National Aeronautics and Space Administration

# IT Talk

October - December 2013 Volume 3 • Issue 4

## BYOD and Mobile Computing at NASA

# IT Talk

Oct - Dec 2013 Volume 3 • Issue 4

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*IT Talk* is an official publication of the Office of the Chief Information Officer of the National Aeronautics and Space Administration, Headquarters, Washington, D.C. It is published by the OCIO office for all NASA employees and external audiences.

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# In this Issue

# Message from the NASA CIO

The last few weeks have been extremely difficult for our NASA team members. But I am very thankful we now have the opportunity to move forward once again. FY 2014 will no doubt be challenging for us, but I am confident we will make great strides and accomplish our goals. Information technology at NASA has been, and will remain, a critical enabling capability for our Agency and the Nation. Our strategy calls for the ability to support current and future missions, both reliably and affordably, with an increasingly flexible, mobile workforce. So my vision is simple:

- We must clarify our purpose for existing at NASA.
- We should enable the mission and move with deliberate intent.
- We must be a value-added service.
- We must be customer-focused.
- We must be connected to our many Federal initiatives: protecting our national assets, seeking out efficiencies and reducing costs, and adopting IT that makes NASA better.

I have focused my attention on several priorities and will continue to do so in the new fiscal year. They include the following:

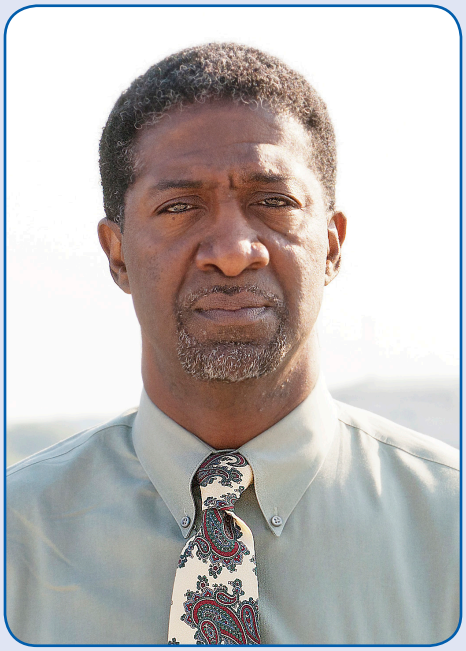
- Strengthen the NASA CIO Leadership Team by embracing collaboration with CIO leadership at the Centers and building trust within the OCIO.
- Develop an IT program that adjusts to the challenging budget environment by being more adaptable and flexible, moving towards more "services-on-demand," adopting more cloud services and new offerings, and Improve IT service performance (such as through I3P) by focusing on enterprise services and our desktop service contract; without getting hung up on "basic services," we must recognize that a strong foundation is needed to build the rest of the house.
- Improve IT governance by addressing each recommendation outlined by the IG, assessing roles and responsibilities for IT decision making, and looking at current model execution.

While we may face a lot of growing pains in the coming months, I am confident that, with good teamwork and a positive, can-do attitude, we will have a successful year.

*~Larry*

*Larry Sweet's first Face-to-Face Meeting as new NASA CIO*

# New Headquarters CIO Selected



On September 8, 2013, NASA Headquarters officially welcomed Victor Thompson in his new role as NASA Headquarters Chief Information Officer (CIO) and Director of the Information Technology and Communications Division (ITCD). Mr. Thompson has been a familiar face at NASA Headquarters these past 5 years while serving as Deputy Director/Deputy CIO in ITCD. With 32 years of management, computer technology, and software application engineering experience to draw upon, Mr. Thompson is uniquely positioned to help Headquarters achieve cost-effective, efficient delivery and utilization of innovative IT services in support of NASA's mission.

In describing his vision, Mr. Thompson said that ITCD's viability as a reliable and respected IT service provider will depend on its flexibility, its willingness to embrace new thinking and technologies, and its ability to implement value-added solutions. Achieving this vision will require extensive collaboration and partnerships with the Mission Directorates and the establishment of strong, trusting relationships with our contracting vendors.

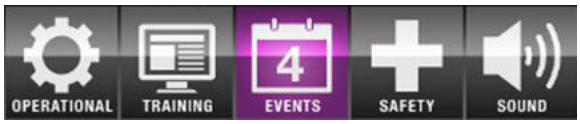

# Digital Banner Service at Headquarters

Digital banners have arrived at NASA Headquarters! The Information Technology and Communications Division (ITCD) keeps the Headquarters community informed through a variety of communication tools, including the Web, electronic newsletters, IT notices, and Headquarters Television. The digital banner is the latest addition to this list, providing employees with information on program and mission updates, Exchange Council events, Computer Training Center classes, and new programs, such as the early adoption of NASA Personal Identification Verification (PIV) smartcards. Conveniently located in both the east and west lobbies, digital banners present employees with important messages each day as they enter and leave the building. ITCD plans to acquire 25 more kiosks so that every floor will have digital banners at each elevator bank displaying information relevant to that floor, including a floor map and emergency exits.

Measuring about 7 by 3 feet, the digital banner screen is eye-catching, vibrant, easy to read, 508-compliant, and environmentally friendly. The banners attract attention by continuously rotating among 10 to 15 different screens. Because of these attributes, messages draw greater interest than traditional posters and banners do. The kiosk also includes scheduling software that allows each message's duration and frequency to be customized. For example, as an event approaches, the kiosk can show that event's message more often in order to increase exposure.

At a time of shrinking budgets and rising environmental concerns, Headquarters recognizes the value that digital banners provide. Replacing printed posters and banners with digital messaging reduces consumption of precious resources, which in turn reduces NASA's environmental footprint. Compared with typical production, cost savings in materials alone can average $4,026 per month. Additional savings accrue because one digital banner can be pushed to every device throughout the building instead of printing multiple copies. Digital banners also eliminate the time, physical labor, and potential safety hazards associated with posting and removing printed notices throughout the building.

Headquarters employees can even access specific banners by using the interactive feature at the bottom of the screen.




Touching one of the first four icons brings up messages within that category: **Operational** banners provide building information, such as renovation schedules; **Training** banners provide Computer Training Center and other class schedules; **Events** banners provide information on a variety of activities at Headquarters; and **Safety** banners provide details about flu shots, blood drives, and other medical issues. Touching the fifth icon, **Sound**, allows the visually impaired to hear a voice recording of the on-screen text.

Headquarters employees can look forward to seeing even more kiosk features in the future. To learn more about digital banners, contact Cynthia Miller at 202-358-0622.

## Stop.Think.Connect—Protecting NASA's Information Technology Assets

October has been designated as the 10th Annual National Cyber Security Awareness Month. This is an opportunity to engage and educate NASA employees and private-sector partners in effective cyber security practices. Each of us has an important role to play. Emerging cyber threats require engagement from the entire American community—from government and law enforcement to the private sector and, most importantly, members of the public—to create a safe, secure, and resilient cyber environment.

Living in the 21st century, we are more interconnected today than ever before. Few of us need to be reminded of the impact that cyberspace has on our lives. From the kitchen table to the classroom, from business transactions to essential government operations and services, cyber security is an issue that touches all of us.

As a NASA employee, we encourage you to remain aware of cyber security risks and to implement effective IT security practices to protect our IT assets. These practices include the following:

1. Set strong passwords and do not share them with anyone.
2. Keep a clean machine—your operating system, browser, and other critical software can be optimized by installing regular updates.
3. Maintain an open dialogue with your family, friends, and community about Internet safety.
4. Limit the amount of personal information you post online, and use privacy settings to avoid sharing information widely.
5. Be cautious about what you receive or read online—if it sounds too good to be true, it probably is.

National Cyber Security Awareness Month reminds us that being safer and more secure online is a shared responsibility.

Remember, cyber attacks can occur any time. We need to remain vigilant and utilize the best practices identified during National Cyber Security Awareness Month. Cyber criminals are opportunists, and they can seek out and exploit vulnerabilities at any time. By exercising effective cyber security practices, we will not only keep our families, personal assets, and information more secure, but we will also help to improve the overall security of cyberspace.

*Cyber security begins and ends with you!*

# Ann E. Dixon, STI's Contract Program Manager, Wins NASA Public Leadership Medal

*By Lynn Heimerl, Agency STI Program Manager*

*From left to right: Lesa Roe, Langley Research Center Director; Ann Dixon, STI's CASI contract program manager; and Richard Keegan, NASA Associate Deputy Administrator*

Ann E. Dixon was recently awarded a NASA Public Leadership Medal at NASA Langley Research Center. Dixon heads the NASA Scientific and Technical Information (STI) Program's services contract and facilities, which are collectively called the NASA Center for AeroSpace Information (CASI).

The NASA STI Program acquires, organizes, preserves, and disseminates NASA's research results through the assistance of the CASI contract, which is currently managed by Chugach Federal Solutions, Inc.

As manager of CASI, Dixon successfully managed budget reductions while supervising a highly qualified and diverse workforce. Utilizing her program management professional (PMP) skills, she formed and led content and information technology project teams in an effort to completely digitize all NASA STI (back to 1915). As a consequence of Ms. Dixon's highly effective leadership, NASA became the first Federal agency to fully digitize its current and legacy STI collections. This allows NASA scientists and engineers to quickly locate and leverage STI, giving them a competitive edge and helping them to succeed in their jobs. She achieved a 140-percent increase above the contract digitization metrics, resulting in the completion of all digitization 2 years earlier than required by NASA. Ms. Dixon implemented innovative and creative options for cost reductions of existing facility utilities, postage, and maintenance that resulted in annual savings of $40,000 ($200,000 over 5 years).

In support of NASA's goal to increase the availability of STI to Agency personnel and the public, Dixon created and led contractor teams that expanded the STI collection of documents by 400 percent above contract requirements. She initiated a social media campaign to disseminate STI, making her one of the first in the Federal Government to use social media in this unique manner. This campaign achieved an 83-percent increase in users.

Ms. Dixon led the collaboration between NASA STI and the National Archive and Records Administration (NARA) to test their new Electronic Records Archive (ERA) system, paving the way for NASA's successful use of the system.

Dixon also leads the team that produces the Spinoff publication, which has consistently been cited as one of NASA's top accomplishments. The NASA Office of the Chief Technologist uses the CASI contract for Spinoff work. Dixon redefined and refocused the Spinoff project team to leverage unique skills and instituted process improvements for Spinoff production that generated $65,000 per year in cost savings for NASA ($325,000 over 5 years).

*Left to right: Laurie Johansen, NASA STI Program's contracting officer's technical representative, and Ann Dixon*

# BYOD and Mobile Computing at NASA

***By John Sprague, Enterprise Applications Service Executive***

As NASA employees, we expect "anytime, anywhere" access to our information. New devices (laptops, tablets, smartphones), applications, and operating systems bring tremendous opportunities for productivity and innovation, but they also bring challenges in securing and maintaining NASA information. In the coming months, the NASA Office of the Chief Information Officer (OCIO) will develop a formal policy to govern the use of personal devices, to be known as "Bring Your Own Device (BYOD)."

The possible benefits of BYOD to NASA employees are as varied as the many kinds of devices in use: increased productivity, higher employee morale, lowered costs, greater innovation, and better work-life balance.

NASA BYOD will encompass the policy work of the BYOD Integrated Transition Team (ITT), the Mobile Device Management Integrated Process Team (IPT), the Institute of Electrical and Electronics Engineers (IEEE) 802.1x IPT, and the future Mobile Applications Management IPT. The Mobile Device Management IPT has been developing the requirements for a commercial product that manages mobile devices.

The first step in managing mobile devices was the implementation of Exchange ActiveSync policies on all NASA e-mail accounts on September 10, 2013. Notices regarding this change went out via e-mail in early September. These ActiveSync policies have been established to ensure that any mobile device that connects to NASA e-mail servers, whether it is Government-furnished or personally owned, meets minimum security standards. It is important to enforce these minimum standards, such as basic lock out code protection, to safeguard NASA data on your device in the event that it is lost and/or falls into the wrong hands. IEEE 802.1x is an international standard for network access control, and the IEEE 802.1x IPT's task is to identify long-term user/device network identification, authentication, and management requirements and to develop an implementation plan.

The NASA OCIO held the first BYOD ITT kickoff meeting on August 15. Team members representing Centers, Mission Directorates, the Office of the General Council, the Office of Human Capital Management, IT security, and others met to start forging a BYOD policy that fits NASA. Their main goal is to develop a formal policy governing the use of personal devices to access NASA information. Sub-teams were formed to accomplish the following tasks:

- Communicate monthly status to stakeholders and coordinate with other teams
- Identify/benchmark BYOD at other Federal agencies
- Review the Mobile Device Management and IEEE 802.1x charters
- Identify relevant NASA publication directives, regulations, and National Institute of Standards and Technology (NIST) standards
- Develop a communication plan
- Identify risks & use cases
- Develop business cases
- Recommend infrastructure changes
- Recommend incentives
- Draft policy and present it to stakeholders for approval

Looking at the big picture, BYOD falls within the category of mobility. NASA's mobility vision, adopted at the NASA Mobility Summit Meeting in summer 2012, states that NASA personnel "will be able to securely and seamlessly access and share any authorized information, anyplace, anytime, using any device." The aim of NASA's mobility vision is to provide services while protecting sensitive data. Participation in BYOD is voluntary, and NASA is not compensating employees for any costs associated with using personal devices. This may change in the future, after a full BYOD policy and program are developed and considered part of the BYOD ITT process; however, those details have yet to be determined.

In the meantime, NASA employees are required to adhere to certain minimum security standards in order to be able to connect to NASA data. Minimum standards include enabling lock out code protection and updating personal devices to the latest security patches provided by vendors.

Under the current timeline, a draft BYOD policy will be presented to stakeholders by mid-February 2014. Implementation of the recommendations by the Mobile Device Management and IEEE 802.1x IPTs will follow. Although a communication plan is being developed, you can count on seeing outreach in the form of e-mail notices, frequently asked questions (FAQs), and briefings on any upcoming changes.

Protecting sensitive NASA data is a complex effort that involves managing lost or stolen devices, encryption technologies, commercial security patching, personal data, and privacy. It also requires familiarity with features on mobile devices that employees may not have used before. But the ultimate goal is to enable you, the NASA employee, to have a more functional and enhanced work environment. So what can you do? Follow current policies, support the new policy once it is finalized, and always remember to protect NASA data!

For more information, or if you have questions, please contact John Sprague at john.sprague@nasa.gov or 202-558-8247.

# Mobile Security Requirements: Why Now?

*By Daniel Conway, NASA IT Security (ITS) Division*

On August 29, 2013, NASA Chief Information Officer Larry Sweet sent out an Agency message to all NASA employees entitled "Bring Your Own Device (BYOD) and Mobile Computing at NASA," which included a memorandum of minimum security requirements for personal mobile devices (available online at *http://inside.nasa.gov/ocio/sites/inside.nasa.gov.ocio/files/files/Minimum-Security-Requirements-for-Use-of-Personally-Owned-Mobile-Devices.pdf*). The memo alerted employees to the enforcement of several requirements regarding the NASA e-mail system that would begin on September 10.

Many have asked, "Where did these requirements come from, and why are they coming out now?" Well, as we all know, mobile devices (e.g., smartphones, tablets, etc.) are playing an increasingly important role in our lives. As we start to use these new and exciting technologies at home, we often want to use them in all aspects of our life—including at work. However, the introduction of such devices into the marketplace and then into the workplace often precedes NASA's ability to test and secure them. As a result, they present unique technological, legal, and security challenges for you and for our IT staff.

Historically, NASA has not blocked or prevented the use of mobile devices to access NASA e-mail and resources. However, due to the exponential growth of these unmanaged systems in the NASA environment over the past few years, it has become imperative for NASA to acknowledge and address the risk they present to our resources and data.


So, instead of simply "turning access off" and forbidding the use of mobile devices (which would have certainly addressed the risk), the NASA CIO decided to implement a minimum set of basic security requirements and capabilities to support NASA employees while a broader BYOD effort is pursued. Many of these security requirements are general best practices that are already in use by employees on their personal devices.

That being said, we did want to address a few questions and concerns that have been raised, particularly those related to using a personal mobile device to connect to the NASA e-mail system:

**Does NASA now have the ability to access any information on my personal device?**

No, absolutely not. NASA cannot access any data on your personal device; it can only confirm that your device exists and has connected to our system.

**Did NASA install any software on my device?**

No. Any changes in the security configuration of your personal device to support NASA's minimum requirements take place within the device's own native capabilities. No software or additional "profiles" have been installed.

**Can NASA "control" my device?**

No, NASA cannot control your device. Any capabilities that are enforced by NASA are native capabilities that already exist on your device.

**What about the ability for NASA to "remotely wipe" my device if it is lost or stolen?**

The ability to "remotely wipe" your device in the event that it is lost or stolen does exist; however, NASA will never use this capability without an explicit request and coordination with you. Moreover, NASA is not "controlling" your device if and when the remote wipe capability is used, but is instead requesting that the device trigger its own, internal, native wipe capability.

Additional guidance and many other frequently asked questions (FAQs) can be found online at *http://inside.nasa.gov/ocio/content/faqs-regarding-mobile-computing-devices*. Check back often, as these FAQs are being continually updated as you and your coworkers provide feedback and ask questions.

The goal of these initial security requirements is to enable every NASA employee to continue using personal devices. We are striving to support a better work-life balance while also addressing some very basic and self-evident risks that these devices pose to NASA data and systems. Lee Stone, president of IFPTE local 30 and co-chair of the NASA Labor-Management Forum, says, "Labor supports the responsible implementation of a voluntary 'Bring Your Own Device' policy for NASA. With the proper balance of privacy for the employee and data security for the Agency, we hope the policy will achieve mutual benefit, as well as value for the taxpayer."

Any use of personal devices to conduct NASA business at this time is purely optional, and in the event that you do not feel comfortable, or are unwilling to comply, with any of these basic requirements, you may simply choose not to connect. Employees cannot be required or expected to use their own devices to accomplish their assigned tasks if they choose not to do so.

Look for more information on NASA's support of BYOD in the near future. And, as always, thank you for all the work you do every day to help us achieve NASA's mission!

# Exchange ActiveSync Policies Applied to All NOMAD Mailboxes

The End User Service Office (EUSO) was directed to enforce a minimum set of security requirements on any personal mobile device that attempts to access the NASA e-mail system, as is currently required of Agency Consolidated End-User Services (ACES) Government-issued devices. Both ACES-managed and personal devices use Microsoft Exchange ActiveSync (EAS) to synchronize with NASA e-mail.

EAS policies are applied to mailboxes, not to individual devices. Therefore, any ActiveSync device connecting to a NASA Operational Messaging and Directory (NOMAD) mailbox will be subject to these policies. The application of EAS policies was completed on Thursday, September 12, 2013. This implementation imposes certain minimum security requirements, including a passcode and an inactivity lock.

A complete list of ActiveSync use cases is posted on the NOMAD Web site at *http://nomadinternal.nasa.gov/nomad/documents/ActiveSync_Device_Use_Cases.pdf*.

Most commercially available devices are compatible with the new minimum security requirements. However, NASA cannot accommodate every single model, brand, and type of personal mobile device. As a result, there is the potential that some (mainly older) devices may be unable to meet these requirements and will therefore be unable to continue accessing NASA e-mail. To guarantee compatibility, employees should ensure that their device adheres to the standards provided in NASA-STD-2804P, which is available online at *https://etads.nasa.gov/dcs/current-standards/*.

Please take a moment to review and familiarize yourself with these requirements. Also, keep in mind that any use of personal devices to access NASA data is purely optional. You should refrain from using a personal mobile device to access NASA information and systems if you are uncomfortable, unable, or unwilling to comply with these minimum security requirements (you will still be able to access NASA e-mail via webmail). Because the use of personal mobile devices is purely optional, employees cannot be required or expected to use their own devices to accomplish assigned tasks if they choose not to do so.

NASA cannot offer help desk support for your personal mobile devices; if you choose to use your personal mobile device to access NASA e-mail and calendaring resources, you should make sure you have technical support through your vendor.

Microsoft® Exchange ActiveSync®

IT Labs

# IT Labs Update

***By Allison Wolff, IT Labs Project Manager***

IT Labs had a very productive year in 2013 with new projects, new partnerships, and the annual report.

IT Labs' highly efficient approach to rapid IT innovation was put to the test in this very lean budget year, but it succeeded in funding six new projects while continuing support for two existing projects begun in 2012. Efficiency and collaboration were key to project success, and IT Labs continues to explore new ways to share the great ideas of its contributors across NASA.

The group began a new video series highlighting the work of NASA's "IT Heroes." The IT Heroes Showcase is a streaming presentation that demonstrates the work supported by IT Labs. The IT Heroes Showcase launched in August with "Development of a Gesture-Based Interface for the Office." It is available to view on the IT Labs YouTube Channel at *https://www.youtube.com/user/NASAITLabs*.

The FY 2012–2013 Annual Report captures all of the incredible contributions from NASA's IT Heroes this year. To read the annual report, or to learn more about IT Labs, visit *https://labs.nasa.gov*. You will need to enter your NASA credentials to access this site.

Coming soon, NASA employees will be able to download a new mobile app that lets them carry IT Labs project knowledge everywhere. This app displays the new IT Labs graphics that were developed via a Center of Excellence in Collaborative Innovation (CoECI) and NASA Tournament Labs challenge.

And, last but not least, don't forget that the fiscal year 2014 IT Labs project call is just around the corner. There will be question and answer sessions prior to and during the call to facilitate the submission of applications, as there were last year.

If you have comments and/or questions, send an e-mail to HQ-NASA-IT-Labs@mail.nasa.gov. You can follow IT Labs activities on the IT Labs Blog at *https://labs.nasa.gov/Blog*.

# IT Infrastructure Integration Program (I3P) Update

### *Communication Services Office (CSO)*

The transformation phase of NASA's communications services continues. The NASA CSO currently operates two separate backbone infrastructures: one for critical spacecraft and science operations, and one for Agency corporate services. Three projects have been initiated with the goal of optimizing these backbone infrastructures to reduce costs and improve service delivery.

The Mission Next Generation Architecture (MngA) will implement the new mission network architecture required to support emerging and upcoming mission concepts and requirements, utilizing the CSO corporate backbone infrastructure wherever possible to reduce the overall cost of mission network services. Simultaneously, the Backbone Equipment Refresh (BB-ER) project will leverage a technology refresh to position the CSO's corporate backbone to support these mission network needs. Finally, the Mission Backbone Transition (MBT) will augment the MngA core, including all mission service locations, and transition existing mission-routed data service to the optimized infrastructure in order to take advantage of the new capabilities provided within the MngA. It is expected that at the completion of these projects, support for both mission and corporate services will be greatly improved and provided at a lower cost to the Agency.

### *Enterprise Service Desk (ESD)*

#### *ESD Releases*

The ESD project team continues to forge ahead toward the next release slated for Nov. 2013. The team is currently preparing the following enhancements:

- Additional details are being added to the system emails that are sent when an incident is resolved. This detail will help users recall which incident is being surveyed.
- A new system notification will be sent to P-Card holders upon completion of a service request which they funded, as a means of assisting them with P-Card invoice reconciliation.
- Center and Org Code details are being added to the approver screen in Enterprise Service Request System (ESRS) to help approvers view and sort pending requests.
- New guidance for use of the Urgency field is being added to the "My Tickets" screen at ESD Tier 0 to help users choose correctly.
- A new capability is being added for "My Tickets" to allow users to select another individual to act as point of contact for the incident ticket. This effectively adds a possible third party to each incident ticket, in addition to the existing Customer and Contact fields. The change is being made to ensure ESD and the I3P service providers are talking to the right person in reference to the ticket.

#### *Latest Releases into Production*

Several changes were made to ESD capabilities in Aug.

- Users now have the ability to look up incident tickets and service requests by name or number.
- The time-out issue between the APC, Order Services, and the Tier 0 website was resolved.
- Additional details were added to system-generated emails for service requests to help users better understand which request is being referenced. These details include APC cart contents and a link to delivery times for I3P services.

### *End-User Services (ACES)*

Instant Messenger/Presence Upgrade Complete: Microsoft Lync 2013 is being implemented as the Agency solution for instant messaging (IM) and presence, replacing Office Communicator. A pilot program was started in late August to test features of IM/presence. General deployment began on October 17. To learn more about IM/presence, refer to the training and feature-comparisons document located on the NOMAD Web site at *http://nomadinternal.nasa.gov/nomad/documentation.html*.

Transition from WebEx to Lync: NASA's Web conferencing services will transition to Lync 2013. Lync has features comparable to WebEx, including the capability to conduct online meetings for up to 1,000 attendees via a secure https Internet connection. An extensive pilot test of the new service will occur. The deployment schedule for the Lync web conferencing transition is being revised. Additional information will be communicated in the near future.

Nighttime Computer Patching: Software and security patches are currently distributed during the day each Tuesday to proactively protect against vulnerabilities and to maintain current software versions. Beginning in November, this patching activity will move to Tuesday nights to minimize disruptions during working hours. Patches will be released between 9:00 p.m. and 2:00 a.m. local time. To take advantage of Tuesday-night patching, computers must be connected to the NASA network in a "powered-on" but "logged-off" state. Users who take their laptops home must connect to the NASA network remotely through VPN to receive the nighttime patches. Machines left in the correct state will receive an automatic patch push with no user interaction required. Machines that are not left in the powered-on/logged-off state will receive notifications on Wednesday morning for patches that require user interaction to complete.

OS X 10.8 Upgrades for Macintosh: NASA has completed Mac operating system upgrades from OS X 10.6 to 10.8. Upgrades from 10.7 to 10.8 are in progress. Please contact your Center's subject matter expert (SME) if you have a Mac and have not been scheduled for an upgrade.

***Enterprise Applications Service Office/NASA Enterprise Applications Competency Center (EASO/NEACC):***

The Office of Education Performance Measurement (OEPM) financial integration initiative, due for release at fiscal year cutover, will link OEPM projects and activities to SAP Core financial data using work breakdown structure (WBS) as a key field. Although it is behind schedule, the NEACC has proposed a phased approach so that basic capability can be delivered in a reduced timeframe.

The NEACC is consolidating many existing service-level agreements (SLAs)/ operational-level agreements (OLA) into one document to define the service agreement between the NEACC and the Business Systems Management Board (BSMB). The initial draft is in review, and the approved version will replace all previous SLA/OLAs.

Identity, Credential, and Access Management (ICAM) supported the migration of an additional 320 users to PIV Mandatory, bringing the current Agency totals to above the 10-percent goal targeted for the end of September. The official signing of Federal Information Processing Standard (FIPS) 201-2, the Federal mandate requiring four certificates on the PIV smartcards, was completed. To comply with FIPS 201-2, all-new and replacement PIV cards must be issued with the new, mandatory PIV features (i.e., four certificates on the card) no later than 12 months after the effective date of the standard.

***Web Services and WESTPrime***

WESTPrime has completed migration and integration of the initial 65 Web sites and applications over a 22-week period. The WESTPrime team gained "User Concurrence" after collaborating with application owners, the NASA OCIO, and the NASA Security Group in critical design reviews and operational readiness reviews.

Before the migration, WESTPrime designed and implemented new open-source content management systems. As a result, NASA content creators can update content in minutes rather than hours because NASA.gov has been migrated to a cloud-ready Web site in AWS.

WESTPrime has moved to operations and maintenance for the migrated applications and Web sites. The WESTPrime Operations includes an incident management process, change control policies, change control board (CCB), cloud operations program (help desk), and monitoring plan. WESTPrime has captured these programs and policies in a comprehensive concept of operations (CONOPS) document and integrated various tools such as a Jira Tracking System, CloudWatch and Nagios monitoring software, and full integration with the Enterprise Service Desk.

A secure onboarding process has been documented, which includes a Risk Assessment, Identity, Credential, and Access Management (ICAM) Roadmap and deliberations with application owners to determine cloud environments and requirements pertaining to access, functionality, and security.

WESTPrime's Security team has worked closely with the NASA Security Division to ensure alignment with NASA's and FedRAMP's security policies and procedures. Currently, security controls are documented in a system security plan template issued by the FedRAMP Program Management Office. The WESTPrime team has implemented security controls such as a logging infrastructure, vulnerability management program, and a security configuration baseline. The WESTPrime team also participated in a lessons learned meeting with the Department of Health and Human Services (HHS) and NASA to obtain guidance from HHS based on their recent process in issuing AWS to their FedRAMP ATO. Through implementation of the required security controls and extensive security planning, WESTPrime also received an ATO from NASA for the WESTPrime cloud.

WESTPrime is currently in the process of migrating another 75 applications into its environment. The migration should be completed by the end of the calendar year. For question about Web Services and WESTPrime, contact Roopangi Kadakia at *Roopangi.Kadakia@nasa.gov*

## Langley Rolls Out Mobility Service

***By Kevin Boswell, Network Engineer, NICS SETE***

The NASA Langley Research Center's (LaRC) Office of the Chief Information Officer (OCIO) and the NASA Integrated Communications Service (NICS) are rolling out a service that extends desktop phone capabilities to certain smart devices (ACES-provided iOS devices, with future support for Android). This allows the device to support several popular enterprise business telephone system features, such as call transfer, conferencing, and forwarding. The target users of the service are those who periodically work from home, engage in frequent business travel, and experience poor cellular reception on or off campus.

This new service will empower users to

- use their ACES-provided smartphone or tablet as their business phone;
- make and receive calls using their NASA desktop phone number on their smart devices;
- make and receive calls on Center property in areas with poor cellular reception by using wi-fi networks;
- transfer calls between smart devices, NASA desktop phone extensions, and external numbers;
- conduct conference calls between external and internal phone numbers;
- contact colleagues by dialing their 5-digit NASA desktop extension; and
- place toll-free calls over wi-fi during domestic or international travel.

The LaRC OCIO and NICS collaborated to evaluate several solutions ranging from cellular repeaters to smartphone applications. As a result, LaRC chose the ShoreTel Mobility Router (SMR) product because of its support of multiple smart devices (iOS, Android, and Blackberry), seamless integration with the current Langley Telephone System, client reliability and system availability, and overall cost benefits. The service made available to all LaRC employees with ACES-provided smartphones and tablets in September 2013.

# Glenn's Graphics & Visualization Lab Soaring to New Heights

Recently, the Glenn Research Center Graphics and Visualization (GVIS) team welcomed Dr. Uwe Wössner from the University of Stuttgart, creator of the Collaborative Visualization and Simulation Environment (COVISE) software. As one of only a few teams in the world to collaborate with Dr. Wössner's development staff, the GVIS team was pleased to host Dr. Wössner as he shared his latest COVISE application developments and presented his paper, "Using Augmented Reality and Interactive Simulations to Realize Hybrid Prototypes." The information from the presentation and the follow-on technical demonstrations helped to expand the services of the GVIS lab, enabling new capabilities such as

- immersive interaction with fluid dynamics and volume visualization datasets
- creation of custom interfaces for interaction and control of visualizations

Services supported by the GVIS lab range from the visualization of scientific data and engineering analysis to the development of mission scenarios. GVIS also includes an immersive visualization environment, known as the Glenn Reconfigurable User-interface and Virtual Reality Exploration (GRUVE) lab. With these unique capabilities, researchers and engineers are able to explore their data with higher resolution and more realistic interactivity than is currently possible with desktop computers. The GVIS lab offers a unique forum for conveying complex scientific concepts to both general and expert audiences.

The GVIS team is currently developing applications in support of aeropropulsion, biotechnology, high-speed space and terrestrial communications, microgravity, aircraft safety research, and education. For example, it developed an interactive three-dimensional virtual reality experience that simulates the new altitude engine-icing capabilities of GRC's Propulsion Systems Lab. The team is currently working on a project that involves the development of an application using natural user interfaces (NUI), including gesture recognition.

During a recent tour of the GVIS facilities, NASA Federal Preservation Officer Jennifer Groman learned about how she could utilize GVIS services for historical preservation efforts. "What impressed me most about both [the GVIS and GRUVE] labs was the potential of the labs just waiting to be discovered by the rest of NASA," she said. "I witnessed very cool technology that I could see immediate applications for in my world, but the mystery remains as to how to get the word out across NASA for others to see the very cool resources and innovating team at GRC." To learn more about the GRC GVIS Lab, please visit their Web site at *https://ocio.grc.nasa.gov/gvis/* or send an email to *grc-gvis@lists.nasa.gov*.

IT Talk

# 2013 LAUNCH Materials System Forum

*By Beth Beck, Open Innovation Program Manager*

In the final week of September, NASA featured ten Materials System Innovations at the fifth LAUNCH forum, which was held at the Jet Propulsion Laboratory. NASA Deputy CIO Deborah Diaz and Deputy CTO Jim Adams represented NASA as LAUNCH Council members, along with several dozen world-class thought leaders from the multiple disciplines within the public and private sectors. The two-day Forum featured innovator presentations and facilitated conversations with LAUNCH Council. Council comments and recommendations were recorded through MindMapr, a digital platform created by NASA for LAUNCH: *http://MindMapr.LAUNCH*.org The recorded data is tagged and sorted for individually-tailored Accelerator Plans for each innovator.

LAUNCH was created in 2009 by NASA, Department of State, USAID, and Nike to seek, find, and accelerate game-changing innovations for intractable sustainable issues facing humanity, both on and off the planet. LAUNCH, recognized as a unique public-private collaboration and innovation platform, was selected as one of Harvard's Top 25 Innovations in Government in 2013; and a finalist for the 2012 Service to America Science and Environment Medal. For NASA, LAUNCH is a collaborative innovation incubator, enabling us to:

1. explore unexpected solutions from non-traditional sources
2. provide a testbed for new ways of doing business
3. broker partnerships among communities outside our normal orbit of influence.

Having successfully launched four challenges (Water, Health, Energy, and Beyond Waste), the LAUNCH team adopted a longer-term materials system focus. The 2013 materials innovations represent early-stage technologies; manufacturing and/or chemical processes; data and decision-support tools; and technology platforms. A few of the innovators include: Geckskin, repeatable attach and release technology; Ambercycle, molecular disassembly of PET through engineered enzymes; Artificial Bee Silk, intelligent and programmable smart materials; Ecovative, biodegradable mushroom materials for packaging; and Qmilk, a hypoallergenic fiber created from waste milk.

You can view all the innovator profiles at *http://www.launch.org/challenges/systems-2013*.

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