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IT Talk

May / June 2011 Issue 3

Social Media at NASA

IT Talk

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In this Issue

Message from the CIO

By Linda Cureton

Recently, I wrote my 100th blog post. It was an invigorating experience. Social networking technology has become part of our daily lives today, which we cannot escape anymore. It is my belief that digital relationships are as legitimate as real relationships.

Social media technology has proven valuable for my leadership needs as an Associate Administrator and Chief Information Officer (CIO). I am able to learn faster and stay in touch a little better with my customers, peers, stakeholders, and employees. Here are my reasons for blogging:

- To learn and demonstrate the value of Web 2.0 technologies supporting the spirit of innovation that should be required of a NASA CIO.
- To focus my thoughts and learning to the things that matter in my role as the CIO.
- To increase my leadership abilities to those I serve by providing a means for them to get to know what the "real" me is like.

Web 2.0 and social networking provide amazing technology innovations that empower the end user and give us the ability to make quantum leaps in IT. Using and understanding this technology is helpful for me to learn and demonstrate its capability, and helps me walk the talk as a CIO. The CIO of the future must learn and behave differently.

Take Twitter for example; with the sustained explosive growth in the use of Twitter, it seems we can't just view it as a fad that will pass soon. Twitter provides a powerful way of adding richness to conversations and interactions.

There are many leadership challenges that surround the usage of social media in organizations. In this issue we will explore how social media has evolved at NASA and how employees at the NASA Centers are using it.

NASA HQ hosts Microsoft Office for Mac Demo

By John D. Sprague, End User Service Executive, OCIO

On April 5, 2011, Microsoft and Apple joined forces to demonstrate the capabilities of the new Microsoft Office for Macintosh 2011. The demonstration at NASA Headquarters had quite a few Mac enthusiasts who showed up to hear the features of the product. And they were not disappointed. For two hours the improved Office product was put through the paces with plenty of questions from users. Some of the top features were (1) the ability to collapse multiple e-mail threads into one view; (2) the Office for Mac ribbon, which puts commonly-used commands at your fingertips; (3) the ability to reorder multiple layers in your documents with ease; (4) the broadcast slide-show feature (although it would require extensive firewall changes); and (5) the impressive photo-editing function, which lets you edit inside all your documents. One question that came up was, "When can we get it loaded?" The answer is that all Centers have been given the product for testing against Center-unique software loads, but that should be wrapped up in the next few weeks, and then Office for Mac will be coming to a computer near YOU!

Todd Hoffman, Microsoft NASA Account Manager; John Sprague, End User Service Exec; Shawn Carlson, Microsoft Team Architect; Michael Mills, Apple Engineer; Russ Pond, Apple NASA Account Manager

On Our Way to the 2011 Summit

NASA's first IT Summit—at National Harbor, Md., last August—was so well-received that NASA is doing it again, and this time the gathering will be bigger and better. The second Summit, hosted by NASA Associate Administrator and Chief Information Officer Linda Cureton, will take place Aug. 15–17 at the Marriott Marquis Hotel in downtown San Francisco.

Interest in the 2011 Summit is building. The conference can accommodate up to 2,000 participants and by mid-April—four months before the start of the Summit—nearly 600 had signed up. About a third of those were NASA employees, while more than half were from private firms.

The Summit's theme is "Making IT Stellar at NASA!"

The conference will be close to Silicon Valley and meeting planners expect a strong turnout of engineers, visionaries, and executives from that innovation hotspot—some as featured speakers. Immediately following the 2011 Summit (in the same venue) will be the TEDxNASA conference, which is certain to keep the creative juices flowing.

This year's event will feature discussions grouped into tracks by subject matter. Those will include infrastructure, innovation, the roles of chief information officers, IT security, organizational communication, open government, tomorrow's workforce, and "waves of the future." A new track, Mission IT Supporting Science and Engineering at NASA, will be launched. IBM's Watson—the Deep QA machine—will also be at the Summit to show what it can do.

The San Francisco Summit will also include a much-expanded education component, which will bring in to the conference about 300 teenage participants. In particular, a special session Wednesday morning will build on an existing NASA program, the Summer of Innovation, that works to get America's young people interested in science.

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I Tweet for NASA—Social Media at the Nation's Space Agency

By Stephanie L. Schierholz, Social Media Manager, NASA Headquarters

NASA is charged with communicating the activities of the Agency in fulfillment of its mission as widely as possible, and it is one of our core values. Social media sites are valuable tools that have enabled NASA employees to engage the public through media that spread the word efficiently and effectively. The Agency has come quite a distance since the pioneers at JPL started a Twitter account for the Mars Phoenix lander in May 2008. NASA's primary Twitter account @NASA is nearing 1 million followers, and we have more than 200 social media accounts Agency-wide. Don't believe me? Check out http://www.nasa.gov/connect.

Social media provides us an easy way to keep the public updated with news delivered straight into their newsfeed and homepage, Web sites they probably visit more often than news sites or the NASA Web site.

But the real value of NASA's use of social media can be seen in the level of engagement and the communities that form around them. It is called social media because our fans and followers have a reasonable expectation that their questions may be answered and their comments heard. By responding and interacting with them, NASA has the opportunity to educate, inform, and inspire. Fans and followers who are passionate about what we do have platforms to express this passion and share it with their friends, fans, and followers.

NASA Tweetups take it to the next level—bringing the online engagement to in-person gatherings where participants have an opportunity to talk to NASA leaders, scientists, engineers, and astronauts and the chance to see how and where we work. Participants have arrived at NASA Tweetups as casual fans or followers and walked away as enthusiastic advocates of the work we all are doing. A strong sense of community develops at these events, exemplifying how social media can bring together people who have common interests.

As usual, our team has excelled at using social media in a way that benefits the Agency and the taxpayers who fund us. If you are now thinking of ways you could use social media to share your story, work with your public affairs officers in advance to design a strategy that will ensure you are not only effective but also following established communication policies and complying with NASA and Government standards for legal, security, records management, and more. The very efficient nature of the medium that allows us to spread the word quickly about the great work we're doing also requires us to be more vigilant to ensure what we share is accurate, true, and public information. ⁄⁄

Beyond 140 Characters: Social Media @ JSC

By James, McClellan, JSC Chief Technology Officer

NASA's Social Network

Right now, NASA has more than a million followers on Twitter, received more than 300,000 likes on Facebook and had the first person from space check in via Foursquare. But how did it start? From my perspective, it launched in 2008 when a group of NASA Johnson Space Center employees gave a presentation called "The Gen Y Perspective." One of the presenters thought it would be cool to tweet from space. At the time I didn't know what tweeting was, but realized it was something significant and Googled it.

NASA didn't have a social media presence then, but soon, the buzz landed on NASA's doorsteps. Characteristically, social media started off small – NASA's Jet Propulsion Laboratory led and then a few folks at JSC, like the Public Affairs Office (PAO), created accounts for Facebook, Twitter, Ustream, Flickr, and others – and the public loved it! Social media is everywhere and today, NASA's a leader in the social media sphere.

Socially Awkward: Challenges in Successfully Adopting Social Media

The group soon realized that social media was just another tool in the IT and communication toolbox- just like telephones and email. To address this, JSC developed a Social Media Working Group (SMWG) comprised of folks from PAO, the Information Resources Directorate (JSC's IT Organization and the one I represent), the Legal Office, Human Resources and other orgs to focus on issues and guidelines associated with social media.

The group soon realized that social media was just another tool in the IT and communication toolbox—just like telephones and email. Most of the existing policies worked with minor exceptions. For example, updates to NASA Policy Directive 2540.1 included replacing the word "teletypes" with "Facebook." That change, combined with other modifications, resulted in the current NPD 2540.1G revision that allows the use of government equipment to go to sites like Twitter and Facebook, as long as it isn't impacting your work duties.

Our working group also developed a comprehensive guidelines document by mashing up six or seven guidelines from other major corporations and government entities with NASA-specific items. The resulting guidelines were ultimately adopted not only at JSC, but by the OCIO for the Agency: http://insidenasa.nasa.gov/ocio/information/social_media.html.

Balancing Act

But who should use social media at work? And, when is it appropriate? Those questions drove us to develop definitions for "official spokesperson," "professional,"and, "private individual" in our JSC social media policy. Official spokespersons are charged with representing the Agency (e.g., Public Affairs Office, associate administrators, etc.). The general public and employees (not on the clock) fall in the "private individual" category, which means they are expressing a personal, individual opinion, and not the Agency's. In between is "professional," who uses social media technologies in the performance of professional duties to support NASA (i.e., communications made in a business or professional capacity).

Social Media Inside the Firewalls

Social Media has proven it's not just a fad—it has fundamentally changed our culture's behavior in the way we communicate and interact. It's bound to also change the way we work together and collaborate across the center, and, across the Agency.

Over the past several months the JSC SMWG has been working to formally adopt a social media tool that can be used internally. The tool, called Yammer (initiated by our friends at Langley), is a Twitter-like tool, but it's not limited to just 140 characters. Yammer connects those with a "@ nasa.gov" email address, and, it's also one of the "approved" apps that the U.S. General Services Administration has developed Terms of Service Agreements with to address IT security issues such as advertisements.

Yammer also helps us follow the agency's guidelines on the use of social media, especially #17: "Do not use a public social media service for a NASA-related activity or discussion that is not meant for total public access. If the topic is not for release to the public, use an internal social media tool." Using Yammer instead of Twitter affords us the privacy of an internal tool, but enables collaboration and helps unlock information silos. It is not for Sensitive But Unclassified (SBU) type information, but Yammer does allow you privacy to communicate with fellow employees in a more open environment without the concern of 6 billion people on the planet reading your conversations.

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Ames—Engaging a Universe of Social Media Users

By Penny Hubbard, NASA IT Customer Experience Office and Jessica Culler, Ames Public Affairs Officer

Kepler Mission Deputy Science Team Lead Natalie Batalha

NASA's Ames Research Center invites thousands of virtual visitors every day to access all things NASA, providing easy and quick insight into mission milestones, research, and events.

Scientists, mission specialists, and other members of Ames's project and communications teams constantly engage users with personal glimpses into discoveries here on Earth and in space by missions such as Kepler, which has more than 115,000 Twitter followers.

Ames's lineup of social media tools includes Facebook, Twitter, YouTube, foursquare, Gowalla, online chats, RSS feeds, blogs, and other online destinations. These tools reach people where they naturally spend their online time, connecting with local communities and those across the globe. Social media also provide links and tools for science, technology, engineering, and math educators.

Ames is creating leading-edge opportunities for connecting at the Center and Agency level. Of special note, Ames developed the first official NASA application for the iPhone and iPod touch. The app collects, customizes and delivers an extensive selection of dynamically updated mission information, images, videos, live NASA TV, satellite tracking, and Twitter feeds from various online NASA sources in a convenient mobile package. Since the launch of the app, the iPhone/iPod touch version has been downloaded over 3.8 million times and the follow-on NASA App HD iPad version has been downloaded over 1.2 million times. An Android version of the app will be released soon.

Ames Public Affairs, which runs the Center social media accounts, hosted a "Tweetup" in February. The event provided 57 NASA Twitter followers with a unique opportunity to learn about the Kepler and SOFIA missions, speak with scientists and Center leadership, and mingle with fellow "tweeps" and people behind the NASA accounts. The avid social media users then shared their firsthand experiences with thousands in their own social networks.

To follow, like, tweet, and check in at Ames, visit the Ames Connect site at http://www.nasa.gov/centers/ames/connect/index.html. It is a great way to expand your universe of knowledge through social media.

Internal Social Media is Part of Everyday Work at Marshall

By Kevin D. Jones, Engaged Learning

It was one of those questions you normally don't ask because you would never find the right person with the right answer. But this time it was asked.

"Who in the OCIO [Office of the Chief Information Officer] is leading the Green IT movement?"

Who responded? A paramedic, an IT specialist, an environmental engineer, and an aerospace engineer—all chiming in with the correct answer, clarification, and insight into how to make the Center even more Green. They had never spoken to each other before. In fact, they all work in different buildings. And this is not an isolated occurrence. It happens many times a day at Marshall.

On February 1, MSFC introduced ExplorNet—an internal social networking tool—to its employees and contractors. It allows them to open up lines of communication that previously had been unavailable, increase collaboration across stovepipes, and find expertise throughout the Center.

ExplorNet's personal profiles and communities make up the two main components that make this such a valuable tool. Each person automatically has an individual profile. Some basic information—name, phone, e-mail, title, org code—is automatically pulled into their profile. Each person volunteers other information such as expertise, past projects, current projects, and biography. No matter where it comes from, all profile information is searchable, enabling quick access to the expert one may need. Each person is also given his or her own blog, wiki, and discussion space.

ExplorNet's second component, communities, can have wikis, discussions (forums), a community blog, polling, and light project management functionality. Because of the flexibility of the software, anyone can create a community at any time for any purpose. In the first 45 days of use, employees created 61 communities, with some gaining over 50 members each. The communities focus on a variety of topics, such as engineering photographic analysis, the J-2X upper-stage engine, specific software, green purchasing, and even the Marshall Cycling Club. The members of these groups can now collaborate on projects, no matter where they are—whether it is in several different buildings, at home, or from a hotel when they are traveling.

What benefits are they receiving? Some employees find that when they get together for a meeting that many minor issues have already been taken care of in ExplorNet and they can focus on the more complicated issues. Others find that their e-mail load is lessening. Some no longer manage complex e-mail distribution lists. Still others are able to finally ask questions and receive answers that were previously hidden because of their limited scope of communication. In the first month, over one-half of the employees have used ExplorNet in some capacity. The stories of how it is used and how they have benefited keep coming in. As an example, this article was created, edited, and reviewed all through ExplorNet.

Sure, it is a new way of working and not everyone has embraced it. It will take some time before it becomes core to the way we do business. Integrating it into our business workflow will make the difference. So far, the signs are good that we will be able to collaborate at a much higher level than in years past. ///

Finding Web-Based Tools

By Cory Gilbert, LaRC

The Information Management Branch (IMB) at NASA Langley Research Center (LaRC) is often asked for help in identifying Web-based tools for various purposes. Users are familiar with many tools on the public Web and often want to know whether equivalent tools are available internally or if the external tools are suitable for work use. To help answer these questions, Langley's IMB created a simple resource called the Web Toolbox.

The Web Toolbox features a list of all the Web-based tools that are officially approved for use at LaRC, including the NASA-approved applications on apps.gov. By default, a user is presented with a list of all available tools represented by large icons. To limit the list, the user selects one or more narrowing options on the left side. Clicking an option immediately reduces the list down to only the applicable tools.

For example, a user looking for tools with blogging and commenting features simply selects those options and the list changes to only tools with both those features.

Besides feature categories, users can also choose other options such as access restrictions (LaRC Only, NASA-wide, or public) and whether or not the tools support Sensitive But Unclassified/International Traffic in Arms (SBU/ITAR) data.

Once the user has a list of tools that supports his or her needs, the user can mouse over the tool icons to see a brief description or click the icon to see a detailed description, including information on how to gain access.

With the Web Toolbox, IMB has created a simple resource for LaRC users to find the approved tools they need. The team is hoping to add additional features in the future, including the ability for users to rate tools and post comments about their use. Feedback so far indicates users love it!

And while the Toolbox is not available for use Agency-wide, other NASA Centers may want to adopt the Web Toolbox concept and adapt it for their own needs. For more information, contact Cory Gilbert at 757-864-2754 or cory.r.gilbert@nasa.gov.

Beyond 140 Characters: Social Media@JSC

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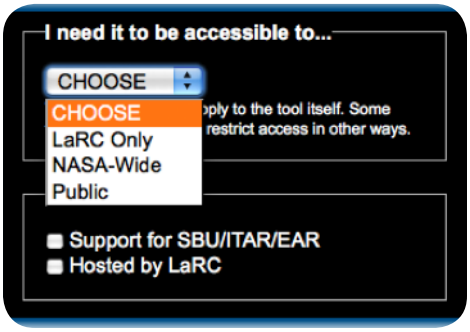
JSC just kicked-off an 18-month pilot of Yammer, and has presented it to NASA's Chief Information Officer, Linda Cureton, for formal adoption. The kick-off is in conjunction with the center's Innovation 2011 event on May 4. Innovation 2011 is a center-wide event that aims to foster an environment of creativity and innovative thinking by exposing the workforce to ideas, issues and perspectives expressed by JSC and White Sands Test Facility colleagues outside their normal circle of associates. We hope the use of Yammer will further enable collaboration throughout the event and beyond.

If you're on Yammer, you can follow me at @jamesbmcclellan.



Space Weather? There's An App For That

By Danielle Moore, Communications Lead, Information Technology and Communications Directorate/CIO, GSFC

On March 7, NASA's Space Weather iPhone App extended NASA's space weather analysis and forecasting capabilities to the mobile arena, becoming a top-12 weather application in the App Store. Designed specifically for the Apple iPhone, this app places both real-time observational data and model simulation data at the fingertips of millions of users. It can be accessed anytime, anywhere.

The NASA Space Weather iPhone App has been a joint activity of the Applied Engineering and Technology Directorate (AETD) and the Science and Exploration Directorate (SED) at NASA Goddard Space Flight Center. Derived from NASA's integrated Space Weather Analysis (iSWA) System, the NASA iPhone App provides free access to space environment information from the Sun to Earth, giving users a look at complex physical processes as they evolve, and how these processes affect the near-Earth space environment.

iSWA was developed to provide past, present, and future space weather information to Robotic Mission Operators across NASA. With the iSWA system serving as the foundation of the NASA Space Weather iPhone App, end users of the iPhone app can be assured that they are accessing the same world-class information used by the professional space science community.

The developers—Richard Mullinix, Marlo Maddox, David Berrios, and Antti Pulkkinen—are a unique team of engineers and scientists who work at the Community Coordinated Modeling Center (CCMC). The CCMC, headed by Dr. Michael Hesse, operates the largest collection of real-time space weather models in the community. With the iSWA system back end already under development, the team capitalized on the need to enable educators, students, and citizen scientists to take advantage of these NASA space weather resources. Now, anyone can perform real-time space environment analysis from virtually anywhere.

All data products in this free NASA Space Weather iPhone app are user selectable, allowing customized display configurations that include only the products of interest to each particular end user. Custom data selection capability is useful as the NASA Space Weather iPhone App has a catalog of over 200 unique space weather analysis data products ranging from the solar domain to Earth's ionosphere.

Enormous explosions of gas and charged particles from the Sun, known as coronal mass ejections (CMEs), can be viewed on the NASA Space Weather iPhone App minutes after an eruption has been observed from satellites like the joint European Space Agency and NASA mission Solar and Heliospheric Observatory (SOHO). Users can view the potential effects of such solar storms by accessing one of the many space weather model data products that use observational data to forecast potentially hazardous space environment effects. In addition to the NASA-provided observational and simulation data products, the NASA Space Weather iPhone App also uses external space weather resources from a host of collaborators such as the National Oceanic and Atmospheric Administration (NOAA) and its Geostationary Operational Environmental Satellites (GOES).

With tools like these, NASA aims to increase general space weather awareness to levels where knowledge of CMEs and solar flares are as familiar to most as hurricanes and tornados. ⫻

IT SUMMIT*—*Continued from page 4

The session will focus on the four components of the educational campaign known as STEM (Science, Technology, Engineering, and Mathematics). Four organizations—Raytheon, Cisco, Research in Motion/BlackBerry, and NASA itself—will each set up a learning environment in a corner of the large ballroom, with each corner devoted to a component of STEM. (For example, Raytheon, which has an ongoing initiative called "Math Moves You," will lead the math effort.) Teens will be able to move among the presentations.

In addition, the session will use Cisco's massive networking resources to create a large "telepresence" for the education session at several NASA Centers and, it is hoped, in South Africa. Meeting planners expect that the interactive session will be quite amazing.

The first Summit, last year, got very favorable reviews. According to post-conference surveys, 53 percent of participants said the Summit met most or all of their expectations, and 32 percent felt it exceeded their expectations. That led NASA's Office of the Chief Information Officer to plan an expanded event with 2,000 attendees this year, versus about 1,100 last year.

In response to the call for presentations, Summit organizers have received 103 abstracts. Track managers are currently reviewing and ranking the abstracts. Track managers from the Mission Directorates are working hard putting together sessions with topics that will captivate and inspire participants.

Summit presenters will have an opportunity to ask questions and get real-time responses via TurningPoint, an application from Turning Technologies, a 2011 Summit sponsor. Participants will respond to questions with handheld keypads. Real-time feedback is displayed on a screen and collected in numerous, detailed reports for further analysis. Participants are instantly engaged and understanding is confirmed, providing for a unique learning experience.

Immediately after the Awards Luncheon on Wednesday, August 17, the TEDxNASA@SiliconValley 2011 will be held. This event is open to the public and requires separate registration. Watch for announcements concerning this event, which is sponsored by the four NASA research Centers: Ames, Dryden, Glenn, and Langley.

For the most current information, and to register for the Summit, visit http://www.regonline.com/itsummit2011. ⫻

ACES 102: *ACES is on the Way!*

By John D. Sprague, End User Service Executive, Office of the Chief Information Officer

Hewlett Packard Enterprise Services (HP Enterprise Services) is the new Agency Consolidated End-User Services (ACES) service provider, replacing the Outsourcing Desktop Initiative for NASA (ODIN) contract. The ACES protest was decided favorably for NASA and now transition activities will be starting immediately, with more information to follow, specific to each Center. The NASA Shared Services Center, the host Center, is standing up an End User Service Office that is working with HP Enterprise Services.

Due to the protest, the previously published Period of Performance dates will change and be advertised as soon as possible.

ACES offerors were allowed to choose from one or a combination of the options for provisioning assets (e.g., hardware and software) and HP Enterprise Services chose Option B—Delivery of all new assets. HP Enterprise Services will deliver new assets for all end-user systems during phase-in for each wave. This includes an exception process for some mission critical resources that may require retaining existing assets. It will leverage the existing email and active directory infrastructure to alleviate any operational disruption to end-users during transition, but will replace shortly after contract start.

HP Enterprise Services will engage 5 percent of Center end-users in pilot tests to validate optimal performance. HP Enterprise Services will deploy Transition Tiger Teams (TTTs) to each Center to conduct asset transition execution during each phase-in wave.

There are four types of computing seats. The S Seat (Standard Premium) is a bundled computing platform with set service level options ("Best Value" solution) that includes 3-year refresh, 8-hour return to service. The M Seat (Modifiable) is a bundled computing platform with modifiable service level options (e.g., 2-hour Return To Service) to provide added flexibility. The B Seat (Build) is intended to meet more diverse needs not addressed by "S" or "M" solutions. The hardware, services, and system administration services are purchased separately. It provides full vendor product lines at a fixed (30 percent) discount for Windows-Compatible, Apple, and Linux/UNIX workstations. The vendor families are: HP, Lenovo, Dell, and Apple. The T Computing Seat (Thin Client) provides bundled computing platform solution with set service level options with a "thin client" appliance at the desktop coupled with the Managed Virtual Machine Service running on a remote server. The T seat price is by far the least expensive seat, excluding a bare-bones B seat. The X-Build (not a seat) is intended to meet needs above and below the current standards, such as test or lab units. This service is purchased from the ACES Product Catalog (APC) which includes all other product lines, and there is no technical refresh every three years.

Most other seats are similar to what is currently provided except: A Smartphone Seat (e.g., Blackberry, iPhone) comes in two types: "S" with standard instrument and service level options, and "B" with user-selectable instrument and services (17.9 percent discount). The Multi-Functional Device (MFD) Seat replaces the Xerox MFDs. The Virtual Team Service (VTS) Seat provides capability to conduct virtual team meetings. HP Enterprise Services will eventually move this service to a NASA private cloud and expand the VTS participant limit to 1,000 and provide the same solution for VTS and Instant Messaging.

HP Enterprise Services also brings Technology Infusion and Transformation that will be included in the next IT Talk.

For more information on ACES please visit the I3P website at: http://insidenasa.nasa.gov/ocio/i3p/i3p_aces_faq.html

I3P Update

On March 25, 2011, NASA selected Science Applications International Corporation (SAIC) of McLean, Va., for the NASA Integrated Communications Services (NICS) contract. SAIC will provide managerial and technical expertise to support NASA's Office of the Chief Information Officer (CIO) for corporate and mission communications needs, including local area network management at all NASA Centers. Functions include corporate and mission enterprise services, Center and associated component facility services, infrastructure projects, and contract management services.

The NICS contract is part of the NASA Information Technology Infrastructure Integration Program, also known as I3P, managed by the Agency's CIO. I3P focuses on consolidating NASA's infrastructure services in the areas of Web services, Integrated network and communications services, Enterprise applications, End-user services, and Agency Service Desk. The Enterprise Applications Service Technologies (EAST) contract was awarded last October and began operations on Feb 1, 2011. The Agency Consolidated End-user Services (ACES) contract was awarded December 27, 2010. Plans are underway for a Nov 1, 2011 contract start date. ACES will be ODIN's replacement. The NASA Shared Services Center continues to set up the Enterprise Service Desk and Ordering System to serve as the consolidated service desk and self-service Web site for the new contracts. The Web Enterprise Service Technologies (WEST) contract continues work in evaluating proposals, and a selection is expected this summer. When it is all completed, this Agency-wide effort will better enable the NASA mission, improve security, and gain efficiencies. So stay tuned, more developments are to follow in the coming months.

Open Source Software Development Summit

The NASA Office of the Chief Technology Officer for Information Technology hosted the first Open Source Summit at Ames Research Center in Moffett Field, Calif. on March 29 – 30. The event brought together engineers, policy makers, and members of the open source community. They discussed challenges within the existing open source policy framework and proposed modifications to enhance NASA's development, release and use of software.

Speakers included Pascal Finette, director of Mozilla Labs; Robert Sutor, vice president of Open Systems at IBM; Chris Wanstrath, CEO and co-founder of Github; and Brian Stevens, CTO and vice president of Worldwide Engineering at Red Hat.

The summit sessions involved licensing, government restrictions, such as the International Traffic in Arms Regulations, governance, and risk assessments.

“Although open source development and release has already provided numerous benefits to NASA, the full benefits of open source can only be achieved if NASA is able to establish the processes, policies, and culture needed to support open source development,” said Nick Skytland, director of NASA's Open Government Initiative. Open source is an inherently transparent, participatory, and collaborative approach used to create, improve and use software.

Goals for the summit included: establishing a method to support collaboration with the public throughout the development lifecycle; exploring NASA's ability to release and develop software under varied open source licenses; determining whether and to what extent NASA can participate in open source software governance bodies; and gleaning best practices from private industry and other federal agencies.

“Open source allows projects to tap resources that were previously unavailable. This software development process will require identifying new ways for NASA to expand its open source activities beyond releasing software,” said Tsengdar Lee, NASA’s acting CTO for IT.

The CTO for IT team planned, organized and implemented NASA’s first Open Source Summit in less than six weeks, with a minimal budget. This extraordinary accomplishment is amplified by the large media impact the event had and overwhelming participation from all corners of the community. Initially the event was planned to be a small discussion with 60 industry leaders. But word spread quickly and for the first time at NASA, more virtual participants than physical ones used new media. More than 700 people registered for the event, and 545 participated online. Twitter alone generated 3,199,713 impressions reaching an audience of 1,190,435 followers. More than 1,200 tweets tracked the many discussions and extended the conversation even further into the public sphere.

“This diverse community had multiple ways to join the conversation: watch the live feed via Ustream, comment through chat, join breakout discussions via Maestro audio conference, and submit feedback on Google docs to shape the policy discussions,” said Skytland.

The summit sparked more than 47 discussion topics such as communication and publicizing NASA’s open source efforts, licensing, limitations on contributing to external open source projects, and how to close the feedback loop between policy makers, developers and end users. Participants debated top challenges and came away with nearly 20 major issues and 66 substantive solutions.

For more information about NASA's Open Gov Initiative please go to www.nasa.gov/open/.

Ames and High School Intern—Collaborating for Success

By Penny Hubbard, NASA IT Customer Experience Office

IT Talk

NASA Ames hosts many successful educational programs at its Center. Some of these include: intern programs geared toward university and college students; summer camps for K-12 children; and development of numerous online resources for students and teachers. Yet, what about students who desire to learn about real-life applications but who don't meet university internship requirements? Enter Ames' Chief Information Officer James Williams, and Director of Center Operations Deb Feng, who worked together to identify a way for high school students to intern at the Center.

Two Paths Converge

Joel Bucheim-Moore was struggling to keep his grades up in high school when his parents enrolled him in a San Francisco technology program—the Bay Area Video Coalition (BAVC). To enter the program, students must first have an entrance interview. Joel recalls, "It went horribly because it was my first interview." However, he successfully ran the gauntlet, entered the program, and began focusing on computer courses. With his knack for technology programming skills, he was a great candidate match with the Nebula team for a summer internship. Nebula is an open-source cloud computing project and service developed to provide an alternative to the costly construction of new data centers whenever NASA scientists or engineers require additional data processing. Nebula also provides a simplified avenue for NASA scientists and researchers to share large, complex data sets with external partners and the public.

Williams, the Ames CIO, worked with BAVC's Digital Pathways program to arrange for Joel to become the first high-school-age intern at NASA Ames. "My instructors pushed me to do more and learn more," Joel said. "Without it I don't think I would have been prepared for the tasks and skills required by NASA."

A New Trajectory

At age 15, with goals established and signed intern agreements in hand, Joel rode the train and NASA bus shuttle from San Francisco to Mountain View. The Nebula team took him under their wing right away, and began mentoring him. One project manager on the team said, "He brought out everyone's nurturing instincts; we wanted to make sure he succeeded."

Joel's first task was to write user instructions for Nebula features. As he showed them what he could do, his mentors began giving him more responsibilities and challenges. Joel began learning new software code, understanding more about cloud computing fundamentals, and eventually was helping develop Nova—the code Nebula runs on.

"This is probably one of the hardest things I have done as a programmer," Joel said. "There were so many things I had to learn. Before NASA, I only had a fuzzy idea of what cloud computing was and I had never worked on an open source project. With the help of my coworkers I was able to grasp the concepts and contribute to the project."

Building a Win-Win

Partnering with BAVC produced wins for all involved. NASA executives Williams and Feng successfully illustrated that it's possible to achieve project goals, while supporting mentoring and positive outreach. The Nebula Team enjoyed influencing a bright and capable student, while maintaining their fast-paced schedule and giving back to the community. Best of all, Joel no longer struggles with his grades. His grade point average improved from 1.5 to 3.8. In spring of 2011, he continued to help the Nebula Group, and is now teaching computer programming to other students at BVAC.

"My internship at NASA has given me a lot of things, especially valuable work experience," Joel said. "It also taught me how do deal with people in a professional way."

Joel is now an excellent role model for those struggling with the same challenges he had. He has learned new skills and seen a glimpse of what the future holds for him. NASA Ames Teams were positively impacted and hope others will consider high-school interns for their programs. What is next for Joel? We think big things, since he's learned the sky's the limit!

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