' Cubesat Fruit Flies Experiment (CFFE) to study the effects of microgravity on fruit flies flight patterns by (1) providing two STIEP students working under two Ames mentors from the Fluid Mechanics Lab and Space Biosciences Division on its development, and (2) by STC's sponsorship of the American Society for Gravitational Space Biology (ASGSB) and NanoRacks LLC in arranging the conduct of the Experiment aboard the ISS. Other students' research projects include orbital debris slot allocation and aerodynamic modeling. All students will complete their STIEP internships by presenting their research results at ARC, which are anticipated to be submitted for conference presentations and/or scientific Journal paper publishing.

STIEP 2012 students Inés Hernández, Eddie Urribe, José Manuel Cruz, José Javier Cavazos, and Eduardo Z. Flores from Universidad Autónoma de Nuevo León, Facultad de Ingeniería Mecánica y Eléctrica; Daniel Sánchez, Luis Otero, and Miguel Porras from Universidad Politécnica Metropolitana de Hidalgo; Danny Chen, National University of Singapore; and Alexander Haagsma, Technical University, Delft, with NASA Ames Center Director Dr. Pete Worden, Ames Chief Technologist Dr. John Hines, Astronaut Dr. Richard Linnehan, STC Executive Vice President for Operations Dr. Ashok Kaveeshwar, TakshaU Manager Ravi Deepak, and STIEP Program Manager Dr. Amar Choudry.

Science and Technology Corporation Sponsors First Journal of Small Satellites

STC, an innovative advanced technology support services provider to government, industry and academia since 1979, and A. Deepak Publishing (ADP), in cooperation with NSF-funded ASTREC, sponsored the first online peer-reviewed journal for the benefit of the international small satellite community, the Journal of Small Satellites (JoSS), www.jossonline.com. Launched January 2012, the JoSS premiere issue contained three scientific papers, a feature article on Prof. Robert (Bob) Twiggs, and other useful information including a Meetings Calendar, a Meetings Blog, and Jobs/internships portal. To maintain its high-quality standards of publishing peer-reviewed original research papers, JoSS is ably assisted by an international cadre of over 24 leading small-sat experts from academia, government and industry who have agreed to volunteer their valuable time and effort to submit, solicit and peer review the papers for JOSS.

Founding members include Editor-in-Chief Prof. Norman Fitz-Coy (Univ. of Florida), Associate Editor-in-Chiefs, Profs. Jordi Puig-Suari (CalPoly-San Luis Obispo), Marcello Romano (Naval Post-Graduate School), and William Edmonson (National Institute of Aerospace, VA), who are assisted by over 20 Technical Area Editors, including Chief Technologist John Hines (NASA ARC). They are supported by volunteer JoSS executive managing staff including Founding Publisher & Managing Editor (ME) Dr. Adarsh Deepak, Founding Associate ME Dr. Paul D Try (STC), and Founding Assistant ME Ravi Deepak (Taksha University). A monthly online JoSS Bulletin provides timely updates of international small-sat related news, including conference news and proceedings.

Taksha University offers Course in Yoga Therapy, Space Health, and Space Science & Technology

by Ravi Deepak
West Coast Manager, TakshaU

Taksha University (TU) has been offering Yoga Therapy classes/workshops in the Bay Area and in Virginia. In November 2011, TU Professor Dr. Dilip Sarkar, MD, FACS, CAP, presented a Yoga Therapy short-course (6-hours) at Fremont; and, in February 2012, TU Professor, Dr. Joan Vernikos, formerly Chief, NASA Health Sciences, a Stress Management and Yoga Therapy Seminar at NASA Research Park (NRP). Both Drs. Sarkar and Vernikos have been doing research on Yoga Therapy for Space Health, see papers at www.yogatherapyforspacehealth.com. In addition, TU's Small Satellite and Space Systems Institute (4SI) is continuing to present TU Short-Courses & TU Seminars at NRP and Silicon Valley, including the popular courses on Launch Vehicle Design and System's Engineering, Space Craft Design, Atmospheric Radiation Propagation, etc.

NASA HQ CTO Dr. Mason Peck (right) visited NRP Partner Scanadu, Inc. on April 17, 2012, and was briefed by Scanadu co-founder Misha David Chellam (middle) and Dan Sokol (left), Senior Engineer at Scanadu, Inc. in Bldg. 20, NASA Research Park.

Dr. Mason Peck (left), NASA CTO, being briefed by Scanadu CEO Dr. Walter De Brouwer (right) on April 17, 2012 at Scanadu.

The 2012 Conrad Awards were held at the Moffett Field Conference Center, NASA Research Park, Moffett Field, CA on March 31.

In Memoriam

Rich Davies

NRP partner Rich Davies, CEO, Western Disaster Center, passed away in his Scotts Valley home on March 26, 2012. Rich graduated from Northrop Institute of Technology in 1968 with a Bachelor's Degree and the California Institute of Technology with a Masters in 1972.

An aeronautical engineer, Rich founded the Western Disaster Center in 1999, his true passion. WDC, a nonprofit applied research center, was designed to save lives and reduce economic loss from natural, environmental, technological and man-made disasters. WDC accomplished these goals through applied research, the application of advanced computer, information and communication technologies, humanitarian projects, education and training and the development and the application of methods for public/private partnering.

Through WDC's work, Rich interacted with the FBI, SF Bay InfraGard, and Citizens Academy, of which he became an elected Board of Directors member. He spearheaded the building of a web presence for these organizations, and actively worked with HAZUS and the Earthquake Clearing House, aiding in the early detection of earthquakes and training for response teams.

Internationally-known 1st Special Response Group (1SRG), also found a home at WDC through Rich's efforts. Rich contributed to countless search efforts that brought people home alive or brought closure to families.

NRP Post

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