National Aeronautics and Space Administration

IT Talk

October - December 2012 Volume 2 • Issue 4

Mars Science Laboratory

IT Talk

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Message from the CIO

By Linda Cureton

NASA's Mars rover Curiosity continues to captivate many of us every day. But what is even more entrancing is the Information Technology it took to get us to the Red Planet. We've often heard the saying, "It takes a village to raise a child." Well in this case, it certainly took the help of several NASA families to bring this child, or mission, to fruition. In this issue we'll hear from engineers and scientists in their own words about the IT aspect of the mission and the remarkable science the Mars Science Laboratory is bringing us every day.

We'll also highlight some of the innovative projects being funded by the NASA IT Labs program. IT Labs was created to help make strategic investments in innovation. It is an innovation incubator, soliciting ideas from the greater NASA community and enabling their development as part of a rapid, low-cost, low-risk process.

And finally, we have some new faces in the Office of the Chief Information Officer family. We'll take a closer look at who they are and what they are bringing to the team.

—Linda

National Cybersecurity Awareness Month

NASA Themes: STOP • THINK • CONNECT as NASA Leaps Forward in Cybersecurity

By Evelyn Davis and Rebecca Shore-Suslowitz, NASA IT Security Division, OCIO

October is designated as the National Cybersecurity Awareness Month. NASA is teaming up to promote awareness to help improve the understanding of why cybersecurity is important in our everyday lives. It is a shared responsibility that begins and ends with you. It is critical that we learn how to protect and safeguard NASA information and information systems. By learning best practices, NASA employees can be equipped to better protect the NASA IT infrastructure and sensitive information. Every small leap in understanding effective cybersecurity practices helps to ensure that we are improving our IT security posture.

No country, industry, community, or individual is immune to cyber risks. To protect NASA and its data, members of the NASA community are reminded to STOP. THINK. CONNECT.

STOP: Before you use the Internet, take time to understand the risks and learn how to spot potential problems.

THINK: Take a moment to be certain that the path ahead is clear. Watch for warning signs and consider how your actions online could impact your safety.

CONNECT: Enjoy the Internet with greater confidence, knowing you have taken the right steps to safeguard NASA and your NASA computer.

Headquarters will kick off NASA's awareness activities on October 3, 2012, with the NASA National Cybersecurity Awareness Month Training. During October, everyone in the NASA community is encouraged to participate in Center cybersecurity awareness activities, which are designed to educate the NASA community on its cybersecurity responsibilities. Information on each Center's awareness activities is available on the Information Technology Security Awareness and Training Center (ITSATC) Web site.

Web Browser Version Wars

By John Sprague, End-User Service Executive, and Irene Wirkus, Emerging Technology and Desktop Standards (ETADS) Manager

These days, it's no longer a one-Web-browser-fits-all strategy for accessing Web sites and browser-based applications. With rapid changes in technology and new browser versions being released in industry as quickly as every 8 weeks, it is difficult for Web site curators and application vendors to keep up. Sometimes applications fall behind or vendors make a decision to support only one or two different browsers. For users of these sites and applications, it can be a frustrating experience. You might wonder why new browsers are implemented and versions updated when you would prefer to remain with the status quo because it works.

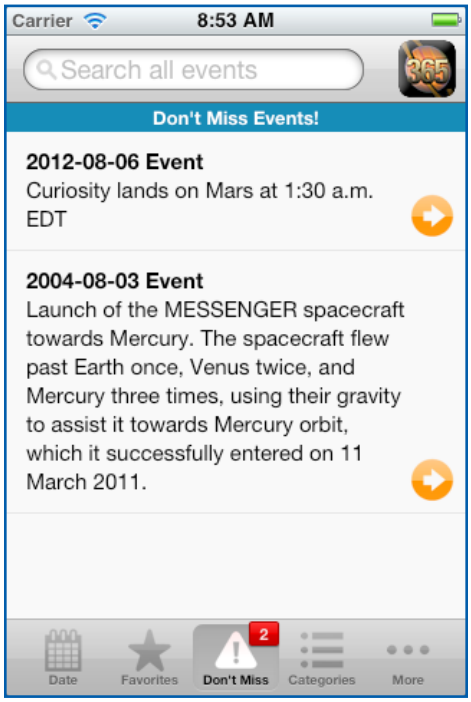
Every year, the NASA ETADS team, at Glenn Research Center in Cleveland, OH reviews the hardware and software configuration standards for NASA. NASA Technical Standard 2804, Minimum Interoperability Software Suite, identifies the required software configurations for use on NASA computers. During the annual review process, the ETADS team works with stakeholders across the Agency to test new browser and software versions to ensure interoperability to the greatest extent possible, while continuing to maintain a secure and viable computing infrastructure. When it comes to Web browsers, the best security and the most features typically comes with the latest versions, making it very important for the Agency to remain up to date. Currently, our standards support Internet Explorer, Mozilla Firefox, Safari, and Google Chrome at close to the latest industry-supported versions.

As we navigate this new world and adapt to a changing model of application delivery, it is important for users to remember the added security and new features that are available with the newest browsers and adopt a no-one-browser-fits-all strategy toward accessing sites and applications. Over the coming months, much work is going to be done in this area to improve communications, understanding, and application delivery. In the end, we will provide the best industry can offer to benefit our NASA community.

For more information or to view the latest on supported browsers or desktop standards, please visit the ETADS Web site at http://etads.nasa.gov/DCS/CurrentStandard.shtml.

Space 365 App

By Jane Maples and Kellie White, MSFC-CIMA

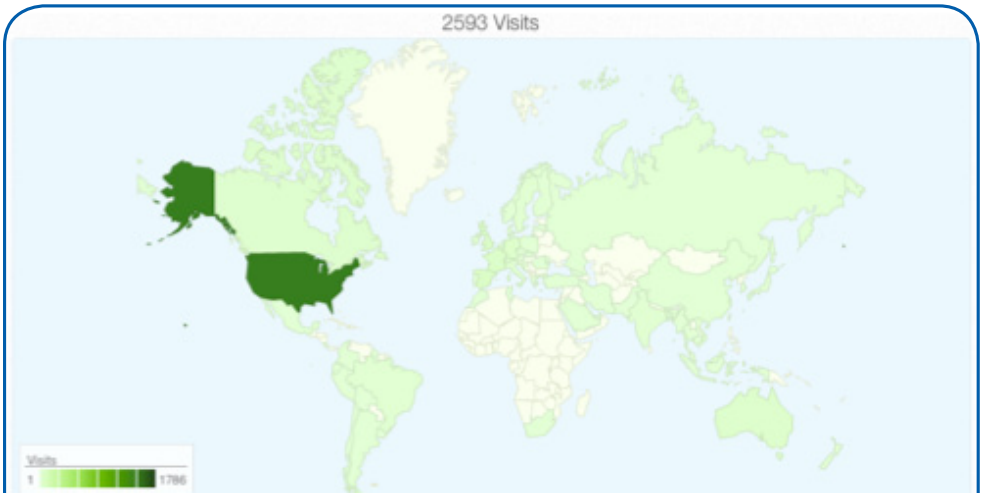


NASA continues to use technology to connect people with space activity information that is relevant to their lives. The new mobile app Space365 contains a searchable index of more than 4,000 events that educators, students, and the overly curious among us can search to find NASA and space-related facts. Space365 delivers NASA events and quirky trivia facts for each day of the year straight to the user's mobile device. The mobile app gives users access to a wealth of space-related information at the palms of their hands, allowing users to search by date, keyword, or category for recurring aviation and space events and anniversaries. Searching for Mars, for example, produces at least 47 different events.

The application also answers puzzling Martian trivia questions: When was the Mars Science Laboratory (A.K.A. Curiosity) launched? Who discovered the Martian moon, Phobos, and when?

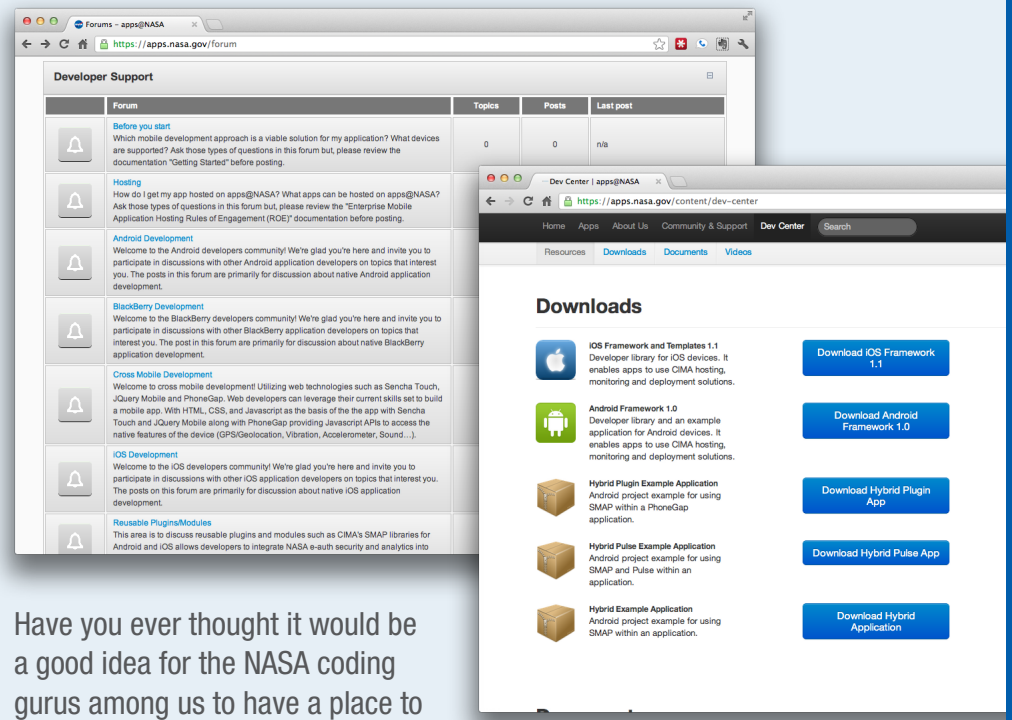
Space365 was officially launched on Friday, August 3, 2012, at the U.S. Space and Rocket Center in Huntsville, AL. The launch was planned to coincide with the landing of Curiosity, NASA's latest Martian rover. Space365 was developed by the Center for Internal Mobile Applications (CIMA), which is located at Marshall Space Flight Center (MSFC) and part of NASA's Planetary Science Division within NASA's Science Directorate. Since the launch, Space365 has been downloaded more than 2,200 times via iTunes and has an average star rating of 4.5. The app has been downloaded more than 95 times on Google Play and has an average star rating of 5. Using the product set services provided by CIMA, an analytics set called Pulse, we can obtain information related to the app's user base, including country (see inset map) and mobile device data, as well as the overall number of searches initiated on a daily basis.

If you are interested in the services CIMA provides, please visit https://cima.nasa.gov. The Space365 mobile app is available for download via iTunes and Google Play.



Dev Center Goes Online

By Kellie White, MSFC-CIMA



Have you ever thought it would be a good idea for the NASA coding gurus among us to have a place to collaborate regardless of where they are located within the Agency? Well, you are not alone, and the Center for Internal Mobile Applications (CIMA) has provided just that—a place for the coding inclined to share ideas and knowledge related to the development of mobile applications. CIMA released Dev Center for use by the Agency only a couple of months ago, and it has been well received by the community since the initial release. If you are currently developing a mobile application or planning to develop a mobile application, you will want to gain access to this online community.

Dev Center was implemented to help enable the Agency to share ideas, resources, and innovation across multiple directorates, projects, and programs. Dev Center has been approved for use by NASA and endorsed by our Agency Chief Information Officer (CIO).

Simply put, Dev Center is an online community for those wanting to learn more about mobile development.

IT provides developers access to framework modules, mobile libraries, and fully developed code to assist in jumpstarting new projects.

Dev Center is a provisioned application, and access can be requested by submitting an online NASA Access Management System (NAMS) request. Simply search using the phrase "CIMA NASA Developer."

How do I access Dev Center once I have been notified my account has been provisioned?

1. Open your browser and type in the following url: https://apps.nasa.gov
2. Once the Web site is displayed, select the “Sign In” link next to the search field in the upper right corner of the page.
3. Once you have authenticated into the Web site, you can select the tab labeled “Dev Center.”

For additional information on our mobile services, please visit https://cima.nasa.gov.

Goddard Space Flight Center: Providing Ready Access

By Danielle Moore, Communications Lead, NASA Goddard Space Flight Center

The increasing demand for easily accessible information is becoming an ongoing trend in both the public and private sectors. Commercial businesses, financial institutions, and others have all gone mobile and have implemented mobile sites that provide consumers with pertinent information at the touch of a fingertip.

In June 2012, Goddard Space Flight Center’s Information Technology and Communications Directorate set out to do the same. The creation of the Mobile Intern Site was intended to provide the incoming summer interns with basic information they needed to become acclimated with the Center and its surroundings. The project team interviewed various generational groups on Center, collaborated with the Office of Education, as well as with the Office of Communications, to capture information and features that addressed many of the frequently asked questions and concerns that the summer interns typically have during their first weeks on Center. Site features include: a complete map of Goddard Space Flight Center, GPS-enabled walking directions, access to the NASA Enterprise Directory, and much more.

Since its implementation, the web site has received significant praise, including from the Center Director. It is deemed to be a valuable tool and asset to not only the summer interns, but to all Goddard employees. As a result, Goddard employees can expect to see additional enhancements in the upcoming months. Work is currently underway to expand the site to target Goddard’s entire civil servant and contractor workforce. New features will include links to WebTADS, launch schedules, SATERN, and detailed on-boarding information from Goddard’s Office of Human Capital Management. The name of the site will soon change to Goddard Mobile and will include a separate, but similar, mobile site for Wallops Flight Facility, a likely no cost investment.

The Mobile Intern Site is compatible with Androids, iPhones, iPads, and Blackberrys. Visit http://mobile-intern.gsfc.nasa.gov. Please note, you must be on the NASA network to access all features. Enter your NDC\username and password when prompted. If you have questions contact danielle.c.moore@nasa.gov.

Oh, What A Night!

JPL OCIO's Journey with Mars Science Laboratory

By Whitney Haggins, Gary Beaner, Jonathan Chiang, Robin Dumas, Joy Laibl, Gabriel Rangel, Julie Reiz, Richard Van Why, and Janet Zadeh

Jet Propulsion Laboratory, California Institute of Technology

On August 5, a worldwide audience watched and celebrated the Mars Science Laboratory's (MSL) successful Entry, Descent and Landing (EDL) and Curiosity's touchdown on Mars. For JPL's OCIO, it was a celebration of a successful Project partnership. This article examines the preparations for that historic night through reflections from JPL IT leads.

Robin Dumas, IT Flight Project Support Manager and Julie Reiz, Information and Configuration Manager: Preparation for EDL began years ago.

Robin: The OCIO has been involved with the MSL Project since 2006 when the decision was made to use OCIO-provided IT services rather than create a separate project IT environment. A Service Level Agreement (SLA) was carefully crafted and monitored to ensure that the project's IT needs were being met. This required a great deal of coordination within OCIO among different IT service teams.

Julie: As EDL approached, our OCIO Flight Projects IT Readiness Initiative, an integrated cross-OCIO team that conducted weekly meetings with stakeholders and other support areas outside of the OCIO, worked to identify the types of IT support needed for critical mission events. The team focused on preparing for Curiosity's landing and maintained open communication paths with all participants.

Gabriel Rangel, IT Solutions Strategist: The OCIO played an important role in public engagement.

As part of the Innovating Together focus, in 2009 we started working with the Mars Public Engagement Office and the Office of Communications and Education to enable new world class experiences to help tell the story of the wonders of Mars to the public. During the past three years (an IT decade), we helped to put their creative ideas into practice. It started with a cloud-hosted Be a Martian citizen science gaming web site, which then evolved into a virtual immersive experience, and a mobile application. We also helped create and deliver the Spacecraft 3D mobile augmented reality app on the iPhone and iPad. This has led to an effective and ongoing relationship where we prototype new capabilities and put them into production much more rapidly than before.

Richard Van Why, Operations Manager and MSL Support Coordinator: The OCIO provided extensive on-call and onsite support.

Preparing for EDL required extensive coordination. We met monthly with MSL Real Time Operations to ensure that all IT services and support were aligned with the Service Level Agreement and met weekly with the MSL navigation team to discuss high performance computing needs:

- The JPL Galaxy and JPL Nebula supercomputers were dedicated to MSL and ran close to 200 24-hour Monte Carlo simulations at 20 GB each.

- The OCIO supplied on-call support from two days before until four days after EDL, and began onsite support the day before through the day after EDL. Our onsite support teams consisted of two shifts ready to provide any necessary support.
- Our conference room support team ensured all critical conference rooms were ready for EDL and were onsite to provide support.

We published a Support Activity Reference Guide for our providers with coverage schedules and contact information for all OCIO-provided IT services. Over 100 OCIO team members were part of the on-call and onsite support for MSL during their critical window.

Joy Laibl, Network Engineering Manager: Preparing for the IT needs of the many JPL visitors presented a challenge.

Our biggest concern for MSL was enabling appropriate network access to IT resources. MSL challenged us with their requirements, and this enabled us to examine technologies, brainstorm and create effective solutions:

- We worked with the project to create role-based profiles and defined isolated environments to ensure appropriate access for the right people—especially for the MSL Science Zone, a secure network layer where partners and Principal Investigators from around the world access MSL science systems.
- We moved from hardwired connections to ubiquitous and pervasive Wi-Fi.
- We partnered with Cisco to bring in 20 ruggedized access points around critical areas for enhanced Wi-Fi coverage.
- We laid extensive cabling for areas needing hardwired access.

It takes a coordinated effort and team to support an event of this magnitude.

Gary Beaner, Telecommunications Manager: Communication systems had to be increased to meet MSL's needs.

MeetingPlace (JPL's audio, video, web conferencing application from Cisco) was upgraded to support 250-300 connections to meet MSL's requirements. We also:

- Arranged special telecom services for the MSL science community.
- Worked with AT&T and Verizon to offer improved cell phone coverage through the use of Cell On Wheels (COWS) in project spaces, the main JPL auditorium, and the central mall area.
- Established mini call centers using VoIP phones to accommodate the increased calls into JPL.
- Installed phones in strategic locations for guests and VIPs.
- Installed analog lines for the satellite JPL Store locations.

Jonathan Chiang, IT Directorate Engineer: 8 million hits in one minute!

With less than four months to the MSL EDL event, our team had to engineer and migrate a legacy content management system and the Mars public outreach Web sites to Amazon Web Services. Working with the Ground Data Systems, Public Outreach and contractor teams we developed a solution that would download raw images and telemetry directly from Curiosity and place them into Amazon S3 storage buckets. Now the content managers for the Mars Web sites can easily create informative Web pages with powerful real–time images. We dealt with shifting requirements, including implementing live streaming of NASA TV and migrating the Eyes on the Solar System Web sites two weeks before EDL.

In short, we successfully met a high volume of traffic and took a legacy application and completely ported it to a new platform in the cloud. We delivered 120 TB of throughput during the night in video streaming alone. Adding the static content, we exceeded 150 TB. In one minute the websites served 8 million hits.

IT Labs: Fueling Innovation

IT Labs is the Technology and Innovation Division of NASA's Chief Technology Officer (CTO) for IT in the Office of the Chief Information Officer (OCIO). It is an innovation incubator, soliciting ideas from NASA's scientists and engineers and enabling their development as part of a rapid, low-cost, low-risk process. There are 14 ideas that have been awarded funding from IT Labs for FY13. Here is a small synopsis of what they plan to accomplish in the coming year.

Baselining NASA's Mobile Device Theft and Recovery Processes

Led by Irene A. Wirkus, Glenn Research Center (GRC), this collaborative effort will attempt to identify measurable gaps and deficiencies in NASA's IT security training efforts, augment IT security's mobile forensics capabilities, and demonstrate the efficacy and value of enterprise mobile-device management.

Benchmarking Virtual Collaboration Technologies Across Government Agencies

Led by Mary E. Walsh, Ames Research Center (ARC), this benchmarking study will identify virtual collaboration in use, or planned, at the other 11 Federal research and development (R&D) agencies. Results will help NASA continue necessary, mission-enabling meetings in more affordable ways and will support Information Resources Management (IRM) Strategic Objectives 1.5 and 3.2.

Communications Dashboard

Led by David W. Scott, Marshall Space Flight Center (MSFC), this project will build a software test bed to explore unconventional integration, presentation, and exchange of flight control communications in intra-Center and inter-Center contexts, which will create a unified interface for multiple communication tools to complement and augment voice loop discussions.

DropBox for the Enterprise: Secure Collaboration for Mobile Workers

Led by Manson Yew, Jet Propulsion Laboratory (JPL), this follow-on to the Drag-Drop-Sync-Share project will take the capabilities explored previously and provide a proof of concept for secure collaboration for mobile workers.

Engineering Enterprise Data Harvest Standards

Led by Chatwin Lansdowne, Johnson Space Center (JSC), this follow-on to the ATML and SysML project is driven to reducing the cost and schedule of the engineering cycle for flight projects by using industry standards to enable automated data harvesting into interoperable formats.

Enhance NASA's Large File Transfer (LFT) Capability to 100 GB Capacity

Led by Bryan K. Walls, MSFC, this project proposes enhancing or replacing the existing LFT to support larger files while maintaining a shared NASA resource—rather than supporting multiple file-transfer implementations on a program by program basis.

Evaluation of Personal Identity Verification (PIV) Two-Factor Authentication with iPads

Led by Irene A. Wirkus, GRC, this project seeks to determine whether a Smartcard reader can be used on an iOS device to access NASA applications requiring PIV authentication.

Image Data Mining of Terrestrial and Lunar Data Sets

Led by Ali Shaykhian, Kennedy Space Center (KSC), this research endeavor's objective is to explore novel IT in order to benefit from huge data sets, such as the 192 TB of data, images, and maps delivered from the Lunar Reconnaissance Orbiter on the Moon.

Lightweight Digital Signatures

Led by Manson Yew, JPL, this project will analyze the NASA environment and summarize the barriers to digital signatures. It will also explore the potential cost-saving benefits for NASA to implement tiered digital signatures.

Mobile Audiovisual Broadcasting from Field Sites and Beyond

Led by Mike Toillion, ARC, this investigation will probe into the implementation of mobile, cellular, and satellite streaming technologies as a means to broadcast audiovisual data from field sites to NASA Centers, labs, and education/public outreach (E/PO) community partners.

Radio Frequency Identification (RFID) Equipment Inventory

Led by Fabiola C. Martin, Langley Research Center (LaRC), this venture will use RFID tags to manage and account for the

Center's controlled inventory. This capability will reduce the inventory cycle, improve data accuracy, and keep better track of property compared to the current use of line-of-sight barcode scanners to inventory more than 25,000 items annually.

Safeguarding NASA's Mobile Assets

Led by Irene A. Wirkus, GRC, this collaborative effort will study the efficacy, viability, and enterprise requirements needed to support Intel's antitheft technology. This technology is inherent to Intel's processor architecture and has the potential to augment NASA's Data at Rest initiative.

Security for Mobile Applications

Led by Andrew J. Cecil, MSFC, this project will produce a strawman security control configuration to understand how National Institute of Standards and Technology (NIST) controls can be applied to mobile applications and devices—both personal and Government-issued.

sysadmin.nasa.gov—Knowledge Sharing for Improved Operations

Led by Branson Matheson, LaRC, this project will perform an internal hosting of a community-supported, centralized set of services that will be made available to all NASA system administrators. This community will help organize information, enhance cross-Agency communications, and improve operations.

Videoconference E-Concierge (V-Concierge)

Led by Manson Yew, JPL, this proposed multiphase project will provide an analysis that would support a way forward for greater utilization of videoconferencing by NASA programs and projects.

Virtual Private Network (VPN) Authentication & Automated Policy Enforcement

Led by Richard M. Pearson, Headquarters, this project proposes to unify and consolidate VPN authentication and policy enforcement throughout the Agency within the LaunchPad framework.

Wolfram Alpha Search Overlay Integration

Led by Allan Stilwell, JSC, this project will assess the technical capabilities of the Wolfram Alpha API by researching the documentation and producing a working proof of concept that will integrate the Wolfram Alpha results with JSC search results.

You can keep track of IT Labs projects and connect with NASA's innovators at https://labs.nasa.gov.

IT Labs @ LaRC

By Ed McLarney, LaRC Chief Technology Officer for the OCIO

Langley Research Center (LaRC) is benefitting from the Agency IT Labs program. Langley prototypes funded by IT Labs include experimentation with digital eBook publishing, an initiative to stimulate collaboration among system administrators NASA-wide, and a prototype to use Radio Frequency Identification tags to improve inventories. These projects and the IT Labs program are briefly discussed below.

Transition to Digital Publishing: The goal of this project was to develop the technical and business processes to enter the emerging world of digital publishing for mobile devices. The prototype produced a modern, interactive iBook for iPad. And eBooks promise to include many features, including navigation, interactive video, 3D, and audio. This project was completed in August, and results and demonstrations are available from Larry Merrill at LaRC.

Radio Frequency Identification (RFID) Inventory Prototype: The goal of this project is to use RFID tags to manage and account for the Center's controlled property inventory. Current technology uses line-of-sight barcode scanners to inventory over 25,000 equipment items annually. This current process takes from 6 to 12 months to complete. With the RFID Inventory prototype, we anticipate being able to cut inventory time and increase accuracy. Fabiola Martin, from the LaRC Center Operations Directorate, is the project lead.

Sysadmin.nasa.gov Collaboration Site: The goal of this project is to provide collaboration methods for system administrators across NASA. This is a grassroots proposal developed by a large group of system administrators and IT security professionals around the Agency for the internal hosting of a community-supported centralized set of services. Capabilities will include a code and script sharing repository, a system administrator shared knowledge base, and other essential collaboration items. Eric Everton is the Government sponsor, and Branson Matheson is the project lead and system architect.

Similar projects are under way across the Agency using funding from the IT Labs program. For IT Labs information, see https://labs.nasa.gov/SitePages/About IT Labs.aspx.

IT Infrastructure Integration Program (I3P) Update

Communications Services (NICS)

With "Transition" completed and "Transformation" under way, the CSO–NASA Integrated Communications Services (NICS) team has embarked on a path to socialize proposed transformation initiatives with their stakeholders.

During a recent series of face-to-face meetings, CSO/NICS presented snapshots of the 16 proposed initiatives to Communications Architecture Working Group (CAWG) members and communications subject matter experts (SMEs), who represent each NASA Center, to convey information about each initiative. In addition, a roadmap that described dependencies among the initiatives was also presented to provide a perspective regarding how all the initiatives fit together.

Because of this effort, members from both groups are now better equipped to discuss these transformation initiatives with their Center stakeholders and to foster a collaborative environment that can position the initiatives for success.

End-User Services (ACES)

Recently, Apple announced the release of the iPhone 5. Although the iPhone 5 is commercially available, it is not yet available on the Agency Consolidated End-user Services (ACES) contract. Normally, Apple does not provide new products to resellers until consumer demand has been satisfied at Apple retail stores. Hewlett-Packard (HP) Enterprise Services is working with suppliers to determine an availability date. Typical lead time can be up to 2 months after commercial release. It is anticipated that the iPhone 5 will be available to NASA users within the next 3 months or sooner. NASA customers who choose to defer their mobile seat refresh in anticipation of getting an iPhone 5 should be aware of this potential delay to Government clients.

In other news, two new people are now supporting the ACES contract. William "Rich" Horton is the NASA Contracting Officer and Sheila Fogle is the ACES Contracting Officer's Technical Representative (COTR). If you need assistance regarding this contract, please contact one of these individuals.

Mobile Information Protection (MIP), also known as Autonomy Connected Backup, is the ACES solution for providing backup, restore and data protection services on PC and Mac devices. Quarterly notifications are being sent to end users who have not had a successful backup in 30 days or more.

The End-User Service Office is now conducting monthly program reviews. These reviews are focusing on the following items: achievements, risks and issues mitigated, what is not going well and why, upcoming events and milestones, prioritizing future efforts, and identifying and providing status on process improvement initiatives.

Throughout 2012 ACES Technology Expos are occurring at the Centers. HP Enterprise Services and its partners are featuring an assortment of the technology available through ACES. The Expos will showcase current seats and products, as well as upgraded versions for platforms that will reach "end of life" in the next 90 days. For more information regarding Center Expos, visit https://aces.ndc.nasa.gov/subnav/expo.html.

A new process has been implemented for reporting lost, stolen and damaged devices. It is critical to report a lost or stolen device and to document the incident immediately. Proper reporting procedures minimize security vulnerabilities and productivity loss while enabling faster return to service. For more information on what to do regarding lost, stolen and damaged devices, go to https://aces.ndc.nasa.gov/subnav/lost.html.

Enterprise Applications Services (EAST)

The Enterprise Applications Service Office/NASA Enterprise Applications Competency Center (EASO/NEACC) is currently preparing for release 13.1, the major fiscal year-end cutover release, with regression testing under way. Concurrently, a modification to the Enterprise Applications Service Technologies (EAST) contract is targeted for late October to end stabilization and respond to a significant budget cut. Off-campus operations are relocating to the Marshall Space Flight Center (MSFC) to trim costs and preserve as many EAST jobs as possible while minimizing impacts to services. Two buildings have been vacated, and the third off-campus building will be vacated in fiscal year FY13. The EASO/NEACC teams are adjusting to no longer being collocated, while striving to continue providing excellence in operations and customer service.

Two major task order efforts are expected to become new lines of business (LOB) in FY13. The Product Lifecycle Management/Product Data Management (PLM/PDM) LOB will evolve from task orders currently being executed under the EAST contract in support of the Integrated Collaborative Environment (ICE). NASA's engineering programs and projects are responsible for managing programmatic and technical data across all phases of the life cycle. These types of data range from budgets, schedules, risks, cost actuals, and contract data in the programmatic category, to concepts, design requirements and specifications, technical risks, models and simulations, system configurations, software, test and evaluation results, and logistics plans in the technical category. ICE is a Web-centric environment that currently provides services that support many of these needs, including collaboration, product data management, risk, schedule, requirements and cost management, and design and systems engineering in a secure and controlled architecture.

The second new LOB involves the NASA Office of Education Infrastructure Division (OEID). A transition project to bring OEID applications under EASO/NEACC operations completed in late September 2012. This transition will streamline the application management and leverage EASO/NEACC capabilities for future enhancements. The OEID's IT vision includes strengthening configuration, integration and usability, plus building robust reporting capabilities, featuring dashboards, and providing mobile applications.

Two large IT projects are slated for FY13. The Identity, Credential, and Access Management (ICAM) Modernization project will replace aging infrastructure, and the eTravel System II (ETS2) project will implement an eGov replacement for our current FedTraveler system.

Enterprise Services Desk (ESD)

The Enterprise Service Desk (ESD) Enhancements project completed its combined Preliminary Design Review (PDR) / Critical Design Review (CDR) in September. The enhancements project will add several new capabilities to ESD this Fall.

- ESD is adding the ability for Tier-2 providers to generate incident tickets, even in cases when a single customer is not identified. This will be especially helpful to the NICS team, who frequently work tickets generated from a system, not a person. Automation will be built into the process so that the tickets are quickly routed to where they need to go.
- ESD will move to an hourly Lightweight Directory Access Protocol (LDAP)

data pull, which will keep personnel data more accurate in the system.

- Individuals placing *On Behalf Of* orders will find new hires available earlier in the process, which will help onboarding processes. Those departing the Agency will be left in the system for *On Behalf Of* orders for a short time following separation. An individual's status will be displayed when placing an *On Behalf Of* order.
- New flexibility will be added to the approver queues which will allow Center POCs the opportunity to create specific groups for approving orders; when implemented, they can prevent every approver from receiving emails for every request and allow each Center to develop the workflow that is most appropriate for their approvers.
- End users will be able to edit a service request as it works its way through the approval cycle; requests that are edited will need to be re-approved.
- Users will be able to subscribe for notifications in the system, but suppress notification emails if that is their preference. Mandatory Agency-wide messages will continue to be delivered to the users' inboxes regardless of preference.
- Customers and contacts will receive notification emails when orders are approved or rejected.
- Knowledge Articles and help tickets will be print-friendly; help tickets will have an easy email option allowing end users to share an open ticket with a POC.

Additionally, the ESD team is also implementing updates to the available categories used for submitting incident tickets online and reorganizing the services Catalog - making services easier to find for end users. The team is participating in tiger team efforts to ensure accuracy of the I3P Configuration Management Database (CMDB). Furthermore, the team in parallel continues to develop Problem and Change Management Modules as part of the ESD 1.2 release.

Web Services and WESTPRIME

Web services are continuing under the current vendor, whose contract has been extended through April of 2013. Current services include the following features:

1. Web content delivery
2. Web site development
3. Content management
4. Bandwidth management
5. Search capabilities
6. Collaboration services
7. Web hosting

NASA is also shifting to a new Web-services model that uses Amazon Web Services for cloud-based enterprise infrastructure. This cloud-based model supports a wide variety of Web applications and sites using an interoperable, standards-based and secure environment.

The acquisition strategy for the Web Enterprise Service Technology (WESTPRIME) contract is to compete this requirement among several sources under the U.S. General Services Administration (GSA) Federal Supply Schedule (FSS) Information Technology Schedule 70.

NASA released the Request for Quote (RFQ) for WESTPRIME in August 2012. An award selection will be made by April 30, 2013.

The goals of the WESTPRIME contract are to

1. Enhance business and technical agility;
2. Eliminate vendor-specific dependencies;
3. Drive down operational overhead for Web presence;
4. Drive down the cost of custom Web and on-demand services for missions, programs, and projects;
5. Increase NASA IT security;
6. Explore collaborative services across NASA Centers; and
7. Improve online customer service delivery through innovative technology.

New Hires at Glenn

LES FARKAS

Les Farkas was selected in June 2012 as the first IT Chief Technology Officer (CTO) at Glenn Research Center. Prior to his selection as the CTO, Farkas served as the Chief of the IT Security Office at Glenn, where he worked to develop the IT Security Strategic Plan for the Center. During his 28 years at Glenn, Farkas has led several Center teams, served as Glenn's Enterprise Architect for NASA's Enterprise Architecture (EA) program, and was the Center's HSPD-12 Implementation Manager. In December 2005, Farkas was one of only five NASA civil service employees to receive certification in enterprise architecture from the Federal Enterprise Architecture Certification (FEAC) Institute. Farkas holds a bachelor's degree in computer science.

SEAN GALLAGHER

Effective July 2, 2012, Sean Gallagher joined the Glenn Research Center Office of the Chief Information Officer (CIO) as Deputy CIO. Gallagher joined the team from the consulting industry with specialized expertise in the management and administration of large IT implementations and consulting engagements for defense, Federal, and commercial organizations. During his consulting tenure, Gallagher developed a robust software development practice, delivering knowledge management and collaboration solutions to a variety of customers in civil, defense and private organizations. Gallagher served as a communications officer, network engineer, and human resources manager in the United States Army. He holds an undergraduate degree in physics and a master's degree in computer information systems.

JPL IT Recognized with Industry Honors in 2012

By Tom Soderstrom, IT CTO and Whitney Haggins, Communications Specialist, Jet Propulsion Laboratory, California Institute of Technology

The JPL IT Directorate was recognized with two separate industry awards for innovation in 2012.

In July 2012, *CIO Magazine*'s "CIO 100 Award" panel selected JPL IT as "one of the top 100 innovative organizations that uses IT effectively to create business value." JPL was one of only three Government-focused organizations selected in the 2012 competition, with nominations from across Government and industry.

The award highlighted JPL's initiative of changing IT from "Information Technology" into a proactive and action-oriented organization that "Innovates Together" with everyone. As part of the award, the panel recognized the proactive collaboration between JPL IT and missions, NASA, academia, industry, and the public; the exploration and sharing with the public about IT trends; the consumer technologies available, including the IT Petting Zoo; cloud computing; and the innovations in mobile and video technologies.

JPL's Chief Information Officer (CIO), Jim Rinaldi, explained the Innovating Together mission in an article published by *CIO Magazine*, which can be read at http://www.cio.com/article/711437/NASA_s_New_Innovation_Mission.

JPL IT was also recognized in September 2012 as part of InformationWeek's 500 most innovative organizations. JPL was chosen based on its breadth, depth, and innovative use of mobile applications to educate the public about NASA and space in the category of innovation in Government. These mobile apps have been downloaded well over a million times.

When congratulated on the awards, Jim Rinaldi said, "On behalf of our IT staff, I'm pleased that industry recognizes the hard work and rapid innovations by the JPL IT community and that we can help evolve IT. It's also gratifying to help share the wonders of NASA with the public in new ways."

NASA@Work Winner

How well do you know your coworkers? Kevin Powell currently supports the Office of the Chief Information Officer Project Management office in an IT role. He assists with status reporting, risk management, and the usage of metrics tracking in SharePoint. What you may not know is that he has a varied background with high-tech start-up companies. Just recently, Powell won an award through NASA@Work for a technical submission on the topic of "Non-invasive Measurement of Intracranial Pressure"—not what you may have expected from an IT support professional! NASA@Work is an internal collaboration platform that connects the collective knowledge of individual experts from all areas within the NASA organization via a private Web based environment supported by InnoCentive. The platform provides a venue for Challenge Owners, those looking for solutions or new ideas, to pose challenges to internal Solvers, those within NASA with the skill and desire to create enlightened solutions. The Solvers who deliver the best innovative ideas are rewarded and recognized for their contributions. Congratulations to Powell and the NASA collaborative environment—get to know your co-workers!

National Aeronautics and Space Administration

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