

ICASC REVIEW



WAYPOINTS TO NEW HORIZONS



- Mr. Egon Koopmann -
IFIS Host

On behalf of the hosts – the air navigation service providers of Germany (DFS), Switzerland (skyguide) and Austria (Austro Control) and the International Committee for Airspace Standards and Calibration (ICASC) – I am honoured to welcome you to the 17th International Flight Inspection Symposium 2012 (IFIS 2012) in Braunschweig, Germany. Braunschweig will be the setting for the IFIS for the second time since first hosting it in 1996.

The theme for the 17th IFIS is "**Waypoints to New Horizons**". The joint organisation of the symposium by several air navigation service providers may be seen as one of these waypoints. Our industry is evolving rapidly and the future is taking shape on the horizon. Nevertheless, choosing and implementing the exact route to be taken presents its own challenges; many of which are already well known from earlier symposia: isolating radio frequency interference, ensuring navigation database integrity, developing meaningful flight inspection criteria and ensuring appropriate regulatory oversight of emerging technologies.

Relating to the theme, interesting presentations about flight inspection methods (e.g. GNSS, ADS-B), validation of flight procedures, new flight calibration methods for ground and flight inspection, data management and regulatory aspects will allow a fruitful exchange of views between the various national representatives, service providers, air traffic management and flight inspection experts, research bodies and industry. Additionally, a static display will allow visitors to see calibration aircraft from around the world first-hand at Braunschweig Airport.

May I wish to all a productive and enjoyable symposium both on a professional and personal level.

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- Mr. Joseph F. Doubleday -
ICASC Chairman

It is my pleasure to welcome everyone to Braunschweig for the 17th International Flight Inspection Symposium. Every two years the flight inspection community comes together to share ideas, exchange best practices and showcase new technology. We've seen an increase in the amount of satellite based Instrument Flight Procedure development in recent years that continues to place stress on flight inspection capabilities to meet competing demands and ever declining budgets.

The flight inspection community has a proven history of thoughtful inspection requirements, tolerances and intervals that provide the necessary tools to maintain the safety of the Airspace environment used by the flying public. It is extremely important that we do not compromise safety in our search to streamline flight inspection services to become more efficient. The proper implementation of flight inspection services that prevents one accident is worth the financial overhead. As we continue to embrace space based technology we should ponder the opportunities to efficiently validate the safety of Instrument Flight Procedures.

ICASC is dedicated to continue working with ICAO on the Instrument Flight Procedures and Navigation Systems Panels to improve techniques, help draft guidance, and offer best practices. We are very proud of our contributions to developing Doc 9906, Quality Assurance Manual for Procedure Design, Volume 5, Validation of Instrument Flight Procedures and Volume 6, Flight Validation Pilot Training and Evaluation. I am confident that new technologies and best practices will provide opportunities to focus on the flight inspection services that make a difference, and enhance methods and processes for ensuring the safety of the aerospace environment.



City Hall

IFIS 2012 PRESENTATIONS

FLIGHT INSPECTION INTERVALS AND STANDARDS

Flight Inspection Intervals

Hervé Renouf, Direction des Services de la Navigation Aérienne;
Peter Thirkettle, Civil Aviation Authority, United Kingdom

Extending the ILS/VOR Flight Inspection Intervals

Roger Holm, Avinor

Interpretation of DOC 8071—3 Case Studies of Where Experience Fills in the Gaps

Mike Spanner, AeroPearl Flight Inspection Services;
Mathew Bruce, AeroPearl Flight Inspections Services

FLIGHT INSPECTION METHODS FOR GNSS

Flight Inspection of the Ground Based Augmentation System (GBAS) / Local Area Augmentation System (LAAS)

Dan Burdette, Federal Aviation Administration

Experiences in Flight Inspection GBAS/SBAS

Thorsten Heinke, Aerodata AG

Feedback on 2 years of APV/SBAS Flight Inspection

Florence Jacolot, DGAC/DSNA/DTI

FLIGHT INSPECTION OF ADS-B AND MLAT

Necessities for Flight Inspecting ADS-B and MLAT Signals

Thorsten Heinke, Aerodata AG

ADS-B Flight Inspection

Philippe Caisso, Direction des Services de la Navigation Aérienne

Methodologies for the Flight Inspection of ADS-B Systems

Donald A. McGough, Federal Aviation Administration
Mark Perraut, FAA et al.

FLIGHT INSPECTION OF ADS-B AND MLAT & IMPROVING FLIGHT INSPECTION EFFICIENCY

Flight Testing for ADS-B and Wide-Area Multi-Lateration

Andrew Graham, NAV Canada

Enhancing the Scope and Accuracy of Prediction Tools for the VOR

Simbo A Odunaiya, Ohio University
Augustine Dormovi Yellu, Ohio University

How to get a Good Correlation between ILS Ground Measurements and Flight Checks

Hervé Demule, Skyguide
Klaus Theissen, Rohde and Schwarz

IMPROVING FLIGHT INSPECTION EFFICIENCY

Accuracy Evaluation of DME Coverage Predictions Using Software Tools

Gerhard E. Berz, Eurocontrol;
Valeriu Vitan, Eurocontrol; et al.

A Study of Testing DME Facility Signal Quality

Wang Pengfei, National Key Laboratory of CNS/ATM, Beijing;
Wei Bo, Beihang University, Beijing; et al.

OPERATIONAL ISSUES & AIRCRAFT AND FIS INSTALLATIONS/CERTIFICATION

Flight Safety and Flight Inspection Missions—Past Statistics and Future Strategies

Thomas Wede, Cobham Aviation Services/AFI Flight Inspection GmbH

Aircraft Antenna Calibration: Methods, Accuracy and Results

Robert Geise, Technische Universität (TU) Braunschweig;
Jens Schüür, TU Braunschweig; et al.

Quasi-stationary Signal-in-Space Measurements Using Traceable Antennas

Jochen Bredemeyer, FCS Flight Calibration Services GmbH;
Thorsten Schrader, Physikalisch-Technische Bundesanstalt (National Metrology Institute); et al.

AIRCRAFT AND FIS INSTALLATIONS/CERTIFICATION

Aircraft Flight Inspection Systems Installations and Certifications

Russ Kromberg, Duncan Aviation

Certification Aspects about Commercial-of-the-shelf Equipment for Flight Inspection

Rolf Seide, Aerodata AG

Application of Signal Detection Theory to RNAV Flight Inspection Tolerances

Brad Snelling, Federal Aviation Administration

RADIO FREQUENCY ISSUES

Airborne RFI Detection: Examples of Solved Cases

Vincent Rocca, Direction des Services de la Navigation Aérienne

Challenges in Near-Threshold Flight Inspection Measurements

Gerhard Greving, NAVCOM Consult;
L. Nelson Spohnheimer, Spohnheimer Consulting

Detection and Location of RF Interference Sources

Fethi Abdelmoula, Aerodata AG;
Rolf Seide, Aerodata AG

PROCEDURE VALIDATION

Validation of GNSS RNAV Instrument Approach Procedures

Andrew Graham, NAV CANADA

Flight Validation with Complex Judgment—RNP AR Procedure in Japan

Hiroki Ikegami, Japan Civil Aviation Bureau;
Kazuyoshi Keboushi, Japan Civil Aviation Bureau

Instrument Flight Procedure Validation (IFPV) of Performance Based Navigation (PBN) Procedures by Nongovernmental, Third-Party Providers

Danny Hamilton, Federal Aviation Administration

PROCEDURE VALIDATION/INSPECTION

Ground Validation of ARINC 424 Coding

Jessica Ast, Federal Aviation Administration

Flight Inspection of RNP Based Procedure

Wang Yongchao, National Key Laboratory (NKL) of CNS/ATM, Beijing;
Li Xiaoqiang, NKL of CNS/ATM, Beijing; et al.

RNAV-LPV Checks with Helicopter

Franck Buffon, Sagem;
Philippe Labaste, French DGAC/DTI

Flight Inspection System for Efficient Procedures Flight Checks

Frank Musmann, Aerodata AG

Regulatory Framework and Aircraft Avionics Update for GNSS Procedures Verification

David García, Aena Internacional;
Carlos Gimenez, Aena Internacional; et al.

NEW FLIGHT INSPECTION TECHNIQUES & DATA MANAGEMENT

Combined GPS, GLONASS & Co. Position Reference for Flight Inspection

Fethi Abdelmoula, Aerodata AG;
Jörg Dybek, Aerodata AG

Assessment of Localizer and VOR Polarization Effects Using Offset Aircraft Antennas

Steve Bellingham, NAV CANADA;
Andrew Graham, NAV CANADA

Data Management for the Future

Douglas Vaz, Federal Aviation Administration



Braunschweig, Airport

PERFORMANCE BASED NAVIGATION

FAA PRESS RELEASE

The Metroplex initiative, which is part of NextGen, will use Performance Based Navigation to improve the flow of air traffic into and out of all airports in the Atlanta and Charlotte metropolitan areas.

Performance Based Navigation enables pilots to fly aircraft using radar or satellite coverage, or by using the on-board flight management system. PBN allows shorter, more direct routes that reduce flight time and fuel consumption, and result in fewer carbon emissions.

The FAA estimates that 1.2 million fewer nautical miles will be flown each year in and out of Atlanta, based on current flight plan miles filed. That equates to 2.9 million gallons of fuel savings and a 30,000 metric ton reduction in carbon emissions.

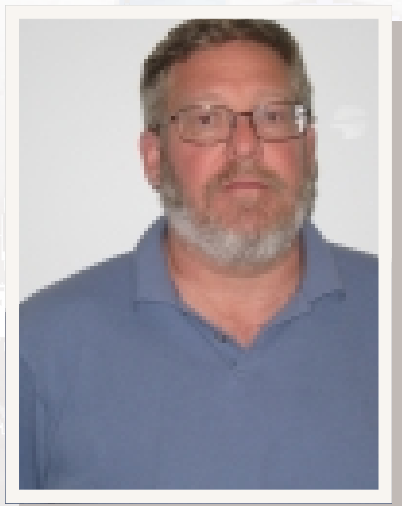
For Charlotte, an estimated 2.5 million fewer nautical miles will be flown annually. Nearly 4 million gallons of fuel will be saved, and annual carbon emissions will be reduced by 35,000 metric tons.

IN MEMORIAM

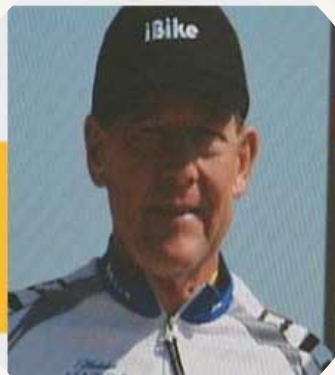
The ICASC lost several valued members and associates since the last IFIS. Dave Cullen, a member since 1999 passed in May 2011, Dave Quinet, a member since 2004, died in May of this year and Monty Maughan, an FAA employee, instrumental in the organization of the 2008 IFIS, died in May 2012. All made significant contributions to the ICASC, IFIS and Flight Inspection community and will be sorely missed.



Dave Cullen



Dave Quinet



Monty Maughan

ICASC Collaborates

At the eighth meeting of its 186th Session, on March 9, 2009, Representatives of the Council to the International Civil Aviation Organization included ICASC in the list of international organizations that may be invited to attend suitable meetings. ICASC members now serve on various ICAO panels. ICASC accepted an invitation by ICAO to develop new Flight Validation guidance material that has led to the creation of two new volumes to ICAO Doc 9906, Procedure Design Quality Assurance Manuals, Volume 5, Validation of Instrument Flight Procedures and Volume 6, Flight Validation Pilot Training and Evaluation. Look for both volumes to be in print later this year.

ICASC has been involved in a study of ICAO member states to evaluate flight inspection/validation periodic intervals of Navigational aids and instrument flight procedures. *Hervé Renouf, Chairman of ICASC Technical Working Group and Peter Thirkettle, active member of the WG, will present a paper on Flight Inspection Intervals on Monday 4th June. This paper is the result of the work performed by ICASC experts from various countries and organisations aiming to find common solutions that benefit the flight inspection community.*

ICASC AND ITS HISTORY

At the 8th International Flight Inspection Symposium (IFIS), June 1994, the delegates expressed their desire that an organization be formed to serve the flight inspection community on a continuing basis. The two-year gap between symposiums left a void in technical information sharing. Additionally, there was no efficient method to provide timely and accurate updates on what was happening globally in the flight inspection arena. Thus the ICASC was born. Thirteen delegates met in Brussels, Belgium, in May 1995 and developed a draft charter. The Charter was approved by the delegates of the 9th IFIS in Braunschweig, Germany in June 1996. Work began immediately to overcome the information-sharing problem. The obvious vehicle to transport this sharing of information was the rapidly growing internet. Hence, the committee began to develop an ICASC website dedicated to the flight inspection community. You can find the website at **icasc.co**. There you will find a wealth of flight inspection/calibration related information.

Future IFIS Suggestions

Your feedback provides important information input to the next IFIS. Please drop by the ICASC booth and fill out the IFIS suggestion questionnaire. Remember to return them before leaving to help future symposiums.

Next IFIS Venue

Mark your calendars to join us in Oklahoma City, OK, USA for the next IFIS in June 2014.

ICASC Membership Information

Interested in joining the ICASC? Do you have skills in Instrument Flight Procedure design or Flight Inspection Regulatory Oversight? Membership is limited to 21 active members with exceptions provided for people possessing desired qualifications.

Submit your detailed resume and a letter of commitment that you and /or your employer will fully support the travel and time investment needed to attend the twice annual ICASC meetings and the biannual International Flight Inspection Symposiums (IFIS).

Soliciting a Host for future Symposiums

We need an IFIS host for 2016. Is your company or organization interested in hosting a future symposium but you're not sure you have the financial or technical acumen to proceed? Contact the ICASC Chairman or Executive Secretariat for detailed planning guides (IFIS cookbook) and outlines for creating the capital to fund the event.

The ICASC web site has been updated and the URL has changed. Come visit us at <https://icasc.co>.

