

SAPOE



Society of Aircraft Performance and Operations Engineers

This update will focus on the status of SAPOE's Action Teams, as well as more opportunities for SAPOE involvement.

A periodic Newsletter, dependent on membership involvement

Autumn 2019

One clear takeaway from 2019 SAPOE Conference in Amsterdam was that the Society needs to do a better job of appraising the membership of what activities SAPOE is involved, what progress has been made, and how members can get involved. SAPOE currently has four Action Teams named after big cats. This is a summary of what they are doing, what they have accomplished, and contact details for more information or to become more involved.

Lion Team

The Lion Team's task is to develop standards for aircraft friction recording and reporting technologies. John Gadzinski is the Chair.

The Lion Team was formed in January 2017. The team holds online meetings two times a month and conducts an annual two-day workshop in Virginia Beach where they partner with the US Navy LSO School and the Military Aviation Museum. In 2018 the Lion Team established a formal partnership with the American Society of Testing and Materials (ASTM) as a recognized technical working group.

ASTM created the "E17.26 Aircraft Friction" Subcommittee for standards drafting and publication purposes. The first activity of the group was to standardize the terminology used in aircraft braking performance. In 2018 the group formally submitted their list of terms to ASTM for approval and in 2019 this list was officially published under the designation ASTM E3188-19 "Standard

Terminology for Aircraft Braking Performance" and was the very first document to publish a definition of a Pilot Braking Action Report as well as introduce a new engineering term, the Aircraft Braking Action Report.

The team is currently finishing work on a new standard titled "Standard Practices for Friction Limited Aircraft Braking Measurement and Reporting" which is due to begin the formal ASTM balloting process in late 2019, early 2020. This will be the first international standard to cover aircraft systems that report braking in relation to the TALPA scale. The team will then work on appendixes for this standard to further communicate industry best practices and guidelines for this field of expertise.

Team members come from Alaska Airlines, American Airlines, Delta Airlines, Southwest Airlines, Airbus, Boeing, FAA, Navblue, and Aviation Safety Technologies.

Members may contact John Gadzinski at john@fourwindssafety.com.

Tiger Team

The Tiger Team's task is to develop a proactive action plan for W&B Advisory Circular 120-27F. Kristine Henning is the Chair.

In 2013, the FAA released the first draft of a revised AC120-27. Industry made every attempt to work collaboratively with the FAA, but hit roadblocks. In response, SAPOE formed the Tiger Team in January 2015 to take a proactive stance on AC120-27F from an industry perspective. The goal was to document an industry action plan for gathering, analyzing, and sharing data for passenger body weight, carry-on weight, and checked bag weights.

To date, the team has documented a comprehensive industry approach for surveying carry-on & checked bag weights and counts, for proposal to national and local FAA offices for incorporation into each airline's approved weight and balance program.

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Panther Team

The Panther Team aims to create best practices or standards to mitigate the risks and reduce occurrences of pilots performing takeoffs using improper data. Duke Ham and Gerard van Es are the Chairs.

Initiated by an FAA Safety Alert SAFO18009, an e-mail was sent by the SAPOE officers to all members on January 26th 2019 to ask for volunteers to form a Take-Off Safety Team (Panther team) to explore the possibilities to create best practices or standards to mitigate the existing risks and reduce occurrences of pilots performing takeoffs using improper data.

After an initial telecon with some of the team members, a concrete and more restricted definition of the task could not be established. A general description of best practices and standards was not the prime goal of the team as this has already been done by many others. Therefore, a more detailed solution, instantly applicable by operators was what the team should strive for.

As the discussion proceeded on the subjects, the SAPOE conference in Amsterdam was approaching and then it was decided to take the opportunity to ask the conference attendants' opinion.

During the conference this was explained, and a survey was held among the audience. The presentation can be found on the SAPOE website which includes a link to the survey. Please fill in this survey if you haven't done this yet.

After the conference, no action has been taken by the team yet. The present list of members may change as all members that want to be involved and that have time available are encouraged to join the team. Also, those members that volunteered in January, may no longer be able to participate.

Once the new responses on the survey have been received and mutations to the participants list have been incorporated, the outcome of the survey will be discussed and a more concrete task will be defined. The proceedings will be published on the SAPOE website, hopefully before the end of this year.

Team members come from Alaska Airlines, American Airlines, Delta Airlines, flyDubai, United Airlines, Airbus, Airbus Canada, Rolls Royce, ADSE Consulting & Engineering, Ham Aircraft Performance Engineering, Lean Engineering, NBAA, NLR - Air Transport Safety Institute, and Operational Performance Systems.

For more information, contact Duke Ham at duke.ham@hapes.eu.

IATA Training Opportunity

During the annual conference in Amsterdam, IATA solicited an idea to partner with SAPOE in order to create airplane performance and weight & balance training curricula. The intent is to create a generic program as a service to airlines and service providers that may not have the means to engage in performance training from the airframe manufacturers. As relevant as this is, we must also state what this training program is not. There is no intent to create a certification program endorsed by IATA or SAPOE.

Sufficient interest amongst the membership was displayed at the conference to encourage IATA to move ahead. IATA management is now reviewing how it wishes to proceed.

Contact John Synnott, synnotti@iata.org for more information.



ABOUT SAPOE

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Thank you for taking the time to read this SAPOE update. Going forward, we hope to send shorter and more regular updates with respect to SAPOE team progress.

We welcome all submissions for technical and industry news. This is the forum that will be read by your counterparts worldwide. Has your regulatory authority imposed a novel (worthy or otherwise) requirement on your operation? Tell us how you resolved it. Have you been facing an unusual operational challenge? Lend your peers your insight into how you not only conquered the technical aspects, but also how you brought other stakeholders (management, labor groups, regulators, etc.) into agreement over the ultimate solution.

We also welcome non-technical articles. Have you traveled somewhere that the members might find appealing? Write a travel article for us and include photos! Is there an air show or other unique event occurring in your region? Give your fellow SAPOE members the inside information to make the most of a visit to your area. While aviation-centric destinations are obvious, feel free to expand the memberships' knowledge of where else we might exercise our pass travel privileges!

More information can always be found on our website, sapoe.org.

Respectfully,

Craig Nordstrom - Editor-in-Chief

editor@sapoe.org

Jaguar Team

The Jaguar Team's task is to identify and gain access to the best sources for aeronautical data. Chris Hill and Jay Leitner are the Chairs.

Access to timely, accurate, and relevant aeronautical and obstacle data has seemingly always been challenging. That access is further complicated by ensuring performance analyses are being completed with best available data sources. In order to better understand and consolidate the existing multiple aeronautical and obstacle data sources, the Jaguar team was established to identify the multiple sources of data, better understand the regulatory challenges faced by agencies in allowing full access to those datasets, and identify a sustainable path moving forward to allow all users access to the data.

The Jaguar team continues to actively participate in the FAA Aeronautical Charting Meetings, in both the Instrument Procedures Group and the Charting Group. This ensures that we remain up to date with current issues facing the FAA with regards to pilot procedures for instrument flight, as well as criteria, design, and developmental policy for instrument approach and departure procedures.

Team members have provided guidance to the FAA as they undergo a SRA (Safety Risk Assessment) regarding changes to the RNAV ICA (Initial Climb Area) and the effects those changes might have on the presentation of low, close-in obstacles on departure charts. As a result of direct communications between the Jaguar team and the FAA Office of Airports, we have been able to enable access to AGIS (Airports GIS) to all registered users. Benefits of this access include:

*AGIS will be opened up on Nov 15th allowing access to completed surveys per AC150/5300-18B

*Anyone (airlines and 3rd party service providers) will be able to access AGIS.

-Each individual application will be reviewed.

-Foreign nationals will be able to access AGIS

*The obstacle data from a completed survey per AC150/5300-18B will be available via AGIS. The file export format is still being discussed.

Visit <https://airports-gis.faa.gov/> to get started.

Jaguar team members continue to monitor the progress of the Aeronautical Common Services (ACS) Data Sources which will be provided through a single point of access where consumers can obtain all Aeronautical Information (AI). Furthermore, Jaguar team members will participate in the FAA's Data Optimization Summit to learn what is currently underway at the FAA and their plans moving forward with Aeronautical Information (AI)/NOTAM modernization. In addition, Jaguar members are in discussions with the FAA regarding the use of climb gradients with respect to SIDs and ODPs and the additional tasking that is created regarding performance evaluations that must be completed.

While this team has been FAA-centric, the lessons learned may be useful for all operators.

Team members come from Alaska Airlines, Allegiant Air, American Airlines, Delta Air Lines, Hawaiian Airlines, Jet Blue, Southwest Airlines, Spirit Airlines, and United Airlines.

Contact Jay Leitner, jay.leitner@aa.com or Chris Hill, christopher.w.hill@delta.com for more information.

Tiger Team (continued from pg. 1)

The team now awaits the publication of guidance from Washington for inspector guidance at local FAA offices. Once published, the team will review and determine a collaborative proposal, if allowed, for collection and analysis of data.

Team members come from Alaska Airlines, Allegiant Air, American Airlines, Delta Air Lines, Hawaiian Airlines, Jet Blue, Southwest Airlines, Spirit Airlines, and United Airlines.

Please contact Kristine Henning at Kristine.henning@delta.com for more information.

Member Discount

SAPOE Member Dr. Trevor Young has published a textbook, *Performance of the Jet Transport Airplane: Analysis Methods, Flight Operations, and Regulations*.

Interested members can receive a 20% discount when ordering the text via the publisher's [website](#) and using the promo code VBG91.

Fun fact: This book was the prize selected by Doug Wood, the winner of the prestigious SAPOE trivia contest at the 2019 Conference.



Proposal for a SAPOE RVFP / EOSID / EOMAP team

At this year's Annual Conference, a request was put forward to members in attendance about the formation of a SAPOE committee to work on several topics related to all engines operating and one engine inoperative terminal flight procedures.

For members who have worked with one engine inoperative takeoff performance, the concept of one engine inoperative obstacle clearance can take many names and even more varied applications. But this important aspect of operational risk management has few industry best practices and no international agreement on where the boundary exists between obstacle clearance and encoded instrument procedures.

Many of our members that have become exceptionally adept at developing complex engine out flight procedures have gone on to lead emerging performance based flight procedures that increase not only the safety of flight, but also the repeatability and reliability of both piloted and FMS-driven flight operations. This includes familiar topics like Required Navigation Performance – Authorization Required (RNP-AR) approaches, RNP-AR departures and even RNAV Visual Flight Procedures (RVFP in the US) or simply the RNAV Visual (SESAR/ICAO). It has even started to cross over into 3rd party database and flight procedure development at airports that flight operations engineers are all too familiar with.

For those of you who have yet to experience the task of enhancing 2 dimensional certified/accepted/validated/best guess aircraft performance data into a 4 dimensional actionable flight procedure, the barrier to entry can appear at best daunting and at worst a topic best avoided. But SAPOE is filled with some of the best and brightest people to have ever worked on this aspect of aviation, and we think it is time to share their best practices with the profession. The request to form a committee reflects the desire to engage in a coordinated effort to create best practices that can help our members safely navigate away from the extended runway centerline of traditional aircraft performance engineering.

For this committee to succeed, the Officers will be looking for at least two co-chairs: one in North America and one in Europe. Committee members will be invited to work towards enhancing the Society's understanding and application of engine out procedures, RNP-AR procedures and RNAV Visual procedures through the development of best practices documents. Committee members will also be asked to support the co-chairs to participate with ongoing FAA, SESAR and ICAO updates where SAPOE is currently engaged.

It is our hope to establish the co-chairs and interested committee members for a kickoff in 2020. If you have an interest in participating on this committee, or for being considered as a chairperson, please contact officers@sapoe.org.

SAPOE takes part in the FAA InfoShare

SAPOE participated in the FAA InfoShare event in Bellevue, Washington in October. InfoShare is part of the Aviation Safety Information Analysis and Sharing program set up by the FAA. Over 1,500 pilots, dispatchers, safety experts and regulators were in attendance.

Mike Byham, American Airlines and SAPOE President Emeritus, presented to two separate breakout sections during the event (the Flight session and the Dispatch session). An introduction to SAPOE and SAPOE's involvement in the TALPA implementation were provided. You can find the InfoShare agenda and a copy of Mike's presentation in the Members Only section of sapoe.org. SAPOE member Chet Collet, Alaska Airlines also provided a presentation on TALPA during the Dispatch session. Kristine Henning, Delta Air Lines and SAPOE Secretary Emeritus, and Tiger Team Committee Chair, also participated in the Cargo session.

Due to the safety-sensitive nature of topics discussed at FAA InfoShare events, participation at InfoShare is limited to airlines and FAA vetted organizations that work in aviation safety. Airline members who wish to participate in future InfoShare events may register directly through their Safety organizations. SAPOE looks forward to continued involvement at InfoShare and ensuring that the application of aircraft performance and weight & balance best practices are highlighted as primary contributions to safety of flight.

Contact Mike Byham at michael.byham@aa.com for more information.