

AFS-400 Field Update

Flight Technologies and Procedures Division

"Improving Safety and NAS Operations through Flight Technologies and Procedures"

Volume 2, Issue 2:

Spring 2015

A Message from Bruce

It is hard believe that a full year has passed since we first began our quarterly newsletter. We have enjoyed highlighting AFS- 400 projects, recent staff changes, division updates, accomplishments and upcoming events.



Over the past year our newsletter has grown from simply being distributed to Flight Standards to now having a growing distribution list. Thanks to your interest, our content continues to grow with each publication and we appreciate your enthusiasm in the division. We always enjoy hearing from our readers and encourage your feedback!

This Field Update is intended to reach both internal and external audiences and we appreciate you sharing with others that you feel may benefit from our content. You can find our previous newsletters archived [here](#), should you want to revisit previous issues.

Thank you again for your continued support and, as always, please continue to send your suggestions, ideas, and comments to AVSNextgen@faa.gov.

Bruce DeCleene

Manager, Flight Technologies and Procedures Division, AFS-400

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Highlighted Stories

Established on Required Navigation Performance (EoR)

EoR is a new function for approaches which leverage technology both in Global Positioning Systems (GPS) and aircraft navigation systems. It will be coupled with Air Traffic Control technology and procedures to enable aircraft approaching two parallel runways from both sides to be established on an approved curved path approach, without being restricted to a 3 nautical mile lateral separation or a 1,000 feet vertical separation.

EoR hopes to transform the way planes fly into airports from how they conduct operations currently. Today's aircraft use the Instrument Landing System (ILS) approach to parallel runways. This usually results in additional vectoring creating a costly and timely landing.

Unlike the ILS straight-in approach, the EoR approach would be in the shape of a "J" with a mirror image on the adjacent runway. This shape allows a shorter lateral distance of 6-8 miles versus the ILS 20 mile approach. The 3 NM or 1,000 ft. vertical separation would not apply in EoR. The changes EoR provides are advantageous to airports, pilots, controllers, and airlines. EoR reduces the amount of time it takes to get an aircraft from the Initial Approach Fix (IAF) to the runway. This will save airlines fuel dollars by reducing the time otherwise spent on longer ILS approaches. The curved path is roughly less than 10 miles from IAF to FAF. It will speed up the approach time and put passengers on the runway at a faster rate, thereby improving arrival times. By mixing in standard ILS traffic with EoR traffic, you can maximize efficiency of the surrounding airspace and increase capacity of aircraft arrivals.



The J-shaped approach with the EoR concept.

In order to implement this new technology at airport runways, our researchers in OKC are investigating all safety components this complex procedure must meet. They are conducting Human In The Loop (HITL) simulations to measure controller and pilot human factors issues that may arise and the proper phraseology for emergency situations.

The HITL researched both the controller and pilot sides. The Controller HITL completed March 5 and tested a total of 22 controllers. The Pilot HITL was organized into a phased approach. Phase 1 brought in over 30 industry pilots from the air carriers to participate in the HITL. Crews from the Airbus A330 fleet and the Boeing 737 fleet participated, flying 24 scenarios on the EoR approach concept. Phase II is scheduled for May. It will involve getting industry pilots who fly the regional jets and using an industry facility.

EoR research is in the initial stages of development. The data gathered from the HITLs is being analyzed in depth by AFS-450 engineers and will be used to identify the collision risk and inform the safety study, which is currently due by the end of calendar year 2015. If the safety study identifies that the EoR concept is valid and ultimately safe, follow on studies will be conducted to identify where the EoR prototype concept can be implemented.

For questions regarding this project, please contact Jason Walls at Jason.Walls@faa.gov.

Highlighted Stories (Continued)

All Weather Operations (AWO) Technical Information Sharing (ATIS)

AFS-408, the NextGen Program Branch, provides oversight and technical guidance for the All Weather Operations Specialists (AWOs) assigned to the field offices, ensures standardization of the technical field work functions, and provides direction to field offices regarding execution and technical support for the FAA NextGen programs. AFS-408 also oversees information, training, and implementation of the NextGen programs in the field.

In the past year, AFS-408 has been conducting regular meetings called AWO ATIS forums. They are conducted on an as-needed basis to provide technical and policy information to the Regional NextGen Branch (RNGB) AWO inspectors who require specialized knowledge on subject matter that is not readily available through other means. Since they began in January 2014, AFS-408 has conducted over 25 sessions in a broad range of topics pertinent to AWO Subject Matter Experts.

The idea was born due to a significant turnover in AWO personnel within the past few years. AFS-408 quickly identified the issue and in response, set up a series of forums to help educate the new AWO personnel. The ATIS sessions seek to hit all of the primary AWO tasks, ranging in topic from items such as processing NextGen applications to Obstruction Evaluation to the specifics of the Electronic Flight Bag. Various AFS-400 specialists and contract support personnel have worked to make these sessions possible.

These AWO Technical Information Sharing (ATIS) sessions help with dissemination of current information and policy on NextGen Technologies and other issues pertinent to the All Weather Operations (AWO) job function. They also help new AWOs assimilate to the job function and provide an opportunity to share best practices and issues across all eight regional boundaries.

Each session is roughly one to two hours with a chance for questions at the end. An FAA representative provides the presentation to the AWOs via WebEx and telecom. With approximately 40 AWOs, it is difficult to have everyone at each ATIS. Therefore, AFS-408 worked to record each of the ATIS presentations so that new personnel and those AWOs on travel could have access to them on the AFS-408 SharePoint site located [here](#). The ATIS schedules, SME contact information, and presentations can all be found on the site.

For questions regarding this project, please contact Pat Zelechowski, Manager AFS-408, at Pat.Zelechoski@faa.gov.

Employee Spotlight

Julie Webb



Q: What you do, how long have you been with FAA, and where are you based?

JW: I'm a Program Analyst for AFS-405A, Management Operations Branch in Oklahoma City. I've been working with Flight Standards since 2008.

Q: How did you begin your career with the FAA?

JW: As a child, I visited the Mike Monroney Aeronautical Center (MMAC) often. My parents, Lonnie and Annabelle Haraway, both worked and retired from the FAA in 1990 and I always wanted to work here. My persistence finally paid off because I got my first job as an Office Administrator in AFS-460, Flight Procedure Implementation and Oversight Branch, when Gary Powell was Branch Manager

Q: What is your favorite part about working here?

JW: I enjoy having a variety of tasks including being a Contracting Officer's Representative, training coordinator, purchase cardholder, environmental and safety representative for AFS-400, as well as working on other miscellaneous projects. The reward comes when everything falls into place-- the contract gets awarded, the employees get (their requested) training, etc.!

Q: Best life lesson?

JW: I have always liked the Serenity Prayer, "God grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference." This has proven to be applicable in both personal and work areas of life!

Q: What is your greatest accomplishment?

JW: Raising a family with my husband Kent of 34 years (also an FAA employee). Both daughters are graduates of the University of Oklahoma and live nearby. Alicia is a veterinarian and Brittany is a registered nurse. I now have the privilege of being "Gigi" to my wonderful grandson, Harrison.

John Gordon



Q: What do you do, how long have you been with FAA, and where are you based?

JG: I am the Manger of the Management Operations Branch, AFS-405. I've been with the FAA for about 12.5 years (since October, 2002) and I work in Washington DC.

Q: How did you begin your career with the FAA?

JG: After 27 years in the Navy as a Master Chief Air Traffic Controller, I went to work for NASA at Ames Research Center from 1992-2002. I was the assistant airport manager for Moffett Federal Airfield. After 4 years I became a program manager for the Terminal/Surface Element of the Advanced Air

Transportation Technologies Project, the NASA research program that developed some of the Air Traffic NextGen tools. Then I went back to the airport as the airport manager and assistant Division manager for the Flight Operations Division. I wanted to get to the east coast and NASA had no openings, so I applied for a job with AFS-430 and got hired as an ATC/ weather SME. I was selected in 2006 for my current position.

Q: What is your favorite part about working here?

JG: Being involved in the implementation of NextGen and seeing the great work the people of AFS-400 do every day.

Q: Best life lesson?

JG: Don't be afraid to make a mistake. Take risks and learn things!

Q: What is your greatest accomplishment?

JG: I have two great children and 4 outstanding grandchildren. I've also been married to my wife for 45 years. I guess that's a testament to her accomplishments, being able to do all that while putting up with me!

System Safety

AFS-400 Safety Implementation Plan:

There are the four pillars of the FAA's Safety Management System (SMS):

1. **Safety Policy**
2. **Safety Assurance**
3. **Safety Risk Management**
4. **Safety Promotion**

Each component focuses on a specific area of managing safety. **Safety Policy** defines safety objectives and the responsibility and accountability of individual employees. **Safety Assurance** focuses on processes within SMS to ensure performance and effectiveness of safety risk controls and determining if an organization meets or exceeds safety objectives through assessments. **Safety Risk Management** is a process composed of describing systems, identifying hazards and analyzing and controlling risk. **Safety Promotion** is a combination of training and communication of safety information that supports the implementation of SMS within an organization.

AFS-400 complies with SMS through a system of processes and procedures. All projects, processes and systems in AFS-400 are reviewed by the division's safety management team, meeting the objectives of the Division safety policy. A detailed evaluation of the project is conducted assessing initial hazards, risks and mitigations. Once the initial evaluation is complete, one of three things occur: an Operational Safety Assessment (OSA), an Operational Safety Review (OSR), or a Safety Status Report is developed to document the safety review and satisfy the safety assurance pillar of SMS. Periodic monitoring after implementation is conducted to ensure any changes that occur are reflected in an update to the original documentation. The objective of the process is to support critical and collaborative thinking while making safety related decisions affecting the various projects within AFS-400. System safety subject matter experts assist project participants by providing system safety support in order to further enhance safety-related efforts.

Notes & Announcements

Mailbox Migration

This spring IT Services completed migrating shared mailboxes from Lotus Notes to the Outlook Web App. During this migration process, some of AFS-400's mailbox names were changed. Please be sure to use the following mailboxes when corresponding with AFS-400:

Correspondence and Document Coordination: 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures-Division@faa.gov

Communications and general Inquires: 9-AVS-AWA-Nextgen@faa.gov

Environmental Assessment: 9-AWA-AVS-Environmental@faa.gov

Staffing Changes

We had one staff change this quarter:

[Thomas Parmer](#) an Aviation Safety Inspector with the Future Flight Technologies Branch, AFS-430. He has relocated to the American Certification Management Office in Irving Texas.

Division Updates

✓ **ADS-B Out Call to Action**

In our Winter Newsletter, we highlighted the Call to Action and follow on working group to identify and address barriers to equipping with ADS-B Out by Jan. 1, 2020, as required by FAA regulations. The Equip 2020 Working Group has made significant progress since the October meeting:

- FAA published a Final Rule Technical Amendment to change the ADS-B Out TSO from “meet requirements” to “meet performance requirements”. The technical correction to the rule addresses concerns from the experimental aircraft community.
- More than 3,500 GA aircraft have equipped since October 2014
- So far, four airlines have publicly declared they will meet the 2020 deadline (Delta, American, Jet Blue, and FedEx)
- An equipage tracking database was developed to capture data from both suppliers and air carriers. This will help track the equipage trends to help inform if we are on track for the 2020 deadline.

✓ **Order 8260.26 Update**

Completed and published on February 2015

This order is being revised to provide procedure specialists, flight inspection personnel, charting agents, and aircrews the shortest possible response time to complete necessary rulemaking actions, when required, and to publish and use procedures after completing flight inspection. It will also change the transmittal letter responsibility from AIM to AeroNav Products

✓ **Light Emitting Diode (LED) Symposium**

Also in the Winter Newsletter, we focused on the LED Symposium held in October. During this quarter significant progress has been achieved on LEDs and work continues at an avid pace. The LED Science group conducted meetings in February and March which produced a list of research priorities for the Operational Flight Test Group (OFTG). The group also finalized a list of recommendations to be forwarded to the OFTG for possible implementation. The OFTG had meetings in January, February, and March. The group has made significant progress toward data collection via a survey instrument and on development of a flight test protocol and timeline. Both groups have follow up meetings already scheduled throughout the spring months.

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