National Aeronautics and Space Administration, Ames Research Center, Moffett Field, CA
July 2004

Astrogram

Communication for the Information Technology Age

New questions and the return of Apollo

On 24 July 1969, at 3:51 p.m. PDT, the Apollo 11 capsule splashed down in the Pacific Ocean. NASA Ames people had designed and tested the capsule's

shape and protective heat shield and they cheered as the capsule safely delivered home its crew of three astronauts and its treasure of lunar rocks and soil.

Almost immediately, NASA Ames began exploring the legacy of the Apollo voyages back from the moon. Once the capsule was aboard the U.S.S. Hornet, the 46 pounds of lunar rocks were tightly sealed and sent to the Manned Spacecraft Center. There, scientists quickly evaluated the rocks for any biological hazards or chemical toxins and, satisfied there were no dangers, lifted the quarantine on the Apollo 11 crew. Then, samples were sealed and sent to NASA Ames for more detailed work on the scientific legacy of Apollo 11.

NASA Ames exobiologists found no evidence of lunar organisms nor of any of the known building blocks of life; notably, they found no evidence of water. For this work, NASA Ames had built an ultra-clean test chamber that pushed the state-of-the-art far beyond the best clean rooms yet constructed in Silicon Valley. NASA Ames geologists concluded that the returned samples had been shaped, then constantly reshaped, by mixing, fracturing and melting during high-speed meteoroid impacts. Still others measured the quantities of radioactive nuclides produced by the cosmic ray bombardment of the lunar surface. Others explored how different from Earth rocks were the chemical elements found in the lunar rocks, and announced the discovery of two new extraterrestrial minerals.

Over the next few years, as further Apollo voyages back from the moon returned different types of samples of lunar regolith, NASA Ames scientists refined their understanding of the geological history of the moon. Today, 35 years later, lunar scientists continue to pose challenging new questions to the old Apollo samples. Similarly, all those at NASA Ames--challenged by the vision to return to the moon, then on to Mars and beyond—ask new questions of the legacy of Apollo, both for the lessons to be learned and inspired by a perpetual sense of awe.

To mark the 35th anniversary of the first landing of humans on the moon, NASA produced this insignia, shown far left, based on the mission patch designed by the Apollo 11 crew. The NASA History Office also produced a data archive CD, titled 'Remembering Apollo 11,' the contents of which can be viewed at http: / / history.nasa.gov / ap11-35ann

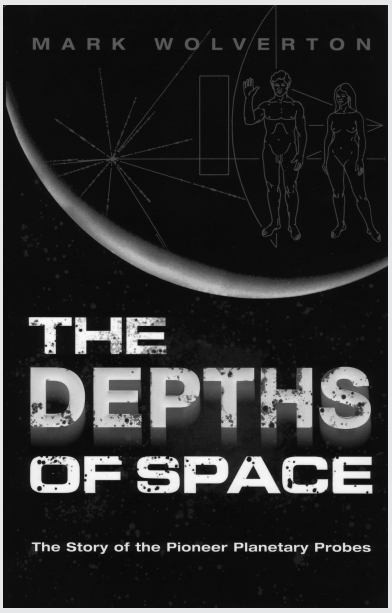
Life sciences glove box in the lunar receiving facility.

BY GLENN BUGOS

Pioneer history book signing set

Mark Wolverton will read from his book, 'The Depths of Space: The Story of the Pioneer Planetary Probes' on Thursday, Aug. 12, from 1:00 p.m. to 2:00 p.m. in the Eagle Room of Building 943, which houses the Ames Gift Shop and the Public Affairs Division and is located just outside the main gate, across from the Exploration Center. The event is sponsored by the NASA Ames History Office and is free and open to the public.

"The Pioneers were the first spacecraft to probe the secrets of the sun, the asteroid belt, the giant planets Jupiter and Saturn and the void beyond Pluto. They paved the way to deep space and made possible the later successes of Voyager and Galileo. The Pioneer project drove the perfection of the communications and telemetry systems and techniques for deep-space missions and inspired the development of new technologies used not only for other deep space probes but for Earth orbiting satellites. Pioneers 10 and 11, the first probes to Jupiter and Saturn, proved the concept of the gravity assist trajectory technique, indispensable for outer solar system missions," states Wolverton.



What's new at NASA Research Park?
-- see pages 8 and 9

NASA Ames' David Morrison wins Sagan Medal for 2004

The Division for Planetary Sciences (DPS) has awarded its prestigious 2004 Carl Sagan Medal to NASA Ames scientist David Morrison.

NASA photo by Tom Trower

David Morrison at a recent congratulatory celebration at Ames, held in recognition of his receiving the prestigious Sagan Medal for 2004.

The Sagan Medal is awarded annually by the DPS, the world's largest organization of planetary scientists, to an active member researcher for long-term excellence in communicating planetary science to the public. Morrison will receive the award at the organization's annual meeting to be held Nov. 8-12, 2004, in Louisville, Ky.

"We are honored by David's award," said Ames Center Director G. Scott Hubbard. "A doctoral student of Carl Sagan, David is that rare breed of scientist who combines research depth with the ability to popularize technical topics to non-scientists."

Morrison is the senior scientist for the NASA Astrobiology Institute (NAI), an international research consortium with central offices located at NASA Ames.

Throughout his distinguished science career - as an expert on solar system small bodies and an as investigator for numerous spacecraft missions, including Voyager and Galileo - Morrison has enthusiastically dedicated himself to sharing the excitement of planetary exploration with the public. For two decades, he generated a highly praised, widely used series of educational slide and information sets, featuring the best planetary images available. He also authored popular books about the Voyager flybys of Jupiter and Saturn.

Morrison has given hundreds of public lectures and appeared on numerous radio and television broadcasts, explaining planetary science in everyday language. As president of the Astronomical Society of the Pacific (ASP) in the early 1980s, Morrison devoted himself to encouraging and supporting its educational work. He also chaired the ASP Long-Term Aims Committee, which conceived goals and activities for public outreach that still are followed today.

Morrison is a co-author of one of the first textbooks in planetary science, 'The Planetary System.' He and several co-authors also are successors in the continuation and revision of the original George Abell series of astronomy textbooks. These books still reach students worldwide. For many college students, these texts have provided the basis for their only college science course.

In addition, Morrison has been instrumental in illuminating the scientific basis for potential hazards due to asteroid and comet impacts, through refereed papers and popular articles and books. He is responsible for creating NEO (near-earth objects) News, an e-mail newsletter with about 800 subscribers. He created and implemented the impact hazard Web site http://impact.arc.nasa.gov/. In his role as NAI senior scientist, Morrison coordinates educational activities for the institute, paying special attention to the content of undergraduate astrobiology courses in this emerging, interdisciplinary field.

The DPS, a division of the American Astronomical Society based in Washington, is the largest organization of professional planetary scientists in the world. More information about the annual DPS meeting and this year's prize-winners can be found on the DPS Web site at http://www.aas.org/~dps/dps.html. For more information about the NAI, visit http://nai.arc.nasa.gov

BY KATHLEEN BURTON

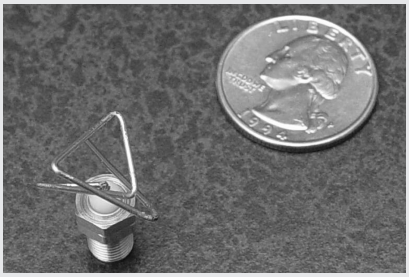
NASA Ames 'evolutionary' software automatically designs antenna

NASA artificial intelligence (AI) software – working on a network of personal computers at Ames – has designed a satellite antenna scheduled to orbit Earth in 2005.

The antenna, able to fit into a one-inch space (2.5 by 2.5 centimeters), can receive commands and send data to Earth from the Space Technology 5 (ST5) satellites. The three satellites – each no bigger than an average TV set – will help scientists study magnetic fields in Earth's magnetosphere. NASA Ames scientists have spent two years developing the evolutionary AI software that automatically designed the antenna.

"The AI software examined millions of potential antenna designs before settling on a final one," said project lead Jason Lohn, a scientist at Ames. "Through a process patterned after Darwin's 'survival of the fittest,' the strongest designs survive and the less capable do not."

The software started with random antenna designs and through the evolutionary process, refined them. The computer system took about 10 hours to complete the initial antenna design process. "We told the computer program what performance the antenna should have, and the computer simulated evolution, keeping the best antenna designs that approached what we asked for.



This antenna, left, fits into a one-inch space (2.5 by 2.5 centimeters) and can receive commands and send data to Earth from the Space Technology 5 (ST5) satellites.

Eventually, it zeroed in on something that met the desired specifications for the mission," Lohn said.

"Not only can the software work fast, but it can adapt existing designs quickly to meet changing mission requirements," he said. Following the first design of the ST5 satellite antenna, Ames scientists used the software to 're-invent' the antenna design in less than a month to meet new specifications – a very quick turn-around in the space hardware redesign process.

Scientists also can use the evolu-

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Spare the Air Today - tips to keep the air cleaner

A 'Spare the Air day' is any day between June 1 and Oct. 15 when the air quality in the Bay area is predicted to exceed the health standards set by the US EPA. The Bay Area Air Quality Management District makes these predictions on the afternoon of the day before the bad air day. The Ames Environmental Services Office then sends out an e-mail notification to all interested NASA Ames employees the same afternoon. The purpose of Spare the Air day is to give Bay area residents advance notice of a bad air day so that they can modify their daily routines to minimize air pollution. In doing so, the Spare the Air program hopes to prevent air quality from reaching unhealthy conditions in the Bay area.

High ozone levels are the primary problem on a Spare the Air day. Ozone in our atmosphere is formed through a photochemical reaction of volatile organic compounds and nitrogen oxides being acted upon by the heat and ultraviolet light of the sun. During high-pressure days in summer, when there are long hours of bright sunshine and little breeze, the prime conditions for ozone buildup occur. A large amount of the ozone built up during the daylight hours breaks down overnight. While ozone is being produced to some degree all the time, it only becomes a problem for the Bay area during very hot days.

Automotive exhaust is the major source for nitrogen oxides and volatile organics in the ozone equation, supplying over a third of both components to our air. You can have the most impact on a Spare the Air day by choosing to leave your car at home! Automobile exhaust accounts for the bulk of smog-promoting pollutants emitted in the Bay area. Walk, ride transit, join a carpool or try cycling to work. Review the local transit schedule on the Internet at www.transitinfo.org and the Ames shuttle service on the Web at http://arcweb/about-shuttle.html to determine a public transportation route to and from work. Consider joining a carpool or vanpool by calling RIDES at (800) 755-POOL.

If you do drive to work, rather than turning on your car again once you've arrived, consider these transportation options:

• When running errands for work, always 'trip-link' by planning your trips in advance and linking them together;

• Eliminate a car ride all together during lunch by packing a brown bag the night before or walking to the cafeteria. Cars driven during lunch contribute more to harmful ozone than emissions generated after work. When a car has been parked for at least one hour, it pollutes most in the first five miles until the catalytic converter heats up –- the average distance one might drive for lunch.

• If you must drive out during lunch hour, make it a group event by carpooling with as many people as will fit in your car; and

• While commuting on campus, if available use your code's electric GEM vehicle or ride one of the building bicycles.

After hours, consider implementing the following alternatives in your own home on a Spare the Air day:

• Set thermostats to turn on air conditioning at 78 degrees or above. Better yet, use fans instead of air conditioners to cool a room. Keep the drapes drawn in order to keep hot sun rays out and cool air in;

• Refuel vehicles after sundown. Despite filling station vapor recovery there is always some evaporation of volatile organics;

• Make sure to have your car tuned regularly. A well-tuned car runs better and pollutes less;

• Refrain from letting your car idle while waiting to pick up the kids after work! One-minute of idling uses up more gas than restarting the engine;

• Try trip-linking at home too, by planning errands in conjunction with family members or neighbors;

• Avoid using consumer products that come in aerosol spray cans;

• To start a BBQ, use a charcoal chimney starter rather than lighter fluid, since burning any fuel adds to air pollution;

• Refrain from using gasoline-powered garden and utility equipment;

• Avoid using petroleum-based weed killers, oil-based paints and varnishes as they volatilize into smog-formers; and

• Try using natural home cleaning products such as vinegar, borax and ammonia. Unlike the chemical-based cleaners sold in conventional supermarkets, none of these are toxic, nor do they produce air pollutants. For natural cleaning solution ideas, click on to the Internet site http://www.epa.gov/grtlakes/seahome/housewaste/src/alt2-2.htm#Glass. Non-toxic cleaning products also are available at local health food stores.

For more information, and to register for e-mail notification of a Spare the Air day, check the Bay Area Spare the Air Web site at www.sparetheair.org.

To sign up for the NASA Ames Spare the Air Day e-mail notification, contact Stacy St. Louis at e-mail sstlouis@mail.arc.nasa.gov.

Building a bridge of communication and understanding

Recently, the Equal Opportunity Programs Office (EOPO) hosted a panel that addressed the topic of civil rights within the gay and lesbian communities. This program was part of EOPO's year-long commemoration of the 40-year anniversary of the passage of the Civil Rights Act of 1964.

NASA photo by Tom Trower

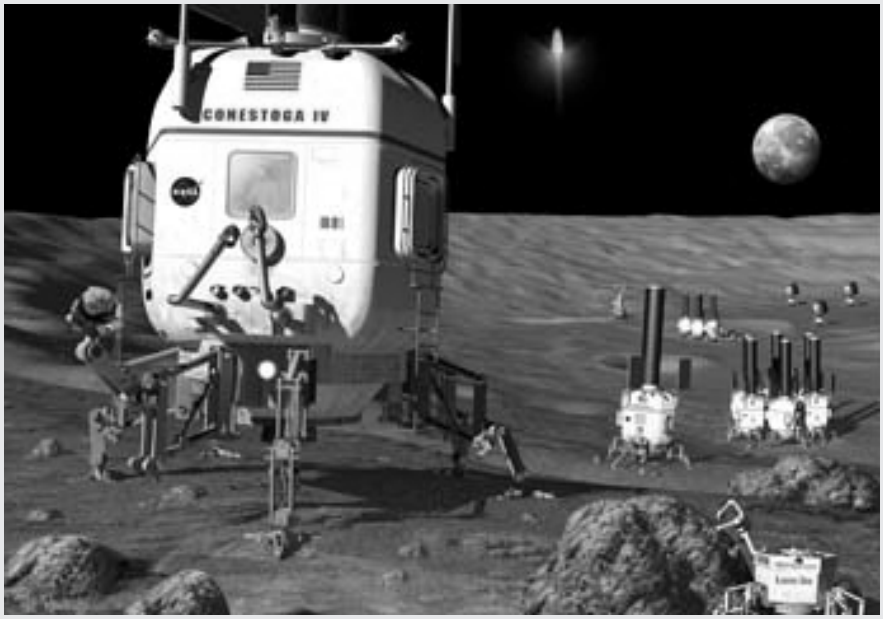
Kate Kendall and Rev. Michael Patrick Ellard, guest speakers on the recent civil rights discussion panel held at Ames.

The first panelist, Kate Kendell, is the executive director for the National Center for Lesbian Rights (NCLR). The NCLR is a progressive, feminist, multicultural, legal center devoted to advancing the rights and safety of lesbians and their families. Kendell is a frequent panelist and

continued on last page

NASA researchers consider mobile lunar base concepts

Landing mobile bases on the moon is an idea whose time has come, according to a NASA Ames researcher. Lunar bases that can travel on wheels, or even legs, will increase landing zone safety, provide equipment redundancy and improve the odds of making key discoveries by enabling crews to visit many lunar sites, according to Ames' Marc Cohen. He recently presented his concept in a research paper at the 2004 American Institute of Physics Forum in Albuquerque, N.M.



Artist's concept of the 'Habot' robotic habitat. Lunar bases that can travel on wheels, or even legs, will increase landing zone safety, provide equipment redundancy and improve the odds of making key discoveries by enabling crews to visit many lunar sites.

"If you set up a base at a fixed location on the moon, you are very limited in the sites of scientific interest that you can reach," Cohen said. "What it comes down to is if you're landing a habitat on legs and wheels, it doesn't take a lot more investment to make it highly mobile, provided you have enough energy resources that would enable it to travel great distance across the moon with or without the crew onboard," Cohen explained.

Linked mobile moon habitats might travel like treaded trains without tracks, or they could cross the moonscape in a line like Conestoga wagons crossing the American West. Walking or rolling habitats could dock to one another, or circle close together, when they reach a rest or research site, according to designs suggested by engineers over that last three decades, Cohen noted.

In contrast, a common scenario for exploration of the moon is that one or more astronauts would travel to a remote site in a pressurized or unpressurized 'rover.' An unpressurized rover trip would only last hours because the astronauts would be in spacesuits for the entire trek. A pressurized rover could sustain astronauts for a much longer trip, lasting days or weeks.

"If you are trying to conduct research with pressurized lunar vehicles, you run into many safety issues," Cohen said. To avoid life-threatening or other compromising situations that might occur with only one rover traveling to a remote place, a second rover might travel with the first.

"But what if the second rover runs into a problem, too - the same or a different problem? Well, that means a third rover," Cohen said. "So, why not make the entire base mobile, so that all the resources, reliability and redundancy of the lunar mission move with the excursion crew?" Cohen reasoned.

"In addition, there's risk if you land lots of immobile modules in one spot -- there is a danger you'll have a very long commute to a place of scientific interest, or can't get there. Then, you've wasted billions of dollars. Mobile habitats greatly reduce the risk of finding yourself on the wrong place on the moon," Cohen added.

Another advantage of mobile moon habitats is that they will be able to move out of the lunar landing zone, which could be hazardous. "The landing zone poses the problem that once a habitat lands on the moon, it is not prudent to land another vehicle within several kilometers because of safety concerns from ejecta in a normal landing, and in case of an explosive failure on impact," Cohen said.

Cohen suggests that mobile habitats must have robust radiation shielding for them to be practical. "Radiation protection remains a challenge and a potential showstopper, as it does for all lunar base and rover concepts," Cohen said. However, there are potential shielding concepts that may well be reasonable, according to Cohen.

Publication size images are available on the World Wide Web at: http://amesnews.arc.nasa.gov/releases/2004/lunarbase/lunarbase.html and http://amesnews.arc.nasa.gov/releases/2004/mobitat/mobitat.html

More information about space architecture is on the Internet at: http://www.spacearchitect.org

BY JOHN BLUCK

Evolutionary antenna

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tionary AI software to invent and create new structures, computer chips and even machines, according to Lohn. "We are now using the software to design tiny microscopic machines, including gyroscopes, for spaceflight navigation," he ventured.

Four NASA Ames computer scientists wrote the AI evolutionary program that operates on 120 personal computers, which work as a team. The scientists wrote the AI software because it can create designs faster than a human being can do so.

"The software also may invent designs that no human designer would ever think of," Lohn asserted. In addition, the software can plan devices that are smaller, lighter, consume less power, are stronger and more robust among many other things – characteristics that spaceflight requires, according to Lohn.

Detailed information is on the Internet at: http://ic.arc.nasa.gov/projects/esg

Space Technology 5 satellite details are on the Internet at: http://nmp.jpl.nasa.gov/st5

Images and an on-line video are available on the World Wide Web at: http://amesnews.arc.nasa.gov/releases/2004/antenna/antenna.html

BY JOHN BLUCK

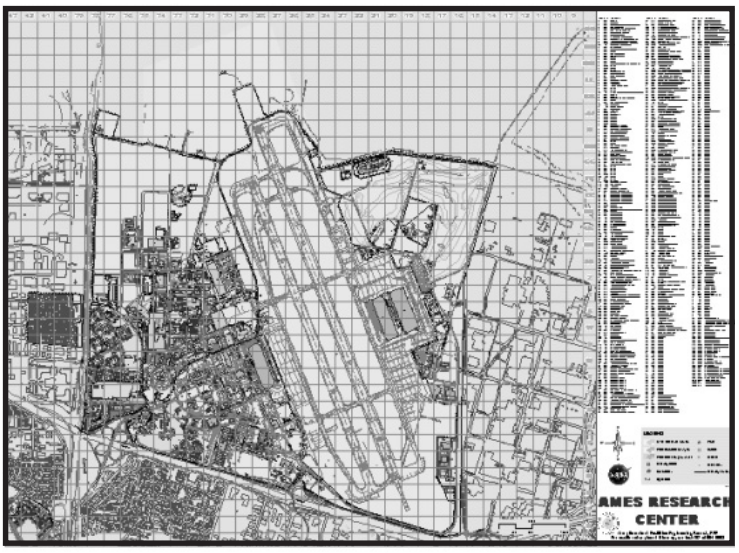
U.S. soldiers return to Moffett from Iraq

NASA photos by Tom Trower

American soldiers from the 341st MP Division are seen here returning from Iraq in June. They were welcomed by throngs of elated family members and friends.

Ames computerized database management system

You've seen them everywhere from the Ames Visitor Center, to the badge office, to the walls and desktops of many offices, but do you really know who they are? They are the Ames Geographic Information System Group or GIS for short. Their services are some of those provided by the Facilities Engineering Branch, Code FEF, and managed by personnel with DMJMH and N. Believe it or not, they are the folks that know who you are, where you sit, where your drinking water enters your building, what type and the number of trees are outside your office windows and the most direct route to McDonald's.



Computerized GIS map of Ames Research Center.

The Ames GIS is a computerized database management system used for the capture, storage, retrieval, analysis and display of spatial data. Unlike paper copies where what you see is what you get, GIS data is stored in a database and is displayed as a series of data layers to fit specific users needs. The GIS database houses data on nine underground utilities, floor plans, roads and runways, landscape, contours and spot elevations, aerial photos of all Moffett Field buildings and much more.

There are two main GIS interfaces for users to access real-time GIS data. Netmap is the GIS Web site available only to Ames personnel on the intranet and Zoom is a PC based interface that can be installed right on your desktop. Netmap is a user-friendly tool that can be used to find building and people locations and to view general basemap features. Using Netmap you can download a list of employees and building floor plans or you can view facility information such as room type, owner and square footage. The URL to access Netmap is 'ARCGIS.' Internet Explorer is the preferred browser. Zoom has all the capabilities of Netmap and much more. It is a PC based interface, where users can turn on or off layers of information and create plots up to 36" x 48". After a quick 10-minute demo, you will be ready to produce highly detailed customized maps. Zoom can be installed free of charge by calling the GIS group.

GIS produces maps covering all aspects of the database in various shapes and sizes. They also have the ability to create additional customized databases to store project specific data which falls outside of the present scope of their existing system. Stop by building N213, room 003 for a free copy of the wall poster Moffett Field color map (as shown), to meet the GIS staff and to learn how they can assist you with their many resources. The GIS group consists of Charlie Tonda, at ext. 4-5003; Yrene Guerrero, at ext. 4-1736; and Angela Ortega at ext. 4-1733.

Former Ames Center Director receives honorary degree

Cy Syvertson, former NASA Ames center director, fifth person from the right, recently celebrated with Ames retirees in Saratoga on the occasion of his honorary doctor's degree presented to him by the University of Minnesota.

Flynt departs from Ames

Ames Center Director G. Scott Hubbard is seen here (left) presenting Center Deputy Director G. Allen Flynt with a framed photo memento of Ames during a special 'going away' gathering held for Flynt in July. Flynt is returning to NASA's Johnson Space Center to lead the Mission Operations Directorate.

NASA photos by Dominic Hart

Upcoming colloquiums

Mark your calendars for two upcoming director's colloquiums.

On Tuesday, Aug. 10, Dr. Larry Smarr will speak at the first colloquium. He is the Harry E. Gruber Professor, Department of Computer Science and Engineering, UCSD; the director, California Institute for Telecommunications and Information Technology; and the chair of the NASA Earth System Science and Applications Advisory Committee.

The title of his talk is 'The OptIPuter: Using Optical Networks to Create a Planetary-Scale Supercomputer.'

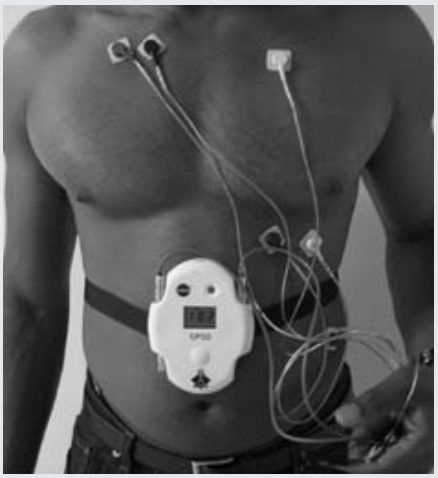
On Thursday, Aug. 19, Dr. Michael Anastasio, director of Lawrence Livermore National Laboratory, will speak.

Each colloquium is planned for 2:00 p.m. in the main auditorium. A confirming centerwide announcement will be sent for each colloquium.

All staff are cordially invited to attend.

NASA device monitors health of scientists and explorers

A lightweight, portable device developed by NASA Ames scientists is enabling physicians to monitor the health and safety of explorers in remote locations on Earth. The deviceeventually may be used in space to monitor astronauts during space travel.



The wireless LifeGuard system used to monitor the vital signs of explorers working in remote locations.

The wireless LifeGuard system watched over the vital signs of several expedition members who sampled soils and water from the world's highest alpine lake, nearly 20,000 feet up the Licancabur volcano, on the border between Chile and Bolivia, late last year.

"Having the team wearing these LifeGuard systems added an element of safety in this extreme environment," said expedition leader Nathalie Cabrol of Ames. The system allows real-time monitoring of vital parameters such as heart rate, blood pressure, electrocardiogram (EKG), breathing rate and temperature. It also can measure human movements in three dimensions.

The LifeGuard units sent real-time vital signs from subjects at the volcano to scientists at NASA Ames by satellite. This demonstrated the monitor's potential to work in an extreme environment. The test demonstrated the enhanced ability for doctors to practice telemedicine over long distances on Earth or potentially in space.

"More recently, we did experiments aboard NASA's KC-135 aircraft that flies big, rollercoaster-like maneuvers to create short periods of weightlessness," said Dr. Gregory Kovacs of Stanford University.

"During the KC-135 flights, we explored the body's vital signs' response to changing gravitational forces, and we transmitted the wireless data from the subject to another location in the plane. The experiments were quite successful," Kovacs added.

"The data logger part of the system that collects data from body sensors is about the size of your palm and weighs about 166 grams (six ounces)," said Carsten Mundt, an engineer who is developing LifeGuard at Ames. "The sensors we use are quite easy to apply and comfortable to wear," Mundt said.

The LifeGuard's button sensors stick to the skin to take EKG and breathing rate. The device uses an arm cuff to measure blood pressure. The data logger connects to a sensor clipped or wrapped on an index finger to measure oxygen in the blood and pulse rate. The system's sensors connect to the LifeGuard by wires. LifeGuard's data logger has a transmitter that radios collected data to a base station computer. The data logger has sensors that measure astronaut movements in three dimensions.

"LifeGuard also could be used by physicians on Earth, since the system could be put on a patient very quickly and transmit vital signs during transfer to the hospital," Mundt said. "When the patient comes in, the doctor would already know the patient's status," Mundt added.

"The system can be worn by firefighters and hazardous material workers to monitor their health during activities," Mundt said. "It could even be worn by patients at home," he added. Home uses could include diagnosing sleep disorders, heart disease or unsteady gait in the elderly.

The NASA team working on the LifeGuard system has been developing physiological monitors for the past decade. The astrobionics team at NASA began work on LifeGuard in October 2002 and is collaborating with the National Center for Space Biological Technologies at Stanford University. For more information about LifeGuard on the Internet, visit http://LifeGuard.stanford.edu. For information about NASA and agency programs on the Internet, visit http://www.nasa.gov. For images related to LifeGuard, visit the Web at http://amesnews.arc.nasa.gov/releases/2004/lifeguard/lifeguard.html.

BY JOHN BLUCK

Local school kids learn about rockets

Launching rockets is a common activity for the kids who attend NASA Club at Edison McNair Academy in East Palo Alto, California. The kids bought the model rockets using NASA dollars, which they earned by answering questions about space, Mars, robotics and rockets. Advanced students built their rockets at home while the new kids to the program received help during NASA Club hours.

NASA Club kids, from Edison McNair Academy in East Palo Alto, launch their rockets.

Reaching out to under-privileged kids and involving them in engineering and science activities is the goal of NASA Club. NASA Club, formerly known as Rocket Club, has been active for 12 years because of the dedication of Mark Leon, deputy division chief of education at Ames. This year Marcella Grant and Jennifer Johnson, interns of the Robotics Education Project, managed NASA Club and they decided to change the name to reflect the addition of new activities. The students had the opportunity to take a field trip to the FIRST (For Inspiration and Recognition of Science and Technology) competition being held at San Jose State University. There was a replica clone of the MER that the kids were able to inspect closely. With the use of Terry Grant's Botball lego equipment we were able to introduce the kids to programming and the competition requirements of Botball.

The impact that NASA Club has on these kids is not easily tracked, but if one student who otherwise would not have taken four years of math and science in high school goes on to an engineering college and gets a job in the field, then NASA Club has served its purpose.

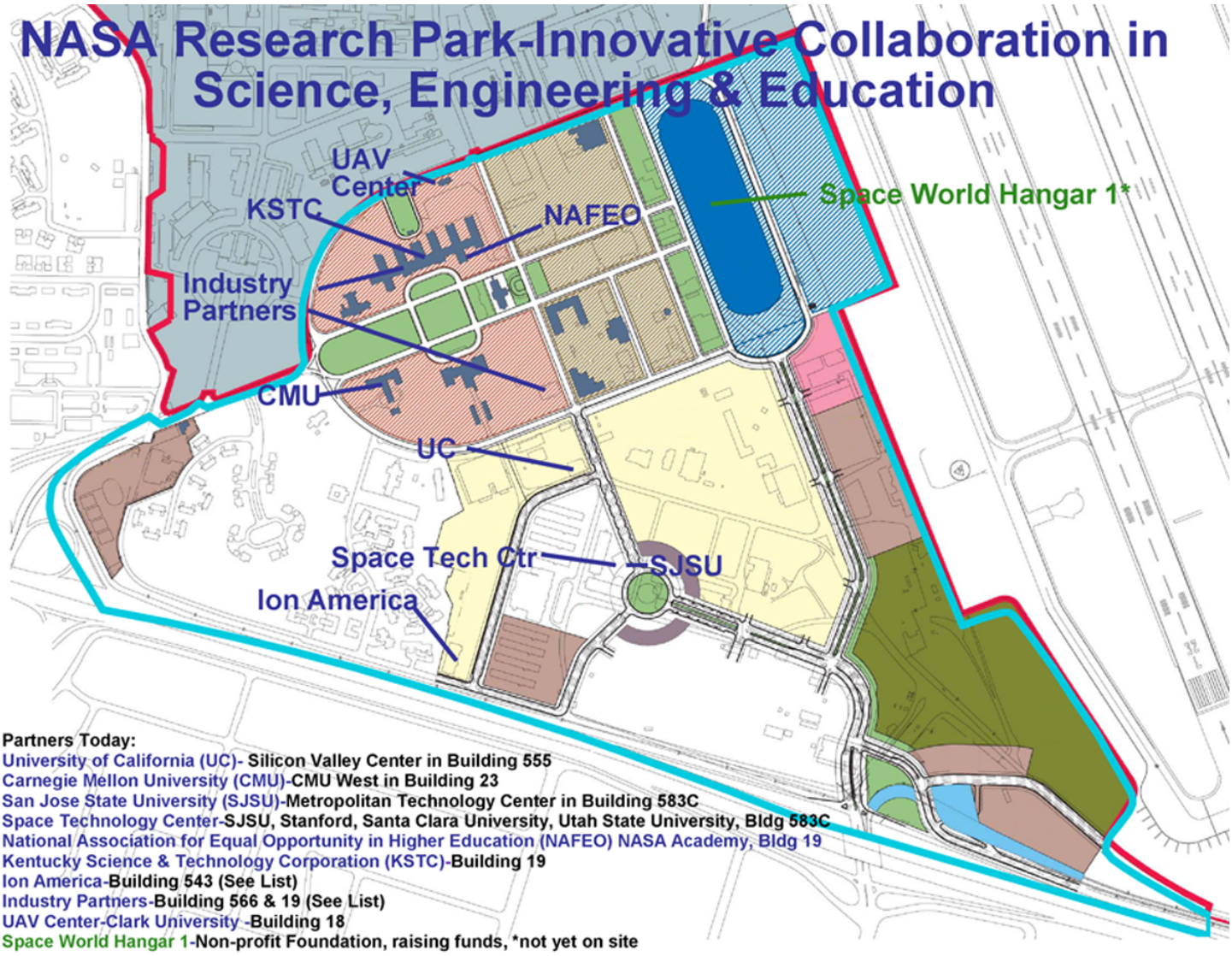
BY JENNIFER JOHNSON

NASA Research Park making strides

Over the last five years, the NASA Ames vision to create the NASA Research Park (NRP), a national campus for scientific research, technological development and education collaboration, has shifted from concept to reality. Though still in the early stages of development, this 213-acre site now houses key NASA partners, including Carnegie Mellon University, San Jose State University, and the University of California at Santa Cruz, as well as various industry partners.

The NASA Research Park is managed by the recently reorganized NASA Research Park Division of the External Relations & Development Directorate, which also encompasses the History Office, the Technology Partnerships Division and Public Affairs Division. The NRP Division manages the development, business operations and the real estate resources of the NASA Research Park.

In late 2003, Mejghan Haider was named chief of the NASA Research Park Division. Previously an account manager within the former NRP Development Office, Haider negotiated and managed numerous agreements, including the first long-term lease with Carnegie Mellon University.



NASA Research Park and its partners

NRP Partnerships

After the Record of Decision for the EIS in 2002, NASA was given a green light to move forward with the development of the NRP. Since that time, NASA has been working closely with a number of strategic planning partners to advance the goals of the NRP. These partners include:

- University of California, Santa Cruz (UCSC)
- Carnegie Mellon University (CMU)
- San Jose State University (SJSU)
- Foothill and De Anza Community College District (FHDA)
- National Center for Women in Science and Technology, Engineering, and Mathematics
- National Association for

EUL Tenant	Area of Research
AITek, Inc.	Human-Machine Interface Technology
ARACOR	Scanning Systems for DHS
Aramira	Distributed Computing Among Mobile Platforms
Changene	Bone Density Growth
Conceptlabs	Technology Assessment / Engineering Services / IT
Defouw Engineering	Biomedical Devices
Digiproofs	Digital Imaging
DMJM Technology	Architectural and Engineering Services
e4Xchange	Mental Health Scenario Planning / CDC SBIR I
IISC	Neuro Networks / Date Packet Transmission Optimization
Intelligence Inference Systems, Inc.	Soft Computing and Intelligent Mechanisms
ION America	Fuel Cell
Jivalti	Research on Grid / Jivalti Library
Kentucky Science and Technology Corporation	IT Research Projects
Omnivergent Communication Corp.	Next Generation Network
Photozig, Inc.	Integrated Digital Photo Technology
Puresense Environmental, Inc.	Environmental Health Monitoring
Tibion	Muscle Augementation Technology
Source: NASA Ames NASA Research Park Division	

Enhanced Use Leasing Program, NASA Research Park, 2003 and 2004 Year-to-Date

Equal Opportunity in Higher Education (NAFEO)
- California Air and Space Educational Foundation (for the development of Space World Hangar One)
- Industry Partners Represented by Small, High-Tech Business

Additional industry partnerships between NASA Ames and local technology companies are on the horizon, as is a development partnership to build and operate a new conference and education center. Meanwhile, the academic partners have made significant strides in the last year toward establishing a permanent presence in the NRP.

High-dependability computing consortium with 25 high tech companies

CMU has leased Buildings 23 and 24 located within the Shenandoah Plaza historic district of the NRP. Moreover, CMU has rehabilitated these historic structures to house classrooms, research facilities and the high-dependability computing program. CMU's West Coast campus opened in the NRP in 2003. With academic programs in software engineering, e-business and learning sciences, as well as research programs focused on high-dependability computing, the West Coast campus establishes Carnegie Mellon's presence in Silicon Valley. CMU is currently investigating further expansion into additional buildings.

Partnership with UC

The University of California system (UC), led by its Santa Cruz campus (UCSC), has selected the NRP as the location for its 'Silicon Valley Center.' The new UC center will provide opportunities for students and researchers to work side-by-side with NASA Ames scientists on multidisciplinary and collaborative projects. Currently, UCSC occupies one building within the NRP. At its completion, however, the Silicon Valley Center will encompass approximately 600,000 square feet of classroom and office space. Currently, UCSC is discussing plans with NASA to build a Bio-Info-Nano R&D Convergence Lab and classrooms by the end of 2008.

Partnership with CSU

The California State University system, led by San Jose State University, has also partnered with NASA Ames. The Metropolitan Technology Center, already located in the NRP, represents the first phase of this organization's presence in the NRP. Upon full build-out, the California State University San Jose facility will encompass approximately 200,000 square feet of classroom and office space.

The Space Technology Center led by SJSU is an on-site partnership with Stanford University, Santa Clara University, Utah State University, California Polytechnic University, and Aerospace Corporation to conduct micro – satellite development and education for the space program.

Enhanced Use Leasing Program

NASA Ames is using a new authority from Congress and NASA Headquarters known as enhanced use leasing (EUL) that benefits the NRP by allowing the center to charge full-market rates and retain the funds, rather than simply recovering costs. NASA Ames is one of only two test sites in NASA to have EUL authority. With EUL, the NRP can generate revenue for Ames to use for its maintenance. To date, the NRP has signed approximately 20 leases with industry partners for space, primarily within the NRP. The growing list of NRP leases includes institutions and companies that cover a broad spectrum, including biotechnology, environmental technology, nanotechnology, communications and homeland security.

More to Come

Additional information about the NRP and its partners will be featured in future editions of the Astrogram.

Planned international research lab to honor NASA scientist

A new research lab designed to fight tropical diseases in Africa will be named to honor the memory and career accomplishments of former NASA Ames scientist Byron L. Wood according to Nigerian officials. Wood passed away recently (see Astrogram, March 2004, page 5).

Prince Philip C. Njemanze, M.D. and chairman of the International Institutes of Advanced Research and Training at the Chidicon Medical Center in Owerri, Nigeria, notified Ames personnel of plans to build the lab at that location and to name it after Wood to commemorate "the memory of our great friend, scientist and educator."

NASA Ames' Dr. Maurice Averner became aware of plans for the new lab in a recent letter from the prince. Recognition of this nature and import is extremely rare. Indeed, it is the first known case for an Ames -- or NASA – scientist, according to officials.

"Byron Wood was deeply committed to improving the lives of people throughout the world, and he conducted himself in a manner that will long be remembered by all," said Bonnie Dalton, NASA Ames' deputy director for astrobiology and space research. "His work truly represented the opening words of our NASA vision 'to improve life here.' We are extremely proud of what Byron -- and NASA -- accomplished, and of this important and heartfelt international honor."

The current proposal calls for the Byron Wood Remote Sensing and Geographic Information System (RS/GIS) Technologies Laboratory to be established through the Tropical Disease Research Program, an independent global program of scientific collaboration. The program, established in 1975, is co-sponsored by the United Nations Children's Fund (UNICEF), the United Nations Development Program (UNDP), the World Bank and the World Health Organization (WHO).

The program is designed to coordinate, support and influence global efforts to combat a portfolio of major diseases, prevalent in third world countries among the poor and disadvantaged. The mission of the new laboratory will be to promote the use of remote sensing and geographic information system technologies in public policy, with particular interest in health. The health target goal will be to achieve a reduction in infant and child mortality in sub-Saharan Africa through the application of RS/GIS risk-analysis-based water management.

This commemoration is a result of the extensive work Wood initiated and directed in epidemiological tracking of disease vectors, particularly in countries such as Nigeria, under the NASA Global Monitoring and Human Health (GMHH) program established by NASA in 1985.

Later, this program established the NASA Ames-based Center for Health Applications of Aerospace-Related Technologies (CHAART), directed by Wood, as part of the Fundamental Space Biology Program. The initial goal of the GMHH program, subsequently achieved, was to demonstrate that remote sensing and field data could be used to predict the time and place of malaria epidemics. This predictive capability could then be used to control the spread of malaria, a global disease of enormous social harm.

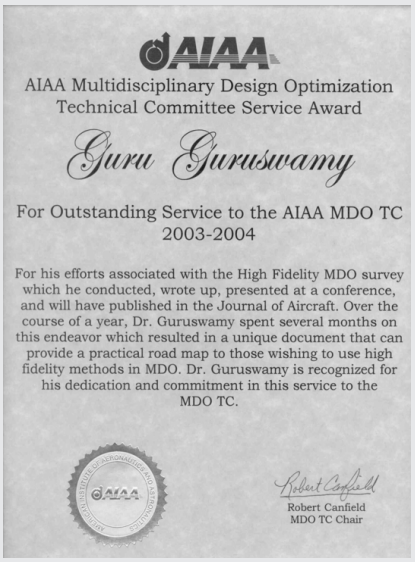
Initial work focused on the dynamics of the western malaria mosquito in California rice fields. The landscape approach developed in California was subsequently extended to a malaria-endemic area in southern Chiapas, Mexico, and then to other countries.

CHAART's extended role was to support the science, application, education and technology goals and objectives of the Agency.

Wood was a member of the Earth Sciences Division of NASA Ames' Astrobiology and Space Research Directorate.

AIAA honors Ames' Guruswamy

Guru Guruswamy


AIAA

AIAA Multidisciplinary Design Optimization Technical Committee Service Award

Guru Guruswamy

For Outstanding Service to the AIAA MDO TC 2003-2004

For his efforts associated with the High Fidelity MDO survey which he conducted, wrote up, presented at a conference, and will have published in the Journal of Aircraft. Over the course of a year, Dr. Guruswamy spent several months on this endeavor which resulted in a unique document that can provide a practical road map to those wishing to use high fidelity methods in MDO. Dr. Guruswamy is recognized for his dedication and commitment in this service to the MDO TC.

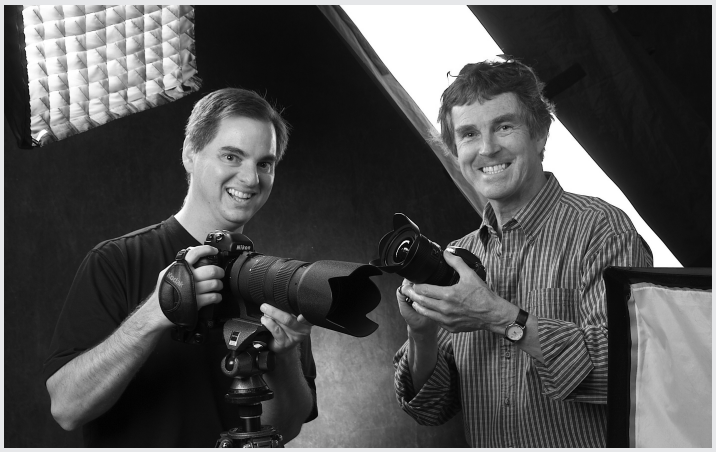
Robert Canfield
MDO TC Chair

In April, during the 45th AIAA/ASME/ASCE/AHS/ASC Structural Dynamics and Material conference held at Palm Springs, Ames' Guru Guruswamy was presented with the 'AIAA Multidisciplinary Design Optimization Technical Committee Service Award.'

The award was determined by a 39-member technical committee that includes national and international experts in multidisciplinary design analysis and optimization field from aerospace industry, government labs and academia.

NASA Ames Contractor Council (ACC) Awards set

The annual ACC Excellence Awards are scheduled for Nov. 9. Now is the time to consider your nominations for a deserving team or individual.



NASA photo by John Schultz

NASA Planners Collaborative Photographer Dominic Hart (left) and NASA photographer Tom Trower.

Nominations are submitted to the ACC by your contract site manager with the concurrence of the NASA COTR.

This year, recipients will be featured in a special photographic presentation. Between now and Sept. 30, you have the opportunity to make sure all of your potential recipients are photographed in anticipation of the award's event.

Be sure to send a digital photo along with your nominations. You can contact Ames' Photographic Services to schedule a photographer to photograph your potential recipients by submitting a Service Request to Code EX.

There will be a centerwide e-mail announcement later in the summer providing full instructions on the nomination process.

For more information about the NASA Ames Contractor Council, visit the Internet Web site at: http://contractorcouncil.arc.nasa.gov/about.html

The council is co-chaired by Deputy Center Director Stan Newberry, and the contractor co-chair Paul Kutler from Computer Sciences Corporation. The vice co-chair is Linda McCahon (Infonetic) and the secretary / treasurer is Chris Johnson of PAI. This year's ACC Excellence Awards chair is Doreen Cohen of Planners Collaborative.

International travel has changed

'Progress' is just another word for change. Most of those who have traveled abroad on business in the last couple of months have noticed a difference in the travel approval process. Well, that's because the process is now different.

The old process was determined to be inadequate in a number of ways (accounting, accountability and traveler safety, among other things), so it was re-engineered in March of this year to more stringently adhere to NASA policy and federal regulations. That was an agencywide, policy-and-procedure shift that required a number of changes at the center level.

One of the fundamental changes that need to take place is at the traveler and travel order preparer levels. This re-engineered process takes more time than you may be used to, so you are going to have to get started earlier than ever before. Most of Ames' international travel is 'non-program travel,' which covers things like conference attendance, so that's the one addressed here.

NASA Headquarters wants complete non-program travel packets submitted to them a full four weeks prior to the proposed departure date. The advance notice form (ANF) should be submitted as soon as possible, preferably well before the rest of the packet. That means you, the traveler, should be seeking help from your travel order preparer and associate gatekeeper at about the six-week mark. If it is cost-sharing reimbursable travel (the inviting entity will pay for some or all of your travel costs), you will need to begin about eight weeks out to allow for the extra paperwork, etc.

If you have questions about Ames' international travel process, then visit our Web site at http://travel.arc.nasa.gov. You can contact the associate gatekeeper for your directorate (see http://travel.arc.nasa.gov/gatekeepers.html), or e-mail at Gatekeeper@mail.arc.nasa.gov. You can also call the Ames principal gatekeeper staff during normal business hours at ext. 4-1955.

The experience of a lifetime

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everything for our respective week in the field. To quote my supervisor Richard Alena:

"The interns provided design validation by performing extensive testing of the wireless LAN before the field season. They provided system and network administration in conjunction with NASA engineers for the operational readiness test and the MDRS field simulations. They initiated new capability in PDA-based wireless LAN monitoring and configuration that significantly extended our real-time monitoring and recovery capability. Without their help, we could not have accomplished our ambitious goals!"

Being a member of this project has allowed me to learn countless new things, to appear on the local news, travel to a remote and beautiful part of the country and make new friends that I will remember forever. I have since been offered a chance to extend my internship for an additional year, and am looking forward to continuing work on the mobile agents project and perhaps other exciting projects that are in the works right now.

BY ED WALKER

The experience of a lifetime

When you think of an internship, pouring coffee, answering phones and refilling the copy machine immediately come to mind. My experience at NASA Ames has been the complete opposite. I have been extremely fortunate to have a supervisor who believes in preparing interns for the real world and molding them into future employees. With a background in computer science and computer networking, I couldn't have asked for a better position than in the Intelligent Mobile Technologies Lab under Richard Alena. While hoping just to get hands-on experience with routers and servers, I was bombarded with exposure to all kinds of new technologies, including one of the most exciting areas of space exploration research going on today.

Ed Walker pictured outside the hab at the Mars Desert Research Station (MDRS) in Hanksville, Utah.

As a member of the mobile agents team, I had the opportunity to travel to the Mars Desert Research Station (MDRS) in Hanksville, Utah, to support crew number 29. The MDRS is a mock-up of a lander module placed out in the desert as a Mars analog environment. The Mars Society provides the MDRS to researchers for testing new systems and solving potential challenges for future Mars explorers. The mobile agents team is a group of such researchers from various NASA centers and universities around the world. The project began as an afterthought to the Apollo 11 mission where astronauts exploring the moon were in continual contact with mission control back on Earth. During a mission to Mars, the crew will not have the luxury of instant communication to Earth, so a new model for communications, mission planning and data gathering needs to be devised.

The mobile agent's model replaces mission control with personal agent software running on a laptop computer mounted in the astronaut backpack. These agents monitor everything on the astronauts from their current location to their blood oxygen content and report back to the habitat lander module. The agents also enable the astronaut to command a rover, send pictures from a digital camera back to Earth and record detailed notes of interesting geological samples they encounter, all by issuing voice commands in a natural dialog. An integral part of this new model is the wireless network communications link.

Communications between the astronauts, to their rover, and back to their habitat are all done over a wireless network very similar to the one in your local Starbucks. Over the past year, I have spent a lot of time learning about wireless technologies and how to operate the system in use for mobile agents. One of my primary responsibilities at MDRS was to assist with setup of the networking components and optimization of the wireless links to ensure everything would run smoothly. During crew number 29's rotation lasting two weeks, all of our wireless links were solid and dependable over a distance of almost five miles. The rover and astronauts pushed the distances that they traveled to the very edge of network coverage and because the network remained so stable, the team was able to meet and exceed their goals for field-testing the mobile agents system in a Mars-like environment.

In order for the field test to be such a success, there were a million things that needed to be taken care of. Some of my responsibilities as an intern were to assist with benchmarks and performance tests of the wireless network in the Ames parking lot. We spent a lot of time perfecting the set up to approximate the performance we could expect when the system was set up out in the desert. I set up a base station, repeaters, and our wireless-enabled ATV using laptops and PDAs to monitor the network and take performance measurements. In order to make the transition from testing at Ames to real operations in the field, I developed a completely redesigned network structure for the lab, and was responsible for making sure it remained stable and functional.

By far the most enjoyable task I was assigned was the design and fabrication work on the astronaut backpacks. The suit and pack used last year in the field were to be redesigned to accommodate new laptop computers, and the new pack frame we obtained from Johnson Space Center needed to be modified to fit our needs. I ended up doing a significant portion of the fabrication and wiring on the main astronaut backpack used in the field, and as a result I took the lead role in suiting up 'Astro2' as well as configuration of her pack. We discovered that having spare batteries to run the astronaut packs was not enough. The computers had to keep running while we changed batteries, which meant devising a way to hot-swap them. Between two interns, we had to be on top of

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Personnel actions, payroll systems to become automated

Another big change is coming for NASA and Ames Research Center. On Aug. 8, the agency is switching to a secure, Web-based system that will automate the processing of personnel actions and payroll.

Most Ames employees will hardly notice the transition. The center will continue to use WebTADS to collect time and attendance data, and employees will receive their EFT checks as usual. Ames' human resources and payroll offices will remain staffed.

However, the new system will mean a few changes that NASA employees should know about.

Leave and Earnings Statements

• The Leave and Earnings Statements (LES) will be in a different format. Details about the changes will be sent to NASA employees with their LES in late July and early August;

• Future LES will no longer be delivered at Ames. Instead, they will be sent to where employees' annual W-2s are mailed. Employees can change their mailing address through Employee Express; and

• Employees will receive two W-2s for 2004 – one from the current personnel/payroll system and one from the new one.

Employee Express

NASA Headquarters has expressed the intention of making the use of Employee Express mandatory except in cases of hardship or difficulty. Ames strongly recommends that all NASA employees use Employee Express to make changes to payroll and benefits information as part of the agency's move away from paper forms.

Information about Employee Express is available on the Web at: www.employeeexpress.gov and at lunchtime demonstrations at the Mega Bites Café (Ames cafeteria) held on the third Wednesday of each month through November. A tutorial is available on the center's Human Resources Web site: http://hr.arc.nasa.gov.

The new personnel/payroll system

NASA currently uses its own system to process payroll and personnel actions. On Aug. 8, the agency – as part of a presidential mandate to consolidate federal payroll systems – will switch to the Federal Personnel/Payroll System (FPPS), operated by the Department of the Interior. FPPS already serves more than 30 federal agencies.

FPPS uses online forms, reducing the amount of duplicative, manual work that center personnel now must do with paper. It also lets managers use data more easily and securely.

In Ames' directorates, supervisors and their assistants who request personnel actions will use FPPS to enter requests on their computers and then forward them to HR. Center employees who request personnel actions will be offered training this fall before making the switch from paper forms to FPPS.

Reports will be available under the new system but will be in a different format. Instead of waiting for printouts, report users will get most reports themselves from the new system. Report users also will be offered training this fall.

Employees, personnel action requesters and report users should look for more information about FPPS and training in Astrogram, e-mails and other communications over the next few months.

The project to switch personnel and payroll systems is one of the e-government initiatives within the President's Management Agenda. The initiative, called ePayroll, is expected to achieve greater efficiency and contribute to cost savings throughout the government.

At Ames, the ePayroll team is headed by Janet Jarmann, project office manager for the Human Resources Division. Planning began in early 2003 and implementation started in September. Team members – including experts from Human Resources, Financial Management and Applied Information Technology divisions – are currently involved in testing the new system and developing reports, training and reference materials.

During implementation, Ames staff have been working with the Department of Interior FPPS staff to ensure that the transition goes smoothly. This working relationship has developed into a close collaboration that will benefit all Ames employees.

International Business Travel Planning

Who can help? Contact your associate gatekeeper!

Org Codes	Primary	Phone	Secondary	Phone
A/N	Leslie Jacob	4-5059	TBD	TBD
C/J	Jean Nozaki	4-5354	Gina Fox	4-4772
D	Meredith Moore	4-6975	TBD	TBD
DN	Patricia Gregory	4-2600	TBD	TBD
DV	Nicola Windmeuller	4-0501	TBD	TBD
E	Jacqueline Nelson	4-5223	Candy Carrick	4-0004
F/P	Merle Simbe	4-6315	Becky Brondos	4-1959
H	Mark Leon	4-6498	Nancy Case	4-0205
I/T	Shelley Marshall	4-2802	Maureen Weller	4-2422
Q	Joe Shields	4-0394	Patricia Beck	4-4231
S	Mary Howard	4-5095	Arlene Pineo	4-5913

You can contact the Ames principal gatekeeper staff during normal business hours at ext. 4-1955.

If you have questions about Ames' international travel process, check the Web site at http://travel.arc.nasa.gov or contact the associate gatekeeper for your directorate or e-mail at Gatekeeper@mail.arc.nasa.gov.

Events Calendar

Ames Amateur Radio Club, third Thursday of each month, 12 noon, N-T28 (across from N-255). POC: Michael Wright, KG6BFK, at ext. 4-6262.

Ames Ballroom Dance Club. Classes on Tuesdays. Beginning classes meet at 6:15 p.m. Higher-level class meets at 5:15 p.m. Held in Bldg. 944, the Rec. Center. POC: Helen Hwang, hwang@dm1.arc.nasa.gov, 4-1368.

Ames Bowling League, Palo Alto Bowl on Tuesday nights. Seeking full-time bowlers and substitutes. Questions to sign up: Mike Liu at ext. 4-1132.

Ames Child Care Center Board of Directors Mtg, every other Thursday (check Web site for meeting dates: http://accc.arc.nasa.gov), 12 noon to 1:30 p.m., N-210, Rm. 205. POC: Cheryl Quinn, ext 4-5793.

Ames Contractor Council Mtg, first Wednesday each month, 11 a.m., N-200, Comm. Rm. POC: Anita Fogtman, ext. 4-4432.

Ames Diabetics (AAD), 1st & 3rd Weds, 12 noon to 1 p.m., at Ames Mega Bites, Sun room. Support group discusses news affecting diabetics. POC: Bob Mohlenhoff, ext. 4-2523/e-mail at: bmohlenhoff@mail.arc.nasa.gov.

Ames Federal Employees Union (AFEU) Mtg, third Wednesday of ea. month, 12 p.m. to 1 p.m., Bldg. 221, Rm 104. Guests welcome. Info at: http://www.afeu.org. POC: Marianne Mosher, ext. 4-4055.

Ames Mac Support Group Mtg, third Tuesday of ea. month, 11:30 a.m.to 1 p.m., Bldg. N262, Rm 180. POC: Julie ext. 4-4694 or Tony ext. 4-0340.

Ames Model Aircraft Club, flying radio-controlled aircraft at the north end of Parsons Ave. on weekend mornings. POC: Mark Sumich, ext. 4-6193.

Ames Sailing Club Mtg, second Thursday of ea. month (Feb through Nov), from 11.30 a.m. -1 p.m. in the special events room in the Ames Visitor Center in N-223. All are welcome. POC: Jeff Smith, ext. 4-2586.

Environmental, Health and Safety Information Forum, first Thursday of each month, 8:30 a.m. to 9:30 a.m., Bldg. 221/Rm 155. URL: http://q.arc.nasa.gov/qe/events/EHSseries/ POC: Stacy St. Louis at ext. 4-6810.

The Hispanic Advisory Committee for Excellence HACE Mtg, first Thurs of month in N255 room 101C from 11:45 a.m. to 12:45 p.m. POC: Eric Kristich at ext. 4-5137 and Mark Leon at ext. 4-6498.

Jetstream Toastmasters, Mondays, 12 p.m. to 1 p.m., N-269/Rm.179. POC: Becky Brondos at ext. 4-1959, bbrondos@mail.arc.nasa.gov or Bob Hilton at ext. 4-1783, bhilton@mail.arc.nasa.gov.

Nat'l Association of Retired Federal Employees, (NARFE). Former and current federal employees. Your only contact with Congress. Join to protect your federal retirement. Chptr #50 meets the first Fri. of each month at HomeTown Buffet, 2670 El Camino (at Kiely), S. Clara, 11 a.m. lunch. POC Earl Keener (408) 241-4459 or NARFE 1-800-627-3394.

Native American Advisory Committee Mtg, fourth Tues each month, 12 noon to 1 p.m., Bldg. 19, Rm 1096. POC: Mike Liu at ext. 4-1132.

August Environmental Health and Safety Forum scheduled

Take a tour of Ames' on-site recycling facility. Learn about Ames' on-site recycling capabilities on Thursday, Aug. 5 from 8:30 a.m. - 9:30 a.m. Greg Bennett will give a walking tour of Ames' recycling facility.

Ames manages the entire recycling process on-site, from collecting the paper and aluminum to compacting these products into cubes for future sale. While touring the recycling yard, you will not only see the compacting machines in action, but will also learn about the detailed facts and figures of recycling on campus.

To take part in the tour, meet at the recycling yard at 8:30 a.m. - lot 127 at the front of building 245.

If you have questions or comments, call Stacy St. Louis at 4-6810.

Safety Data

	Civil Servants	Contractors
Not recordable first aid cases	2	4
Recordable no lost time cases	0	2
Lost time cases*	0	0
Restricted duty days	0	0
Lost work days	0	0

Data above is as of 06/30/04. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

Note: Under new OSHA rules, lost time is defined as lost work days, restricted duty or job transfer.

Ames Contractor Council

Golf Event

September 10, 2004

at The Santa Clara Golf & Tennis Club

Don't let the sun go down without one more round of fun!

Location: 5155 Stars & Stripes Dr. Santa Clara
Registration: noon ~ shot gun 1:00
Entry Fees: $80

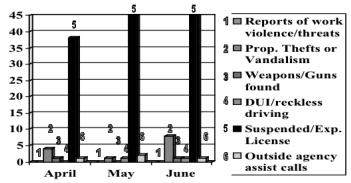
Everyone welcomed!
Team up with your friends or come and join a team.
Social hour/Hors d' oeuvres will be served at 5:30pm

Entry forms and contest information available online at
http://contractorcouncil.arc.nasa.gov
For additional information call 650-604-1291
Entry deadline August 27, 2004

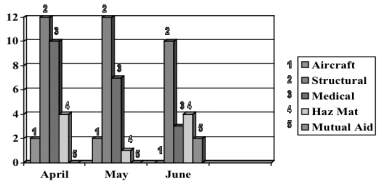
Protective Services monthly activity

A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire Protection Services units for the month of June 2004 is shown below.

Security/Law Enforcement Activity



Fire Protection Activity



Ames Classifieds

Ads for the next issue should be sent to *astrogram@mail.arc.nasa.gov* and must be resubmitted for each issue. Ads must involve personal needs or items; (no commercial/third-party ads) and will run on a space-available basis only. First-time ads are given priority. Ads must include home phone numbers; Ames extensions and email addresses will be accepted for carpool and lost and found ads only. Due to the volume of material received, we are unable to verify the accuracy of the statements made in the ads. Caveat emptor!

Housing

One bdrm apartment avail for sublet. $800/mo. Fully furnished w/large patio. Pool, jacuzzi and laundry available. Located less than 3 mls from Ames. Photos avail. upon request. Avail for sublet 9/1 - 12/31/04. Call (408) 480-4991.

Renovated 1,250 sq. ft. 3 bd/2 ba home for rent on San Jose/Campbell border. Newly finished hardwd floors, new wood blinds, new dual pane windows, large bkyard w/new lawn, covered patio, gardener and W/D. One car garage and one parking space. Water paid. 3-5 mls from H280 and 880, ValleyFair, Santana Row, downtown Campbell and Pruneyard. $1,800/mo. Avail. Aug. 1. Call (408) 515-8134.

South San Jose, 3bd/2ba, A/C, new windows, huge yard, close to shopping, schools. Very large kitchen, gardner included, gated RV parking on side, 2 car garage. Avail. now, $1,800 plus dep. Call (408) 977-3059.

Room for rent in San Mateo. Duplex, nice apartment plus area, W/D, garage, yard. $550 includes utils. Call (650) 357-8511.

Housing opportunity for long-term visitor: South Fremont, single family home, 2 bdrms/2 ba, 1,500 sq. ft, yard, furnished, very well maintained. Available from Oct. 1 for 12 months. Rent $1,800 per month. Call (510) 683 0879 or e-mail garbar1@comcast.net."

Room avail. Sept. 1 in eccentric, six-bdrm mansion in Mtn. View. Share smoke-free household w/five mature, friendly people. Looking for easygoing, considerate person. House features huge garden, outdrr entertaining area, basement w/loads of storage space. DSL and cable. Sorry, no pets. $650 per month, plus 1/6 utils. Alan (650) 776 9071 or e-mail gudgenby@hotmail.com

Shared housing room for rent in quiet Los Altos area near Ames. Share house w/prof'l males/females. Large house and yard w/gardener. W/D, N/S/pets, Available now. $575/mo plus dep. and 1/4 utils. Call (650) 964-2913 or (408) 243-7750.

Miscellaneous

Leather chair-recliner-rocker. Light Sky-grey color. Gd cond. $140. Call (650) 691-1239 (hm) or (408) 234-0025 (cell) Shirley.

Full size bed; mattress and box in very gd condition. Simple metal frame w/o a headboard. Have a pickup, we can help you get it home if you live with in a reasonable distance from Los Altos. $30. Charlie (650) 917-8672 after 7 p.m.

Wanted: Volkswagen Pop-Top Camper Van. Prefer late model such as Eurovan but will consider earlier Westfalia vans in gd condition. Jerry (650) 207-9725.

Couch for sale, good condition, 88-inch length, beige with floral pattern, $50. Call (650) 793-3305.

Antique maple dresser and vanity w/mirror, matched set, gd condition, needs some refinishing. $300 total, $150 each. Call (650) 793-3305.

Transportation

'67 Chevy El Camino, 283 engine, leather interior, new tires and rims. Good condition, $9,000 or B/O. Robert (650) 224-9727 or Charlie (650) 917-8672 after 7 p.m.

'84' Winnebago Chieftain 26' motorhome. Fully self contained. New fridge, sleeps 8, 57K orig. miles, runs great. $11,500 or B/O. Call (408) 267-1654.

'88 classic Acura Legend, 2 dr, sporty-elegant, leather int. moon roof, new tires, very clean, 156K mls. $2,500. Call (650) 328-4633.

'94 Cadillac STS Seville, fully loaded, new paint exc condition. 149K mls 99K on engine. $5,500 or B/O. Call (925) 846-5282.

'96 Acura Integra LS Coupe, 1.8 liter engine w/ automatic trans, A/C, pwr locks, windows, mirrors, pwr mnroof, alarm w/keyless entry, cd player, cruise control, ABS, dual airbags, folding rear seat. Call (408) 863-0835.

'98 Volvo V70 stationwagon, 150k hwy miles, silver, major service recently completed, well-maintained, exc. cond, 26 plus mpg hwy. Great family or commuting car. $8,750. Bob (831) 595-4115.

'98 Honda SuperHawk motorcycle for Sale. 1000cc, V-Twin; also known as a VTR1000. Color is red and is a sport-touring bike w/29K mls. Immaculate shape (garaged and covered). Several modifications, including after-market seat. Asking $4,500 or B/O. Kevin (408) 723-2115.

'99 Mazda B2500 pickup, 5 spd, ps, pb, ac, cc, tilt, air bags, abs, slw, am/fm/cd, bed liner, alloys and new tires, just like Ford Ranger. Registered until 7-2005, 98K mls, $5,800. Call (415) 377-7837.

'02 Honda Civic Si, 20K miles, 4-cylinder, 2.0L VTEC, 5-spd manual, front wheel drive, A/C, pwr steering, windows, locks. AM/FM stereo, cassette, compact disc player, dual front air bags, ABS 4-wheel, moon roof, alloy wheels. $15,500 or B/O. Call (408) 578-6316.

Car Pool

Seeking carpool from ACE Train-Great America to Ames: Arrive 7:26 a.m. (Train #03). Leave 4:44 p.m. (Train #04). Will consider carpool from Fremont to Ames. Gloria (650) 814-3508 or ext. 4-6357 or e-mail: gloria@lake.org

$ave gas - car pool over Hwy 17 to Ames. Flexible hours and arrangements. Barry ext. 4-1893.

Ames Retirees

Name	Code	Date
Patrick Lewis	JTN	5/02/03
Herbert J. Finger	FOI	5/23/03
John Humbert	JT	6/03/04
Bohdar K. Cmaylo	JTS	6/03/03
Paul T. Soderman	APS	6/03/04
Lyndell S. King	APS	6/30/04
Armando T. Buenaventura	FOO	6/30/04
Lee Mikula	IH	6/30/04
Carole Barrie	JTC	6/30/04
Jim Bonagofski	AF	7/31/04
Mary Buford Howard	S	7/31/04
Steven S. Wegener	SGE	7/31/04

Astrogram deadlines

Deadline:	*Publication:*
Aug 6	*Sept 2004*
Sept 3	*Oct 2004*

All Ames employees are invited to submit articles relating to Ames projects and activities for publication in the *Astrogram*. When submitting stories or ads for publication, submit your material, along with any questions, in MS word by e-mail to: astrogram@mail.arc.nasa.gov on or before the deadline.

Ames emergency announcements

To hear the centerwide status recording, call (650) 604-9999 for information announcements and emergency instructions for Ames employees. You can also listen to 1700 KHz AM radio for the same information.

Exchange Information

Information about products, services and opportunities provided to the employee and contractor community by the Ames Exchange Council. Visit the web site at: http://exchange.arc.nasa.gov

Beyond Galileo N-235 (8 a.m. to 2 p.m.) ext. 4-6873

Ask about NASA customized gifts for special occasions. Make your reservations for Chase Park

Mega Bites N-235 (6 a.m. to 2 p.m.) ext. 4-5969

See daily menu at: http://exchange.arc.nasa.gov

Visitor Center Gift Shop N-943 (10 a.m. to 4:00 p.m.) ext. 4-5412

NASA logo merchandise, souvenirs, toys, gifts and educational items.

Tickets, etc...(N-235, 8 a.m. to 2 p.m.) ext. 4-6873

Check web site for discounts to local attractions, http://exchange.arc.nasa.gov and click on tickets.

NASA Lodge (N-19) 603-7100

Open 7 days a week, 7:00 a.m. to 10 p.m. Rates from $40 - $50.

Vacation Opportunities

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba, balcony view, horseback riding, hiking, biking, golf, river rafting, tennis, ice skating, Equipped and more. Summer rates. Call (650) 968-4155, DBMcKellar@aol.com

South Lake Tahoe cottage w/wood fireplace, hot tub. Rates $50 to $130 per night. Call (650) 967-7659 or (650) 704-7732.

Vacation rental, Bass Lake, 4 mls south of Yosemite. 3bd/1.5 ba, TV, VCR, MW, frplc, BBQ, priv. boat dock. Sleeps 8. $1,050/wk. Call (559) 642-3600 or (650) 390-9668.

Big Sur vacation rental, secluded 4bd/2ba house in canyon setting. Fully eqpd kitchen. Access to priv. beach. Tub in patio gdn. Halfway between Carmel and Big Sur. $175/night for 2; $225 for 4 and $250 for more, plus $150 cleaning dep. Call (650) 328-4427.

Tahoe Donner vacation home, 2 bd/2ba. trees, deck, sun, fun. Access to pools, spa, golf, horseback riding, $280 wkend, $650 week. Call (408) 739-9134.

Pine Mountain Lake vacation home. Access to golf, tennis, lake, swimming, horseback riding, walk to beach. Three bedrooms/sleeps 10. $100/night. Call (408) 799-4052 or (831) 623-4054.

Incline Village: Forest Pines, Lake Tahoe condo, 3 bd/2ba, sleeps 8. Fireplace, TV/VCR/DVD, MW, W/D, jacuzzi, sauna, pool. Walk to Lake, close to ski areas. Visit Web page for pictures: http://www.ACruiseStore.com. $120/night low season, $155/night high season (holidays higher) plus $156 cleaning fee and 12% Nevada room tax. Charlie (650) 355-1873.

Disneyland area vacation rental home, 2 bd/1ba. Nearing completion completely remodeled w/ new furniture. Sleeps 6 (queen bed, bunk beds, sleeper sofa). Air hockey and football tables. Introductory rate $600/wk, once completed rate will be $1000/wk. Security deposit and $100 cleaning fee required. Call (925) 846-2781.

Ski Park City Utah, NASA Ski Week XIV, Feb 5 - 12, 2005. Space is limited. For more info, e-mail Steve at e-mail exnasa@sbcglobal.net or call (408) 432-0135.

Building bridges of communication

continued from page 3

lecturer on a broad range of subjects impacting the lives of lesbians and gay men. Kendell received her J.D. degree from the University of Utah College of Law in 1988. She became the first ever staff attorney for the American Civil Liberties Union of Utah and directly litigated many high-profile cases focusing on all aspects of civil liberties including reproductive rights, prisoners' rights, church / state conflicts, free speech and the rights of lesbians and gay men.

The second panelist, Rev. Michael Patrick Ellard, is the senior pastor of Spirit Connection Metropolitan Community Church, a church that has been working to support gay and lesbian rights since it was founded in 1970. Spirit Connection MCC is a part of the Universal Fellowship of Metropolitan Community Churches, a Christian denomination founded in Los Angeles in 1968 to provide gay and lesbian people with a safe and supportive place to worship. Ellard has been an activist in the gay community since 1986, working with organizations such as the Pacific Center for Human Growth, the STOP AIDS Project, the San Francisco Lesbian / Gay Freedom Band, and the Lesbian / Gay Bands of America. Prior to pursuing a career in ministry, he was a management and technology consultant with Arthur D. Little and the Mykytyn Consulting Group, working with clients such as Apple Computer, the Southern California Gas Company and Southern California Edison.

The panelists were chosen for their civil rights work and activism in the community. Each of the speakers spoke passionately about their work and their dedication to civil rights. An engaging question and answer discussion with Ames civil servants and contractors followed their presentation. Issues discussed included civil rights for gays and lesbians and gays and lesbians in the workplace.

For more information about this topic or on upcoming events please contact the EOPO office at ext. 4-1065.

BY THE EQUAL OPPORTUNITY PROGRAMS OFFICE

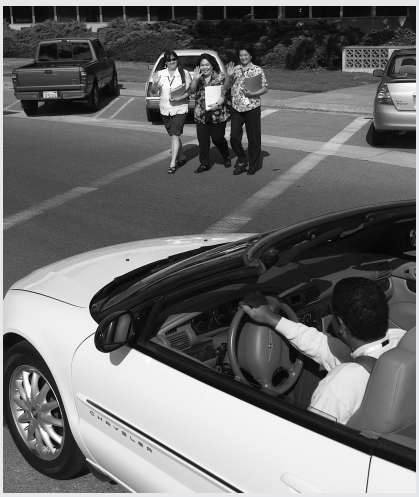
ALM pilot program graduates

Recently, 'The Art of Leadership Mastery' cohort completed their 9-month journey with a graduation ceremony. Center Director G. Scott Hubbard was on hand to congratulate the graduates and present them with a Certificate of mastery.

Participants gave testimonials describing their transforming experience in the program. One participant stated "I was always looking outside for strength and confidence, but it comes from within, and it's been there all the time." Full-transcriptions of participant remarks are posted outside the Leadership Development Office in B241-Room 144.

The program sponsor, the Human Resources Development Branch, is currently keeping a list of those interested in applying for the program that begins this September. Spaces fill up quickly, so send your interest to jshook@mail.arc.nasa.gov.

Safety first, -- remember the crosswalk!



NASA photo by Tom Trower

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