



SWIM

The Current

→ System Wide Information Management → www.SWIM.gov

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Welcome Message from the Program Manager

Welcome to the fourth issue of *The Current*, our newsletter distributed to FAA staff, SWIM Implementing Programs (SIPs), and other interested parties.

Since our last newsletter, I am proud to report that the SWIM team has continued to aggressively pursue our agenda for Fiscal Year (FY) 2010. Our team has participated in a number of panels and conferences designed to continue the dialogue on innovation, information sharing, and the Next Generation Air Transportation System (NextGen), including: Integrated Communications Navigation and Surveillance (ICNS) Conference, Experimental Aircraft Association (EAA) Airventure, NATO/EUROCONTROL Air Traffic Management Security Coordination Group (NEASCOG), SWIM-SUIT Final User Forum, and others. Additionally, we recognize the benefit of communicating the long-term vision for SWIM and, thus, are holding our 2nd Annual SWIMposium, on September 29th.

It is an exciting time for the SWIM Program. The team worked hard on deploying the NAS Service Registry/Repository (See page 2 for the full article), which will help users of FAA data become more aware of what information is available in the National Airspace System (NAS). We're also preparing for a Final Investment Decision (FID) on SWIM Segment 2A to request baseline funding for FY11 and FY12 and a governance policy decision based on the selected alternative. The focus of Segment 2A will be on further requirements and architecture analyses, pre-acquisition work leading to an infrastructure contract award, and prototyping critical/near-term capabilities.

I invite you to learn more about SWIM services. We will use this newsletter to keep stakeholders apprised of the current activities and innovations happening in the SWIM Program. It is my sincere hope that, by delivering this newsletter, our team can keep all programs informed about circumstances that could benefit or affect their activities. We also strive to communicate to newcomers the resources available through SWIM.

I encourage you to visit us for more information at www.SWIM.gov or email us with any questions at 9-ATOW-HQ-SWIM@faa.gov.

Thank you,
Ahmad Usmani

Issue Spotlight: NAS Service Registry/Repository

The SWIM Program deployed the NAS Service Registry/Repository (NSRR) on July 8, 2010. The NSRR will serve as a central repository to help users discover, use and, whenever possible, reuse NAS services. The major functions of the NSRR include service discovery, governance, and lifecycle management. The NSRR stores metadata related to services, as well as the relationships between those services, which interested parties may access by browsing or querying the Registry/Repository.

The primary function of the NSRR is to enable the design-time discovery of NAS services. During design-time, a software developer will be able to discover NAS services of interest by browsing or querying the Registry/Repository. If the developer decides to use a discovered NAS service, they may retrieve various service artifacts, such as Web Service Definition Language (WSDL) files, to access the service. Developers wishing to be notified when the meta-information for a NAS service is updated may subscribe to receive such notifications. Interested individuals within the FAA may complete the User Account request form located in the SWIM Compliance Documents section of the Documentation page on www.swim.gov.



Issue Spotlight: International Partnerships

In the last several months, representatives from the SWIM Program met with a wide variety of stakeholders from abroad, including colleagues from the Japanese Civil Aviation Bureau, the Chinese Air Traffic Management Bureau, EUROCONTROL, the NATO/EUROCONTROL ATM Security Coordinating Group (NEASCOG) and Air Services Australia. In some

cases, these were first time discussions and information sharing sessions; while in other cases, the meetings represented a continued dialogue on critical next steps in aviation, SWIM and NextGen. All parties shared an interest in gaining an understanding of the SWIM program and understanding lessons learned. **The highlights include:**

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SWIM Accomplishments

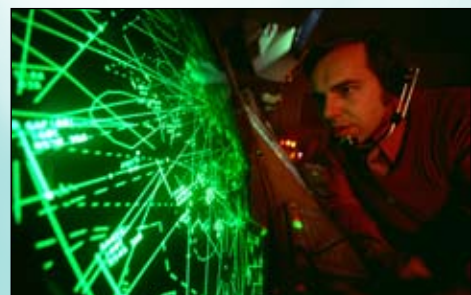
The SWIM Program continues to pursue an aggressive agenda in FY10, and has achieved a number of activities in the last three months. Chief among these accomplishments include:

- Released a Request for Information (RFI) for SWIM Segment 2. SWIM designed the RFI to seek industry feedback that will help the FAA finalize their requirements and the acquisition strategy for the design, integration, and delivery of SWIM Segment 2
- Developed investment analysis documentation for Segment 2, including costs, benefits, the Segment 2 Safety Plan, Implementation and Strategy Planning Document, Business Case Analysis, Exhibit 300, and other documentation needed for a Joint Resources Council (JRC) FID
- Participated in this year's Experimental Aircraft Association (EAA) Airventure in Oshkosh, Wisconsin. SWIM representatives provided an overview of the program and answered questions at the SWIM booth, part of the FAA's NextGen exhibit
- Deployed the NAS Service Registry/Repository (NSRR)
- Shared lessons learned in developing traffic management systems at Volpe Center Day at the Department of Transportation Headquarters
- Participated in panel discussions on "Net Centric Communications" and "Information Sharing and SWIM" at the 2010 Integrated Communications Navigation and Surveillance (ICNS) Conference



Issue Spotlight: International Partnerships *continued...*

- SWIM Requirements and Governance Team Lead, Jim Robb, delivered a briefing on SWIM Security to NEASCOG in Brussels, Belgium
- The FAA SWIM Program Manager, Ahmad Usmani, and the Implementation Team Lead, Jeff Hobbs, met with a representative from Air Services Australia to provide a program overview and discuss implementation lessons learned
- In coordination with the FAA/Air Traffic Organization (ATO) International office, the SWIM Program participated in a briefing series in support of Air Traffic Management Executive Training for a delegation from China. A SWIM Overview session was delivered by the SWIM Communications Lead to executives from China's Air Traffic Management Bureau (ATMB)
- The FAA SWIM Program Manager participated in the SWIM-SUIT Final User Forum held in Rome, Italy. The forum provided an opportunity to display examples of collaborative activities between Europe and the U.S.
- The SWIM Program prepared for a Data Exchange and Operations Based Trajectory Based Operations Workshop with the Japanese Civil Aviation Bureau (JCAB) in October



Issue Spotlight: Prototyping Developments

Prototypes are typically used to prove or test aspects of a potential design. In recent months, a number of prototyping activities were demonstrated by Segment 1 SIPs to demonstrate SWIM-compliance, including:

- The SWIM-compliant Integrated Terminal Weather System (ITWS) Prototype Service was developed by the ITWS development team at the Volpe National Transportation Systems Center in Cambridge, MA, using open-source software provided by Progress Software. Subscribers receive the products by connecting to the FAA's NAS Enterprise Security Gateway at the William J. Hughes Technical Center (WJHTC) in Atlantic City, NJ. Subscribers include FedEx, Harris, UPS, and the Air Force. Most recently, the ITWS Program also developed an application, or "app" that displays SWIM-compliant ITWS data on handheld devices
- The Corridor Integrated Weather System (CIWS) developed a prototype and selected participants who were interested in receiving CIWS weather data. The industry users will receive the CIWS gridded weather products by connecting to the FAA's NAS Enterprise Security Gateway located at the WJHTC
- The Terminal Data Distribution System (TDDS) is being developed to publish airport traffic information for NAS SWIM consumers to enhance operational efficiency in the NAS. On March 17, 2010, Raytheon conducted a second Proof of Concept demonstration at their facility in Marlborough, MA

In the photo, Kevin Graue, a software engineer with Raytheon, demonstrates to FAA and Volpe personnel outputs from TDDS. A Prototype demonstration was conducted in September at the Raytheon Facility in Rosslyn, VA. The demonstration included highlights from the prototype implementation, a system demonstration and the results of recent performance testing.



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Issue Spotlight: Net Centric Demos and Prototypes

The fifth in a series of Net Centric Demos and Prototypes Technical Interchange Meetings (TIMs) was held on May 26th. Mike Hritz, SWIM's Evolution and Coordination Team Lead, hosted the 40 attendees. The TIM remains focused on standardizing network centric information exchanges. An added bonus has been that shared information has enabled some organizations to leverage assets. The SWIM Program understands the importance of being aware of what other organizations are doing to analyze and develop Network Enabled Operations.

Ten presentations were provided, including current SWIM activities, ITWS/SWIM update, selected AJP-67 demos (especially the Daytona Beach Integrated Testbed), aspects of the Electronic Flight Bag, AIM/SWIM activities, the WJHTC NextGen lab, and other topics such as NNEW's 4D Weather Cube. These presentations are posted at www.SWIM.gov.

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Issue Spotlight: Net Centric Demos and Prototypes

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The next Net Centric Demos and Prototype TIM is tentatively scheduled for November 3rd at FOB 10A. Please contact Mike Hritz at 202-385-7198/ mike.hritz@faa.gov, if you are interested in attending. Remember, if you brief it, SWIM will post it for the benefit of all.

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Issue Spotlight: Aircraft Access to SWIM taxis out...

Since our last issue, Aircraft Access to SWIM (AAtS) has begun to generate interest. AAtS is the name of a joint initiative between System Operations and SWIM to define how aircraft could potentially become a "node on the network." The intention of the initiative is to do just as the name implies, provide aircraft access to the SWIM SOA network and all the data contained within.

The process of adding information to an aircraft cockpit can be laborious and expensive for each new capability. With AAtS, when a new service is added to the SWIM SOA network, it can be exposed to the aircraft and, at the same time, it makes the AAtS concept extremely data scalable. Additionally, aircraft operators are already in the process of installing the electronic flight bags (EFBs) and broadband IP connections to their aircraft for their own operational needs. AAtS would simply leverage those existing EFBs and connections making the development process that will enable AAtS potentially shorter and inexpensive for the operator.

On July 22nd, the AAtS Working Group met for the second time where the progress of various concurrent efforts was discussed to heighten coordination and reduce duplicative labor. The working group is currently comprised of representatives from SysOps, SWIM, Next Gen I&I, AFS, AIR, WTIC, AIM and FTI and their contract support. Additionally, the AAtS initiative is working with individuals from NASA and Volpe Transportation Center's Airborne Network Security Simulator, as well as members of the European SESAR Special Joint Undertaking 09.19 (SWIM Air-Ground Capability). The next AAtS Working Group meeting is tentatively scheduled for November 17th. Those wishing to attend or to receive updates on changes to the meeting schedule should contact Mike Hritz at 202-385-7198/mike.hritz@faa.gov.

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Practitioner Highlight: Abraham Calderón

An interest in software development and enterprise architecture made Abraham Calderón a natural fit as an intern for the SWIM Program. Abraham spent part of his summer researching Service Oriented Architecture (SOA), including SOA components and implementation, its benefits for business enterprises, and analyzing various service registries that the SWIM Program may potentially use in the future. In addition, he assisted Acquisitions Lead, Rhonda Thomas, and her team in determining IT companies with the technical expertise to provide support services to the SWIM Program. Additional activities have included identifying IT publications to publicize procurement opportunities in for the SWIM Program.

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SWIM Program announces 2nd Annual SWIMposium for September 29th

SWIM invites all interested FAA staff to its 2nd annual SWIMposium, an informational panel on SWIM. The event will take place on September 29th from 1 - 2:30pm in FOB 10A Bessie Coleman Conference Center. The SWIMposium is designed to provide an overview of SWIM, describe what it means for your program, highlight next steps, and allow an opportunity to answer your questions about SWIM.

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Staff Highlight: Linda Chen

Linda Chen joined the SWIM Program in April as a Computer Specialist. She supports the SWIM Implementation Team, acting as the interface between the SWIM Program Office and the weather programs that participate in SWIM Segment 1. Linda holds Master's degrees in both Computer Science and Physical Chemistry. After graduating from the George Washington University, she worked as an FAA contractor for more than 11 years and gained experience by active participation in all phases of a system's lifecycle in the Information Technology field. In her spare time, Linda enjoys spending time with her 17 year old daughter. For Linda, "SWIM" plays a big part both at work and at home; she often spends her weekends at the pool.

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SWIM Newsletter provided to you courtesy of the following: *Aisha Saaka, Andrea Freeman, Lesley Woodburn, and the SWIM Team.*

*All documents are available to the public on the SWIM external website at **www.SWIM.gov**.*

Practitioner Highlight: Abraham Calderón *continued*

Abraham attends Heritage University in Toppenish, Washington, where he is pursuing a double bachelor's degree in Computer Science and Mathematics. He works on campus as an XML Converter Specialist at the University's CIDERS Lab and is a big UFC and Denver Broncos Fan. Great Job Abraham!

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SWIM Questions & Answers (Q&A)

The SWIM Program has posted a list of commonly asked questions (Q&As) at www.SWIM.gov. In each edition of the newsletter, a few questions and responses will be highlighted.

What is IT governance? How does it relate to SWIM?

IT governance is intended to direct and control the use of an organization's IT resources in a manner that balances risk and return and meets the organization's overall business objectives. Effective IT governance requires consistent and coordinated approaches to IT decision-making through a set of policies, processes, plans, procedures, and decision-making structures. SWIM governance will ensure use of common protocols and interfaces, assisted by use of commercial software for some core services.

Why does SWIM require use of specific software?

SWIM requires the use of specific software because many SOA protocols are not "on-the-wire," meaning there are multiple implementation options that meet the intent of the standard. One example is the Java Message Service (JMS) protocol, which is implemented differently by different vendors. The standard is not yet mature enough to avoid issues with incompatibility and interoperability across various vendors.

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Updated Subscribe Feature on www.SWIM.gov

The SWIM Program invites you to explore our new and improved **www.SWIM.gov website!**

The Communications Team recently added a "Subscribe" feature to the SWIM website. Subscribing will allow the team to keep up-to-date with current activities anytime the team makes changes to the "Recent News" section on the SWIM.gov home page. To subscribe, click on the green check mark on the top of the SWIM home page, and follow the instructions to register. We've updated the Subscribe feature to include the full text of our news announcements – direct to your email!

If you have a suggestion or information to contribute to our website, please contact the Communications Team at 9-ATOW-HQ-SWIM@faa.gov.