



IT Talk

Issue 6
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NASA CIO: Linda Y. Cureton



Transparency, Participation, & Collaboration

The Open Government Directive calls on Executive Branch agencies to become more open, accountable, and centered on the principles of transparency, participation, and collaboration. NASA has embraced this Open Government challenge and has a number of Open Government activities underway, including the creation of a NASA Participatory Exploration Office to infuse more public participation into NASA's mission. For more about NASA's involvement in the Open Government Initiative, visit <http://www.nasa.gov/open/>. ☘

NASA's Open Government Commitment

NASA's Office of the Chief Information Officer hosted the Open Government Community Summit Series on October 13th. Invited speaker Astronaut José Hernández, known for his bilingual tweets from space and for his 160,000+ Twitter followers, summed up his remarks by saying that Open Government is about "leveraging resources that perhaps the public is not aware are available to be used for good causes."

He reminded participants that many tools are available to allow contributions to any cause. As a timely example, Hernández pointed to his use of Twitter in the days following the Chilean mine accident. He communicated to his Twitter followers that NASA had resources to help in the rescue. While efforts were already underway for NASA to engage in the effort, Hernandez said his followers' awareness added to the momentum around NASA's involvement in the rescue.

Other speakers at the event included NASA's Deputy CIO Deborah Diaz and CTO for IT Chris Kemp. One theme participants heard through the session was that the Open Government Initiative requires an approach to communication where the Government enables the flow of ideas. NASA is working to publish more of its data sets online and create more opportunities to engage the public using digital tools. "As more data is generated, we are witnessing the emergence of new electronic tools almost daily," said Diaz. "Agencies must look ahead to anticipate change and efficient use of new technology tools."

Kemp added the following: "From one conversation to thousands of conversations, technology enables the conversation and supports the conversation. We're finding that if we don't stand in the way of that conversation, incredible things can happen."

Participants from as far away as Vienna, Austria exchanged ideas and expertise with others from around the globe and in the meeting room. As many as 50 people simultaneously provided input for discussion topics. The Open Government Community Summit Series is an inter-agency collaborative event hosted monthly by a different organization. It is sponsored and managed by the Open Forum Foundation in Washington. ☘



Deborah Diaz,
NASA's Deputy CIO



Astronaut José Hernández,
Guest Speaker



Chris Kemp,
NASA's CTO-IT

EAST Contract Awarded

NASA CIO Linda Cureton said "I am extremely pleased to announce the award of the Enterprise Applications Service Technologies (EAST) contract to Science Applications International Corporation (SAIC) in McLean, VA. SAIC will provide all services in support of the NASA Enterprise Applications Competency Center. This is the first of the contracts to be awarded under the NASA Information Technology Infrastructure Integration Program (I3P) and is a key milestone. I congratulate the entire EAST source evaluation board and thank them for their superb work and dedication to this effort over the past several months."

Under a Firm Fixed Price contract, SAIC will provide key application development and maintenance services in support of the NASA Enterprise Applications Competency Center (NEACC) in Huntsville, AL. The contract will begin on February 1, 2011 following a 90-day phase-in period. ☛

The Copernicus Trajectory Design and Optimization System

The Copernicus Trajectory Design and Optimization System represents an innovative and comprehensive approach to on-orbit mission design, trajectory analysis, and optimization. Copernicus integrates state-of-the-art algorithms in spacecraft trajectory optimization and interactive visualization. It allows NASA engineers to design spacecraft missions to all possible solar system destinations, making use of many types of propulsion systems and any number of spacecraft. All of these features are incorporated within a single software tool that can be used interactively via a comprehensive Graphical User Interface (GUI) or passively via external programs. The modular architecture of Copernicus allows for the inclusion of new algorithms, models, and techniques as they become available. Copernicus can be scaled from a single desktop personal computer (PC) to computer clusters where no user interaction or graphical feedback are required.

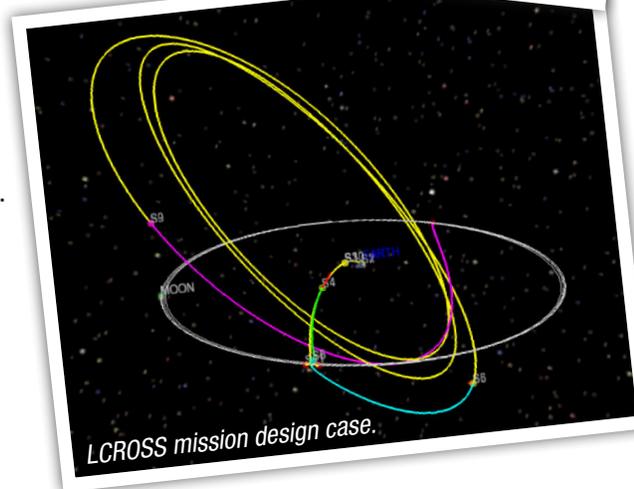
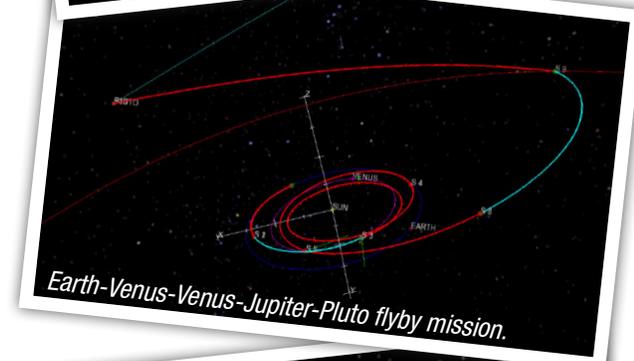
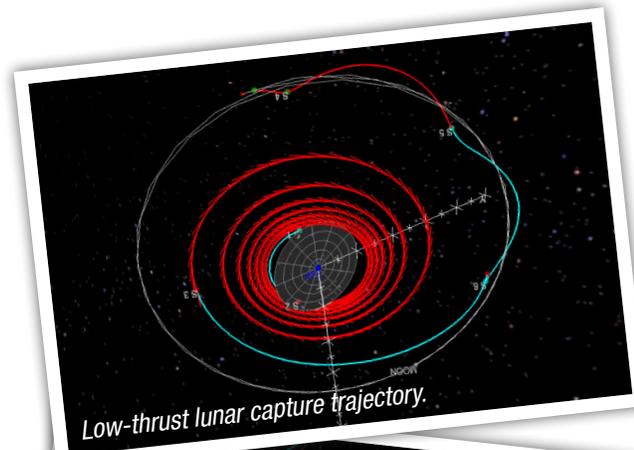
Copernicus provides continuous visual feedback to the analyst regarding the trajectory design, thus streamlining the overall process and reducing the total development time. This contrasts with other tools that only provide feedback at the end of the process. By using generalized trajectory building blocks, the user can construct a wide range of problems (e.g., simulation, guidance, targeting, and optimization). Just a few examples of how Copernicus has been used at NASA include:

- Development of the Orion spacecraft on-orbit performance for all flight phases
- Trajectory design for the Lunar CRater Observation and Sensing Satellite (LCROSS)
- Investigation of future piloted and robotic missions to near-Earth asteroids and Mars.

It is currently in use at most NASA Centers, in addition to industry partners and universities.

Dr. Cesar Ocampo at the University of Texas at Austin (UT) began developing Copernicus in 2001. From 2003 to early 2007, the Copernicus development was a collaborative effort between UT and Johnson Space

Center (JSC). The first operational version of Copernicus was released in March 2006. In March 2007, JSC assumed control of primary development of Copernicus. The JSC development team, lead by Gerald Condon (JSC/EG5), includes Jacob Williams (ERC, Inc.), Dr. Juan Senent (Odyssey Space Research), and Elizabeth Davis (Jacobs Technology). ☛



STI Story Gets Told Through Social Media

by Gerald Steeman, LaRC, STI Program Office

The NASA Scientific and Technical Information (STI) program, established over 40 years ago, supports the objectives of NASA's missions and research by acquiring, preserving, and disseminating NASA's wide-ranging technical publications. The STI program is best known for the NASA Technical Reports Server (NTRS), which boasts a collection of over a quarter of a million full-text technical reports, papers, and articles and attracts over 3.3 million visits a year from a worldwide audience.

The STI Program Office is always looking for new ways to promote awareness of NASA STI and assist NASA researchers in discovering technical literature. Turning to social media seemed to be a low-cost, low-risk option.

The STI Program Office looked to the Center for AeroSpace Information (CASI), the contractor-operated organization that supports the STI program, to make a claim on the social media cyberscape. Starting in late 2009, CASI began using Twitter and Facebook to highlight new STI additions to NTRS. Content was easy to come by because an RSS feed for new STI was already in place. Twitter followers have grown to over 1,000 individuals and institutions largely due to the continuous tweeting of this information.

CASI then turned to YouTube in early 2010. "We requested a YouTube channel via apps.gov," says Kim Lyall, a CASI outreach specialist. "After approval, we created the channel and prepopulated the site with some digitized National Advisory Committee for Aeronautics (NACA) videos. The process was very easy."

YouTube proved to be a great vehicle for providing awareness and training tips. Before long, several mini-tutorials on effectively searching NTRS and the NASA Aeronautics and Space Database (NA&SD) were available for broadcast. One does not just jump into making a tutorial blindly. Kim Lyall warns, "There is prep time deciding what the tutorial will cover, writing a script, and practicing. We currently use a free screencasting tool called Screenr to record the content and then post the video



directly to YouTube from our Screenr account." The vintage NACA video and tutorial content have grown a respectable subscriber base. "We have over 3,000 subscribers. Many of our videos and tutorials have received the thumbs up from viewers," says Lyall. This positive experience trumps conventional onsite training classes. It is far cheaper, reusable, and wider reaching, and it provides anytime/anywhere support to the Agency and the public.

Using the different social media tools in concert is key to maximizing outreach. "All of our social media accounts are advertised on the STI home page at <http://www.sti.nasa.gov>, and conversely we link to our home page from our social media accounts," says Lyall. "There is an interplay between the accounts. For example, when we post a new YouTube video it automatically puts out a tweet on our Twitter account linking to the new video."

Social media tools have tremendously improved CASI's outreach endeavors and assisted in achieving STI Program Office goals. The effort put into these activities pays out immediate dividends like thumbs-up content votes and positive comments from followers. "On Twitter, there is an active community of people interested in space sciences and NASA," continues Lyall. "We have been able to tap into this community and bring more awareness to STI resources, especially the NASA Technical Reports Server. Reaching such a diverse audience would be impossible without social media." Having someone tweet "Thanks for existing. NTRS is a fantastic resource!" is not bad either.

Learn more about the STI Program and CASI's use of Twitter, Facebook, and YouTube at <http://www.sti.nasa.gov>. ☘

Improve Email Performance

Having a high number of items in the primary folders (Inbox, Sent Items, Deleted Items, Calendar, etc.) can cause your email client to take a very long time to open. The recommended maximum number of items is 5,000 in any one of the primary folders. Ideally, the number of items should be 3,500 or fewer for maximum performance. There is a desired limit of 10,000 items in any one of the non-primary folders on the server. Non-primary folders are ones that you create and name, as opposed to primary folders which are automatically created by the email client.

Having more than recommended number of items in your server folders causes your email client to send multiple requests to the server every time the view is changed, the messages are scrolled through, etc. ☘

Kids Targeted by NASA Multimedia

By Diane K. Fisher,
Jet Propulsion
Laboratory,
California Institute
of Technology

The Space Place is a NASA-level Web site for upper-elementary kids, their parents, and their teachers, according to Nancy Leon, who manages the Web site team's efforts at the Jet Propulsion Laboratory. She explains that the Web site has been in existence since 1998, and it has continuously grown and developed as more and more NASA missions have bought in. It is also available in Spanish.

"We currently represent nearly 60 different NASA missions, and they are managed from several different NASA Centers," reports Leon.

The Web site (<http://www.spaceplace.nasa.gov>) includes online games, hands-on projects, fun facts, and short cartoon interviews of real NASA scientists and engineers.

"Our games have become the most popular feature of the site," says Leon. "They are, first of all, fun, because we know kids won't stick around if they're not." She adds

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Encouraging the Next Generation of Space Explorers

By Tom Soderstrom, IT Chief Technology Officer,
Jet Propulsion Laboratory

NASA's Jet Propulsion Laboratory (JPL) is encouraging the next generation of space explorers to play an active role in space exploration. JPL's office of outreach, the missions office, and the Chief Information Officer (CIO) are innovating together to reach the public in new and innovative ways and with new technologies.

This outreach takes many forms, such as:

- Twittering and blogging about the Mars Phoenix Lander and Mars rovers
- Holding a contest where Clara Ma, a 12-year old, renamed the next Mars flagship mission from Mars Science Laboratory to Curiosity
- Encouraging citizen scientists of all ages to help explore Mars by tagging craters and other features in a quarter million actual Mars images in Microsoft's Azure cloud through the games on the <http://BeaMarian.jpl.nasa.gov> Web site
- Encouraging developers to write programs to drive extraterrestrial rovers via the E4 Rover Challenge, where all the data and programs were in Amazon's Cloud

A new effort encourages minority students to become interested in science and technology. A group of JPL developers is mentoring four minority college students, advised by Dr. Beth Simon at the University of California, San Diego (UCSD) (<http://cseweb.ucsd.edu/~bsimon/>) to build Mars2Earth. Mars2Earth is an outreach application designed to deliver Mars data to



elementary school students. These students use the application to interact with Mars imagery and perform citizen science by identifying interesting features. Mars2Earth is written entirely in Google Web Toolkit (GWT), and it is deployed on the Google App Engine (GAE) cloud. This powerful combination allows the college students to deliver a full-production application without utilizing any infrastructure from UCSD or JPL and to bring an anytime space exploration experience to elementary school classrooms and homes.

In a recent field test conducted by members of JPL's Operations and Planning Software (OPS) Lab and JPL's Office of the CIO, Sarah Esper, a college student developer on the project, introduced the project to fourth-grade students at an elementary school in San Diego, CA. The results were breathtaking. The project sparked an immediate interest and an extraordinary level of participation from the students. The teacher was specifically impressed with how effectively the application engages fourth graders that read at or below grade level and are often quiet during discussions. Khawaja Shams, a developer at JPL and co-lead for Mars2Earth, shared his enthusiasm for the application. "It has provided a fruitful expansion of the relationship between JPL and UCSD. Dr. Simon's students have delivered tools to infuse a passion for space and robotics into young minds." This is a vision that is echoed by NASA and JPL. ☘

Photos: (left) Students search for craters on Mars. (above) Sarah Esper of UCSD finds crater with Katrina, a 4th grade Mars explorer.

NASA Ames IT—Building Inspirational Education Destinations

Written by: Penny Hubbard, Ames Research Center

NASA's journeys into air and space deepen our understanding of the universe, advance technology breakthroughs, and expand the frontiers of scientific research. These journeys all share a common thread: education. NASA continues contributing to the development of the Nation's workforce of the future, identifying and developing critical skills and capabilities and implementing electronic outreach strategies to best reach today's students, educators, and families. Ames's location, in the heart of Silicon Valley, is perfect for attracting the best tech talent able to deliver programs supporting NASA's educational outreach strategies. Ames IT members Matt Antoun and Chris Antoun, computer programmers with the External Projects Division, develop interactive, informational, and inspiring Web destinations for visitors around the globe. Web sites link visitors to software interfaces illustrating the intricacies of working in the weightlessness of space, enabling educators to inspire students about aerospace careers, and providing an in-depth look at the communication and navigation systems controlling the Nation's orbiting spacecraft. A few of these engaging programs are highlighted below.

Don your virtual spacesuit and take a tour of the International Space Station (ISS) with the **Station Spacewalk** interactive game. Using 3-D graphics from real NASA missions, players take part in seven increasingly difficult levels of play that range from a weightless tour of the ISS, to fixing parts on the Station, and bringing communication systems online before oxygen runs out. Station Spacewalk captures students' interest in space exploration while illustrating the challenges astronauts face in near-Earth orbit. Several simulations are inspired by extravehicular activities (EVAs) conducted by NASA astronauts. Students indicate they love the movement in microgravity, and they now have a better understanding of how difficult it is to work in space. To learn more, visit http://www.nasa.gov/multimedia/3d_resources/station_spacewalk_game.html.

Astronauts, mission controllers, and scientists depend upon the reliable transmis-

sion of information between the ground and spacecraft. Space Communications and Navigation (SCaN) is responsible for providing communications services for all of NASA's missions. Matt and Chris in Ames IT developed the **SCaN Interactive Demo** to show how SCaN's ground- and space-based facilities interact with NASA spacecraft. Enjoy flybys of Earth stations and spacecraft in deep space with visits to assets like the Mars rover, Hubble Space Telescope, and exploration satellites. Virtually send messages to various spacecraft using SCaN networks, including choosing a picture target for Hubble or directing LCROSS to impact the Moon. Amazing graphics and inspirational views take visitors into a new universe of amazing discoveries. To learn more, visit http://www.nasa.gov/multimedia/3d_resources/spacecomm.html.

NASA eClips brings together exciting video segments with educational best practices to inspire and engage students to become 21st century explorers. Video segments are produced weekly to explore current applications of science, technology, engineering, and mathematics (STEM) and provide teachers a tool to inspire students about different careers in the aerospace industry. Ames IT continues to evolve and grow this award-winning interface, recently improving the search process by developing an easy-to-use grid view and making it faster for teachers and visitors to locate a specific video segment of interest. The NASA eClips team continues to showcase this award-winning Web resource at educational forums around the world. To learn more, visit <http://www.nasa.gov/audience/foreducators/nasaeclips/index.html>.

Ames IT continues to develop innovative programs in support of NASA's education goals, supporting educators in preparing, encouraging, and nurturing the young minds of today. These three Web sites are just some of the amazing educational destinations the young and young-at-heart will want to visit to learn more about the universe we live in. ☘

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that they are also educational, each based solidly on important science and technology concepts that are within the grasp of this age group.

For educators, the Space Place offers original classroom activity articles written by the team and previously published in the journal of the International Technology and Engineering Educators Association (ITEEA). Printable images for the classroom, posters, story booklets, and other materials are also downloadable. Teachers are also the target audience for podcasts and blogs by NASA mission scientists.

"We have a small, creative team that works together collaboratively to combine science content, clear writing, compelling graphics, and clever game engineering," Leon states.

The Space Place has won a number of educator and parent awards for its effectiveness and its popularity with kids. The U.S. Government Web site Kids.gov includes the Space Place as one of the top 10 best Government Web sites for kids.

Leon says, "We are still very actively building and marketing this Web site to a large network of formal and informal education partners, and we welcome participation by additional missions." ☘

MONTHLY TIP: 10 Tips toward Prevention of Cyber Espionage

From the NASA Security Operations Center (SOC)

Cyber spying or Cyber espionage is the act or practice of obtaining secrets without the permission of the holder of the information. Cyber espionage perpetrators exist online, as well as from computer desks of professionals on bases in remote countries or may involve infiltration at home by spies and moles or in other cases or even as the result of criminal handiwork of amateur malicious hackers and programmers. Their crimes often involve the use of such illegal access to sensitive info or illegal control of computers or whole networks to gain unethical and illegal strategic advantages. The NASA SOC, continually tracking threats and criminals of this nature, recommends ten tips toward prevention:

1. Stay in touch with your ITSM and be aware of the Security Operations Center (SOC), to optimize your understanding of the threat landscape while leveraging their visibility throughout the user population
2. Know which assets need protection and the risk potential for each.

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Using Cloud Technology to Enhance Customer Service at NSSC

By Patton Tidmore, Customer Satisfaction & Communication Lead, NASA Shared Services Center

The NASA Shared Services Center (NSSC) opened its doors in March 2006 with the mission to provide timely, accurate, high-quality, cost-effective, and customer-focused support for selected NASA business and technical services. The first three years of operation were the transition years, as services were moved from NASA Centers to the NSSC. The fourth year was the stabilization year. The NSSC has now started its fifth year and has begun its continuous improvement phase, seeking best practices and striving to reduce costs.

Tier-0 Service

The NSSC Customer Contact Center (CCC) received, on average, more than 7,000 inquiries per month in FY 2010. Given how costly Call Center operations are, the NSSC turned its focus on providing improved "Tier-0" self service. Tier-0 means self-service support; customers find the information they need by themselves by going to the NSSC website. This would serve to anticipate customers' needs and to make it easy for customers to find answers to their questions online, without the need to pick up the phone and call the CCC. The NSSC could better serve its customers by saving them time on a phone call, and at the same time, costs would be driven down through the reduction in call volume. Enhancing the NSSC website was a primary solution and change would be necessary.

The Vision

Customer interviews and surveys pointed to the need for an NSSC website that was user-friendly, interactive and that provided substantive knowledge articles and easily found Frequently Asked Questions (FAQs). The vision called for giving customers a voice, for example providing users the ability to rate quality of content, make suggestions, share compliments when their needs were met, and offer criticism when needs were not met. The NSSC developed a Web Strategic Plan that outlined all of these goals, and the decision was made to utilize outside assistance, via a cloud provider.

The NSSC Information Center

Once the decision was made to explore cloud providers, it became clear that Software as a Service (SaaS) presented some big advantages: the NSSC could move forward quickly, and could get enhancements to the website started without making a huge financial investment. The development site was tested with NSSC employees and targeted customers at various NASA Centers. The new robust site search was configured and perfected for the NSSC's specific needs. Customers are unable to discern, when they visit the NSSC Information Center, that widgets are being used to pull information from cloud technology; the interface is seamless.

Protecting the Data

The NSSC currently utilizes services from cloud technology provider, RightNow Technologies, Inc. These services are fully compliant with the Federal Information Security Management Act (FISMA) and provide the security, availability, and redundancy the NSSC requires. Comfortable with the results demonstrated on the development site, the NSSC decided to proceed with a public release of the new NSSC Information Center this summer.

In the Cloud

A soft public rollout of the cloud software was executed without any surprises or problems. Some benefits realized included knowledge articles showing high numbers on Google search returns and customers finding the product before it was advertised. The NSSC is confident that the NSSC Information Center will soon be the first place many customers turn to when they have questions and need answers quickly.

Preliminary data, pointing to fewer calls and an increase in Web traffic, are encouraging. The NSSC is optimistic that the NSSC Information Center was an essential component to the record number of NSSC website hits realized in September 2010 and the reduction of CCC inbound calls in the same month. Ongoing analysis will determine the return on invest-



National Aeronautics and Space Administration
NASA SHARED SERVICES CENTER

NSSC Contact Information
Phone: 1-877-677-2123
Fax: 1-866-779-6772



nssc
Customer Service Web

Home
Customer Service Portal
NSSC Information Center
FAQs
Submit an Inquiry
Site Search

NSSC Information Center

Search the NSSC [FAQ](#) database or browse our most popular knowledge articles. Utilize our new [Site Search](#), a powerful tool to help you find NSSC Web pages and documents.

Search by Keyword

Provide Feedback

Submit a suggestion, complaint, or other feedback about this site here.

Give Feedback

Submit an Inquiry

If you are unable to find an answer to your question, the NSSC Customer Contact Center is here to help. Submit an inquiry and we will contact you with an answer.

Submit an Inquiry

Most Popular FAQs

You can also click to view one of our most popular answers.

1	Benefits Open Season
2	COTR Refresher Training Overview
3	NSSC Quick Reference Guides / Brochures
4	2011 Payroll Calendar
5	NSSC Services Catalog (SLIs, Chargeback Rates, Unit of Measure)
6	CAGE Code
7	How do I check the status of my Grant/Cooperative Agreement Proposal?
8	I forgot my SATERN user name/password, can you help?
9	Customer Satisfaction and Feedback on NSSC Services
10	When is the next FEGLI open season?
11	Service Level Agreement (SLA)
12	Enterprise License Agreement (ELA) Definition

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Visit the NSSC Information Center at: <https://answers.nssc.nasa.gov>. For more information about NASA and its programs visit <http://nasa.gov>.

ment, as the NSSC continues to nurture and promote its cloud-driven self-service resource.

Looking Ahead

The enhancements discussed above comprise the first phase of the NSSC's website strategy to include the use of cloud technology. Phase two will provide capabilities such as e-authentication for customers to track topics and items of interest to them. Customers will be able to request e-mail updates when topics of interest are added or changed.

There is also a phase three being evaluated that will allow even greater customer inter-

action. All these enhancements to improve customer service are being made possible through the use of cloud technology.

The NSSC is located at the Stennis Space Center in southern Mississippi and provides the following services to NASA and its Centers: Human Resources, Financial Management, Information Technology, and Procurement. For more information about the NSSC, visit: <https://nssc.nasa.gov>; or visit the NSSC Information Center at: <https://answers.nssc.nasa.gov>. For more information about NASA and its programs visit <http://www.nasa.gov>. ☞

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3. Know where your vulnerabilities may be present or can occur.
4. Report or mitigate vulnerabilities.
5. Be aware of new tactics, techniques, and procedures.
6. Prepare to act ASAP in the event of compromise.
7. Although prevention is preferable, rapid detection and response are critical.
8. Have a fall-back plan for what to do if you fall victim to cyber spies.
9. Ensure critical infrastructure suppliers have not been compromised and have safeguards in place to ensure the integrity of systems provided by these suppliers.
10. If you suspect that you are a victim, please contact the 24 x 7 x 365 NASA SOC at 1-877-NASA SEC (1-877-627-2732) or soc@nasa.gov. To read more about the NASA SOC, see <https://share.nasa.gov/it/security/ops/Pages/default.aspx>

MONTHLY TIP: When Should You “Reply to All”?

*Chris Carmichael and
Heather Kimley*

In most cases, it is not necessary to “reply to all” when responding to an email. Consider who really needs to hear your response. Most often, you only need to respond to the sender. Only use “Reply to All” when you are confident that everyone will be interested. If only some of the recipients would be interested, reply to the author and cc the other few individuals rather than replying to all.

Email senders can prevent recipients from “replying to all” by placing the email addresses of all the recipients in the BCC field. However, doing so hides the names of the recipients unless you address the individuals or group by name inside your email (e.g. Dear CIOs, etc.). Use this option with discretion. ☞

Future Women of Science

Written by Tom Soderstrom, IT CTO, Jet Propulsion Laboratory, California Institute of Technology

On a sunny southern California day (Sunday, October 3, 2010), over 1,500 girls of all ages and their families participated in the Girl Scouts of America’s science festival on the mall at the California Institute of Technology. Several personnel from NASA’s JPL hosted a technology “petting zoo,” where the girl scouts—and their families—were able to try out emerging information technologies, ranging from 3-D technologies, energy-efficient devices, e-books, space-simulation games, walking on the Moon on an iPad, educational games for tablet computers, and much more. Many of the educational online games that were sampled at the technology petting zoo can be found on NASA’s Space Place, a NASA Web site at <http://spaceplace.nasa.gov/en/kids/games.shtml>, and the devices can be found on JPL’s IT Labs at <http://itlabs.jpl.nasa.gov>. NASA’s JPL is man-

aged by the California Institute of Technology in Pasadena, CA, and performs a wide range of space science, robotics, and Earth science research for the Agency.

The hands-on exploration proved to be a highly entertaining and effective way of introducing the girls to emerging technologies and gaining feedback

on how they would use them. The JPL IT team of Chris Cornwell (who led the effort), Charles White, Joe Estes, Gabriel Rangel, and Tom Soderstrom was extremely impressed with the questions, the level of interest, and the expertise displayed by the girls of all ages.

Tom Soderstrom from the Office of the CIO summarized everyone’s sentiment in the following: “The event was a terrific success and hopefully excited the Girl Scouts to become future women of science and NASA/JPL space explorers.” It certainly encouraged JPL’s IT personnel about the enthusiasm of our future scientists. ☞



JPL OCIO members showing IT Petting Zoo to girl scouts.

Making IT Stellar at NASA

Send feedback about *IT Talk* to John Hopkins at john.hopkins@nasa.gov.

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