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Contents

- 1 NAC Approves Key Recommendations
- 1 Congress Examines NextGen
- 2 Program Management Committee
- 3 Consensus Drives NextGen Implementation
- 5 European Meetings Facilitate Harmonization
- 6 Spotlight on Volunteers
- 6 SC-227, Standards of Navigation Performance
- 7 RTCA New Members
- 8 Spotlight on RTCA Staff
- 8 SC-224, Airport Security Access Control Systems
- 9 RTCA DO-178C Training
- 10 RTCA New Documents
- 11 2013 Annual Symposium
- 12 SC-222, INMARSAT AMS(R)
- 12 Calendar of Public Events

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NAC Approves Key Recommendations

Historic Backdrop for NextGen Discussion

The hometown of the Wright Brothers served as the location for the most recent meeting of the NextGen Advisory Committee (NAC). Major General James J. Jones, U.S. Air Force, hosted the meeting at Wright-Patterson AFB in Dayton, Ohio on October 4. In addition to the formal meeting of the committee, the NAC members received a briefing and participated in a discussion of the U.S. military's unique challenges associated with the implementation of NextGen. They also had the opportunity to learn about the research being conducted by the



Air Force Research Laboratory into issues such as sense and avoid, communications and the modeling of procedures and technologies associated with operating Unmanned Aircraft Systems/Remotely Piloted Aircraft.

[continued on Page 4](#)

Congress Examines NextGen

The House Aviation Subcommittee, under the leadership of Chairman Tom Petri and Ranking Member Jerry Costello, held a hearing in mid-September on the status of NextGen implementation. In addition to receiving testimony from a government panel that included U.S. DOT Deputy Secretary John Porcari; FAA Acting Administrator Michael Huerta; U.S. DOT Inspector General Calvin Scovel; and Dr. Gerald Dillingham, Director, Physical Infrastructure Issues, General Accountability Office, the Subcommittee also heard from a second industry panel that provided their perspectives from the aircraft, airport operator and controller perspectives.

The industry panel included RTCA NextGen Advisory Committee (NAC) Chair Dave Barger, President and CEO, JetBlue Airways, along with NAC members Paul Rinaldi, President, National Air Traffic Controllers Association; Ed Bolen, President



and CEO, National Business Aviation Association; and Sue Baer, Director of Aviation, Port Authority of New York and New Jersey. While panel members expressed a desire for NextGen implementation to move faster, they emphasized the importance and effectiveness of industry engagement in NextGen implementation through the NAC. Each one also

[continued on Page 2](#)

The Program Management Committee (PMC) met September 26, 2012 and approved three documents. Information about the new documents can be found on page 10 of this Digest.

Additional issues discussed:

■ **PMC/Integration and**

Coordination Committee (ICC):

The ICC reported on three tasks. First, the completion of a Guide, *Applying RTCA DO-160(A-G) Environmental Conditions and Test Procedures for Airborne Equipment in the Development of Environmental Test Requirements for Minimum Operational Performance Standards (MOPS)*. The Guide provides guidance for Special Committees on developing an appropriate level of MOPS Subsection 2.3 environmental test requirements that will ensure safe equipment operation, while “right-sizing” testing cost to the manufacturer. Second, progress continues on the ICC task to update guidance for the development of RTCA documents – MASPS, SPR and Concept of Use. The ICC expects to complete this MASPS/SPR guidance for the December PMC meeting. Third, the ICC presented the status of work to develop a template and drafting guide for Aircraft System-Level Installation Guidance (ASIG)

documents. Industry participants and a proposed outline were discussed. Completion is expected in March 2013.

- **SC-217 – Terrain and Airport Databases:** The PMC approved work to develop necessary revisions to DO-272C, DO-276B and DO-291B with expected completion dates of December 2013. The PMC requested additional guidance to be included in the committee’s Terms of Reference (TOR) for a future activity to revise RTCA DO-200A, *Standards for Processing Aeronautical Data*, and RTCA DO-201A, *Standards for Aeronautical Information*. Further TOR review was deferred to the December meeting.
- **SC-216 – Aeronautical Systems Security:** The PMC received a briefing on Cyber Security for Aeronautical Platforms. Areas discussed included an aircraft’s computer system and its environment, applicable regulations and access control.
- **SC-214 – Standards for Air Traffic Data Communications Services:** A detailed discussion covered the status and scope of the SC-214 activity, joint with EUROCAE WG-44, to define standards for the next generation ATC data link systems which are being validated within the U.S. NextGen and European SESAR programs. Coordination is

active with ICAO to ensure alignment of the technical specifications of CPDLC, ADS-C and FIS with Doc 9880. Current milestones were reviewed and will lead to final document approvals in March 2014.

- **SC-203 – Unmanned Aircraft Systems (UAS):** The committee reported on the status of SC-203 activities following their recent Plenary meeting and Working Groups sessions held at NASA Ames in mid-September. Adjusted dates for the committee’s deliverables were provided. The PMC acknowledged this as a period of transition and review to help optimize the committee’s efforts. Deliverables are expected by December 2012.
- **SC-186 – Automatic Dependent Surveillance – Broadcast:** Revised TOR was approved. New deliverables will include operational and environment descriptions for the Traffic Situation Awareness with Alerts (TSAA) and Flight-deck based Interval Management (FIM) applications. ■

Next Meeting: December 18, 2012

Chair

Christopher Hegarty, The MITRE Corporation

Secretary

Harold Moses, hmoses@rtca.org

[Congress continued from Page 1](#)

discussed the reality that NextGen implementation is an evolutionary process offering significant potential improvements in efficiency, reductions in environmental impact and capacity expansion. The industry panel members stressed that NextGen is more than technology. The resolution of non-technical barriers, such as changes to policies, controller pilot handbooks,

procedures and streamlining of regulatory approval processes are all necessary to achieve the goals of NextGen.

“The hearing provided an opportunity for Members of Congress to hear first-hand about the efforts underway by the hundreds of volunteers involved in the NAC, the NAC Subcommittee and the Work Groups who are committed to working with the FAA on implementing NextGen,” explained Margaret Jenny, RTCA President. ■

Consensus Drives NextGen Implementation

By Dave Barger, President and CEO, JetBlue Airways



I have spent my career in the airline industry witnessing aviation's maturing through economic, technical and policy changes. Recognizing that we are now at an important crossroads in our aviation system, it was an honor to be asked by my peers on the Airlines for America Board of Directors to take on the role of chairing RTCA's NextGen Advisory Committee (NAC) two years ago.

This diverse group of twenty-eight aviation leaders from across the industry and from around the world provides consensus-based recommendations on complex policy issues to the FAA in response to specific questions they present to us as Taskings. We have reported back to the FAA with recommendations or initial reports on 17 items critical to the implementation of NextGen, ranging from selecting and prioritizing Metroplex sites and NextGen rollout within these sites to Performance Metrics to Equipage Incentives. Earlier this month we approved a suite of high-level metrics and identified key city pairs that will help provide the aviation community with a measurement of our progress in implementing NextGen.

The FAA has now asked the NAC for recommendations on non-technical barriers to NextGen, prioritization criteria for investments in PBN procedures and implementing Congressional authority for expedited environmental review of certain approaches. These are relevant and timely issues that affect NextGen, but we all realize that these are only the building blocks for the expanded capabilities necessary to realize the vision identified for NextGen by RTCA's Task Force 5.

As I told the leaders of the House Transportation and Infrastructure Committee and the Aviation Subcommittee at a hearing in September, I could not be more pleased with the commitment of the NAC. The committee represents only a fraction of the hundreds of industry volunteers on the NAC's Subcommittee, Work Groups and Task Groups who are committing their time, experience, expertise and resources to NextGen. We have worked in close partnership with Acting Administrator Michael Huerta and his leadership team at the FAA.

With Michael at the helm, and with his interest in working closely with the aviation community, I am very confident

in our collective ability to overcome some of the barriers to implementing NextGen. I believe that RTCA and the NAC continue to be the most constructive and effective venue for an FAA-industry partnership.

Our meetings are held over two days at disparate locations from the Nation's capital to Boeing's facility in Seattle to Embry Riddle Aeronautical University in Florida to Gracie Mansion with Mayor Bloomberg in New York and, most recently, at Wright Patterson Air Force Base in Dayton. This provides us with the opportunity to learn about emerging NextGen technologies and the associated capabilities, understand the various perspectives and viewpoints from aircraft operators and share the work of the NAC with the broader aviation community.

As I transition from the role of Chair, I am excited to support the work of the NAC as it will be chaired by Bill Ayer, Chairman of the Alaska Air Group. Not only is Bill an experienced aviator and former CEO of Alaska Airlines, now serving as its Chairman, he was intimately involved with the pioneering work of Alaska Airlines and the FAA in developing the multi-faceted Greener Skies initiative in Seattle. The success taking place in Seattle is as much about technological improvements as it is about surmounting the non-technical barriers to implementing NextGen.

In closing, NextGen is a vital and necessary evolution for the aviation industry and it is just as important for our nation's economy. NextGen will reduce aviation fuel burn, save energy and improve the environment. Implementing NextGen also will improve the efficiency and safety of aviation while adding jobs and strengthening our economy.

The case for NextGen is compelling.

I began with this and will end my tenure as Chair with this: the science is here for NextGen. We have it in our pockets. It is not the hardest part of our work. The hard stuff is the non-technical barriers to implementing NextGen and this is where I am a firm believer that our work is making a difference. I am equally as proud of our partners at the FAA for recognizing that bringing together such a group under RTCA – forging consensus – can and does yield great benefits for the FAA as it moves forward with implementing NextGen. ■





Craig Fuller, AOPA; Carl Esposito, Honeywell; Bill Ayer, Alaska Air Group; The Honorable John Porcari, DOT

Cabinet Level Official Participates

U.S. Department of Transportation Deputy Secretary The Honorable John Porcari participated in the meeting and provided his perspective on NextGen in opening comments. He stressed the importance of the NAC partnership between the FAA and the aviation community and explained that NextGen represents the single largest infrastructure investment in the nation. As such, it presents the unique challenge for the aviation community to maintain public support for a technology-based investment program that, unlike roads and bridges, is largely transparent to the public at large.

Metrics for Measuring NextGen Implementation

One of the important actions taken by the committee during the meeting was the approval of six high-level metrics that are designed to measure impact of NextGen on the performance of the air transportation system. The metrics endorsed by the NAC were developed by members of the Business Case and Performance Metrics Work Group and the NAC Subcommittee and include corresponding measurement criteria as requested by the FAA.

- **Flight Safety** – measured as the change in airborne/ground separation alert rate
- **Operational Efficiency** – measured as the mean aircraft operation time
- **Fuel Efficiency** – measured as the fuel efficiency normalized by weight and distance
- **ATC Cost Efficiency** – measured as the ATC cost per IFR hour
- **Metropolitan Capacity** – measured as the Metroplex peak allowable throughput
- **Metropolitan Access** – measured as the Metroplex achieved utilization

Key City Pairs

The NAC approved an initial recommendation of 24 key city pairs (see illustration) between which the impact of NextGen on NAS performance will be measured. The metrics to be evaluated at the city pairs, as levied by the FAA Modernization & Reform Act of 2012, Public Law 112-95, include:

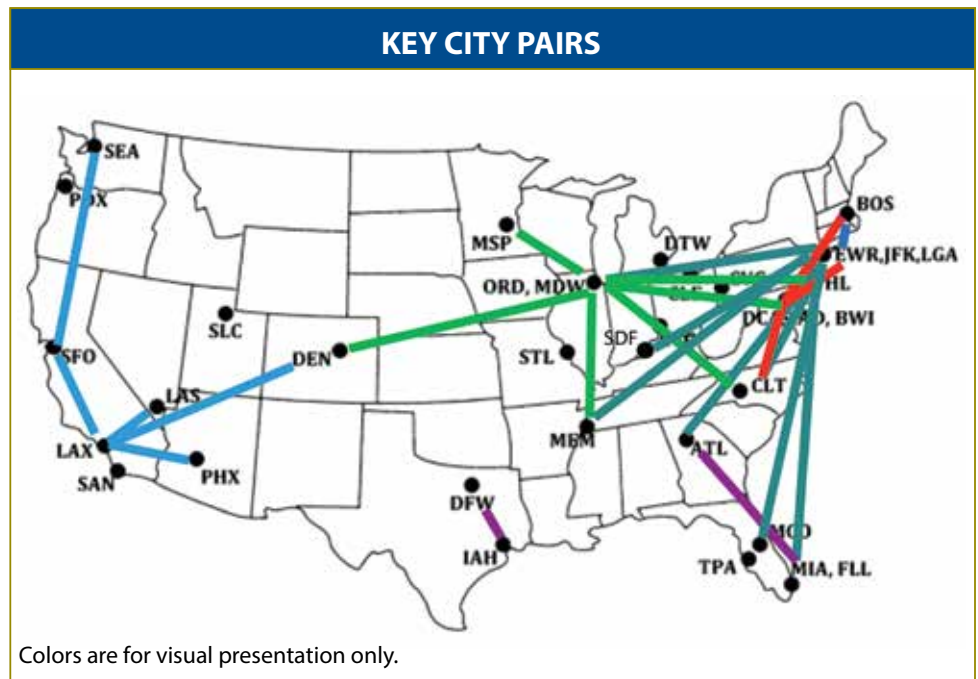
- Fuel burned
- Average distance flown
- Flown versus filed flight times

Applauding the methodical nature and relative speed of this work, the NAC members endorsed the initial list of city pairs. They further asked that the Task Group evaluate several additional considerations for inclusion of city pairs, including transcontinental traffic and key city pairs for regional carriers.

Fuel Burn Data Source Work Endorsed to Move Forward

The committee also approved a preliminary report outlining sources for fuel burn data that could support the FAA's efforts to assess the impacts of NextGen on fuel usage. Two specific recommendations are being forwarded to the FAA for additional work in this area. These are: 1) establishing a team of Subject Matter Experts from the aviation industry and the FAA to develop detailed requirements for airline fuel and aircraft weight reports in support of high-level fuel efficiency metrics; and 2) the continued research into the use of the Aviation Safety Information Analysis & Sharing (ASIAS) infrastructure to support both high-level and diagnostic-level metrics. During discussion by the committee, several members emphasized the importance of including general aviation and

[continued on Page 5](#)



[NAC continued from Page 4](#)

military flying as sources for fuel burn data and representatives of these stakeholders pledged support of their organizations to participate in the associated Work Group efforts.

New Taskings Outlined

The Honorable Michael Huerta, FAA Acting Administrator, introduced two new Taskings addressing performance navigation procedures (PBN) and implementing Congressional authority for Categorical Exclusions under the National Environmental Policy Act requirements (CatEx2). These will be the focus of work by the NAC Subcommittee and Work/Task Groups under its jurisdiction.

Related to PBN, the FAA is asking the NAC to:

- Identify obstacles to PBN utilization, both technical and non-technical
- Develop criteria for prioritizing PBN procedures
- Validate criteria for selection & prioritization of Optimization of Airspace & Procedures in Metroplexes (OAPM) sites

Under the Environmental Tasking, the NAC will explore how to implement Congressional authority for CatEx2 by reviewing the FAA's internal analysis, developing recommendations for measuring impacts on a per flight basis and determining whether additional recommendations for streamlining environmental reviews are needed.



Dave Barger, President and CEO, JetBlue Airways conducts his last meeting as NAC chair, accompanied by FAA Acting Administrator The Honorable Michael Huerta and RTCA President Margaret Jenny.

NAC Chair Transition

At the close of the meeting, Dave Barger, President and CEO of JetBlue Airways, completed his two-year term as NAC Chair and turned the leadership over to Bill Ayer, Chairman of Alaska Air Group.

Commenting on the change, FAA Acting Administrator Michael Huerta said, "Dave Barger has done an excellent job leading and communicating the diverse needs of the aviation community, and I look forward to continued collaboration with Bill Ayer as the new chair."

The next meeting of the NAC is February 6-7, 2013 in Salt Lake City, Utah. ■



Abdoulaye N'Diaye, Secretary General, EUROCAE and Margaret Jenny, President, RTCA

European Meetings Facilitate Harmonization

RTCA President Margaret Jenny recently met with key aviation leaders in Europe to share the work underway by RTCA technical and policy committees and to learn more about European modernization and regulatory efforts. Her trip was aimed at forging ties to facilitate harmonization between the U.S. and Europe. The meetings included leaders from European Aviation Safety Agency, the European Commission Air Transportation Directorate, North Atlantic Treaty Organization Air Traffic Management Working Group, the SESAR Joint Undertaking (SJU), EUROCONTROL and EUROCAE. ■

Spotlight on Volunteers: PBN Expert Forges Consensus



Currently serving as Chair of RTCA's newest committee, SC-227, Standards of Navigation Performance, Dave Nakamura has been in many leadership roles with RTCA. He was a member of the Free Flight Select Committee and ATMAC's Requirements & Planning Work Group, and served as Co-Chair of ATMAC's Trajectory Operations Work Group, Vice-Chair of the PMC and Chair of SC-181, the predecessor to SC-227. "Leading committees to consensus requires strong leadership skills, good listening skills and a dedication to stay with it for the long haul," said RTCA President Margaret Jenny. "Dave has all these skills in addition to deep technical knowledge in numerous areas. When Dave leads a committee, we know the outcome will be exemplary."

Dave is currently a Senior Technical Fellow, Airplane Systems, and Chief Architect, Global Air Traffic Management System (GATMS), at The Boeing Company, where he has been for the past 34 years. After graduation from the University of Washington with a Bachelor of Science in Electrical Engineering, he began his career as an avionics engineer on the Rockwell B-1 Bomber program. When that

program was cancelled, he went to work on advanced avionics for what became the Boeing 767 program. In his current work, he is responsible for identifying and working on technical, regulatory and operational issues/problems of importance to Boeing Avionics and Air Traffic Management as well as the aviation industry. As Chief Architect, Dave's role has been mostly to guide CNS/ATM strategy and internal roadmaps for Boeing products and services, and to provide a technical viewpoint for existing ATM efforts and potential business opportunities.

As Chair of SC-227, Dave guides the work of more than 80 volunteers on updating DO-236B and DO-283A. The goals of their work are two-fold: 1) to reflect the necessary updates since the documents were published in 2003, and 2) to provide some updated guidance and standards that enable future applications such as trajectory-based operations. Dave says, "One lesson learned from my industry work is that there are more than enough smart people around who can solve technical problems relatively quickly. The bigger problem is getting people to understand and agree on what the problem is and

how to move toward a solution. It turns out that people think I can do the latter better than most, so that's what I'm asked to do a lot."

Dave's busy career includes involvement with many other organizations, including serving in advisory roles with international groups such as ICAO and EASA. He also is the founding Chair of the FAA's Performance-Based Operations Aviation Rulemaking Committee (PARC), which led to the implementation of RNP operations in the U.S. The Committee continues to support the FAA on implementation of RNP and RNAV and general operational improvements.

Finally, Dave stresses the need for a leaner, simpler first step of ATM modernization. He believes RTCA has been doing a great job of bringing together all of the affected stakeholders but what happens with such broad support is that the scope of needs becomes huge. He thinks that it is critical to the success of NextGen to focus a much smaller set of changes and to move forward in steps to realize on-time implementation. ■

SC-227, Standards of Navigation Performance

SC-227 met September 17-21, 2012 at EUROCONTROL in Brussels, Belgium. This meeting marked the first joint session with EUROCAE WG-85 to develop a coordinated and harmonized MASPS.

The committee is working to update DO-236B, *Minimum Aviation System Performance Standards (MASPS): Required Navigation Performance for Area Navigation*. The document will include updates for many of its already defined functions and capabilities. Additionally, it will expand its performance and functional criteria so as to better accommodate 4D trajectory-based operations (4D TBO) predicated on an RNP environment. The new MASPS is intended to support the on-going development of advanced ATM concepts that rely on the benefits of enhanced navigation capability in the aircraft. The committee intends to complete its work on the document for Program Management Committee (PMC) consideration and approval in June 2013.

The committee will continue their efforts following this to produce an update to DO-283A, *Minimum Operational Per-*

formance Standards (MOPS): Required Navigation Performance for Area Navigation. The document will be expanded from its current 2D standard to one reflecting the appropriate equipment requirements necessary to support PBN and 4D TBO. The committee anticipates this work continuing through the first half of 2014.

The joint effort between SC-227 and WG-85 is especially valuable in the areas of DataComm interfaces and functional integration with the RNP system. SC-227 efforts also will be coordinated with SC-214 and SC-186. ■

Next Meeting: November 12-16, 2012

Chair

Dave Nakamura, The Boeing Company

RTCA Program Director

Jennifer Iversen, jiversen@rtca.org



ACR Electronics, Inc.

Ft. Lauderdale, FL

Tom Pack

ACR Electronics is the leading development center for emergency beacons. Through their combined technology expertise in the marine, aviation, outdoor and military markets, they design and manufacture rescue beacons and survival gear for boaters, pilots, hunters, hikers and combat troops including leading boat builders and aircraft manufacturers. They develop ELTs (Emergency Locator Transmitters) and other aviation-related safety devices.

AeroNavData

Columbia, IL

Joshua Fenwick

The AeroNavData team includes pilots, air traffic controllers and senior programmers with many years of experience managing both Digital Aeronautical Flight Information File (DAFIF®) and Aeronautical Radio Inc. (ARINC) formatted data. In addition, the AeroNavData team is highly experienced with coding, verification and validation of the following types of Instrument Flight Procedures: Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARs) and Standard Instrument Approach Procedures (SIAPs), including ILS, Localizer, VOR, NDB and RNAV (GPS).

AIRPlus Engineering

Baden-Württemberg, GERMANY

Klaus Attig

AIRPlus Engineering has more than 10 years of experience in design activities certification for VHF-Communication Transceivers and ATCRBS Transponders as well as minor changes and STCs on aircraft.

AVIC Avionics Company Limited

Beijing, CHINA

Zhien Zhang

AVIC Avionics Company Limited is responsible for aeronautical electronics business and industrial development for the Aviation Industry Corporation of China (AVIC) and organizes relational academies and institutes in avionics system demonstration, R&D, integration, test and delivery.

Cooper Antennas Ltd.

Bucks, UNITED KINGDOM

Thorsten Bojardin

Cooper Antennas designs, develops and manufactures communication antennas for the aviation industry. They are currently seeking CAA approval to enter the commercial world as they now primarily service the military market.

Gray's Engineering

Tempe, AZ

Phillip Gray

Gray's Engineering is an advanced full service engineering and testing lab with over 30 years of experience. They have extensive experience in testing requirements for such diverse industries as aircraft, automotive, consumer electronics, medical, military and space. Their quality systems meet the requirements of ISO 17025.

Heriot-Watt University

Edinburgh, SCOTLAND

Iain Young

Heriot-Watt is Scotland's most international university with an unsurpassed international in-country presence. They deliver degree programmes to 11,800 students in 150 countries around the world. The University has no aviation-related activities at the moment but their interest comes from a cross-disciplinary view as to the implications on other research areas and also a potential involvement in aviation in the future.

KalScott Engineering, Inc.

Lawrence, KS

Tom Sherwood

KalScott Engineering provides specialized, full-service research, development, test and evaluation (RDT&E) solutions for the Aerospace, Defense and Remote Sensing industries. Recent clients include: the U.S. Navy Space and Naval Warfare Command (SPAWAR), NASA Dryden, U.S. Department of Energy, U.S. National Science Foundation and the U.S. Naval Air Systems Command (NAVAIR).

Korea Civil Aviation Development Association (KADA)

Seoul, KOREA

Muguen Kim

KADA undertakes publication of aviation statistics and materials, development of air transportation business, improvement of the operation of airport facilities and promotion of international cooperation with foreign aviation institutions.

Meggitt Aircraft Braking Systems

Coventry, UNITED KINGDOM

King Gill

Meggitt Aircraft Braking Systems is one of the leading aircraft wheels and brakes suppliers in the world and has facilities on both sides of the Atlantic, as well as in Europe and Asia. They provide aircraft braking systems to a diverse group of customers which include, but are not limited to, airline operators, aircraft constructors, private aircraft owners and charter operators, governments and military operations, distributors and repair stations.

Modernization of Aviation Complexes, LLC

Moscow, RUSSIA

Krasnozhen Viacheslav

Modernization of Aircraft Complexes, LLC provides design and complex equipment delivery for aircraft training centers of different levels and purposes. It constructs aircrew and helicopter simulators.

[continued on Page 12](#)

Spotlight on RTCA's Executive Coordinator

Since joining RTCA in March 2009, Executive Coordinator Gwen Parker has been responsible for supporting President Margaret Jenny and Vice President Andy Cebula as well as managing Member Services. When asked what motivated her to join RTCA, Gwen said, "Margaret Jenny. She is an absolutely wonderful person to work with and when the position opened up at RTCA, I jumped at the opportunity."

RTCA is the first membership organization that Gwen has worked with and she loves her work. "I have been so impressed by the many RTCA volunteers whose hard work and dedication results in standards and policy recommendations to the FAA. RTCA really pulls together all of the aviation industry into one voice."

Gwen has had an interesting career that has involved working in both the legal and aviation fields. Her career began in her hometown of Birmingham,

Alabama where she attended legal secretarial school at The Cumberland School of Law at Samford University. After school, she worked at a large law firm in Birmingham and went on to serve as a legal assistant in the U.S. Air Force. This was followed by ten years in legal publishing – at Lexis Law Publishing (Charlottesville, VA) and Wolters Kluwer Legal (Frederick, MD). Her last stop before coming to RTCA was at Lockheed Martin Corporation in the president's suite where she served as backup support for the Information Systems and Global Solutions (IS&GS) president while supporting a vice president and the legal department.

As a high-level executive assistant, Gwen has seen this profession evolve over the years. She has found that her duties now involve much more than administrative support – they include research, event planning, fielding phone calls from a wide variety of people, organizing

information, effective communications and in-depth knowledge of technology.

With the recent addition of an Operations Administrator at RTCA whose responsibilities include managing member services, Gwen is delighted that she now will be able to devote all her time to supporting RTCA's President and Vice President. "Gwen has been such an asset to RTCA, and with her friendly persona, has been particularly helpful in our mission of attracting new members and increasing volunteer involvement," says President Margaret Jenny. "In a small organization where staff serve in multiple roles, Gwen is always ready to jump in and do what needs to be done. That's what RTCA is all about – from our staff to our dedicated volunteers."

Gwen can be reached at (202) 330-0651 or gparker@rtca.org. ■



SC-224, Airport Security Access Control Systems

SC-224 met September 27-28, 2012 at RTCA. The committee's task is to update and restructure DO-230C, *Standards for Airport Security Access Control Systems*. The update is to align the document to have a hierarchical structure with an overview and specific technical areas as subsidiary standards. The committee expects completion by March 2013.

The committee addressed the separate Work Group activities in progress. To date the work has been done by the individual Work Groups – credentialing, biometrics, physical access control, perimeter, video, security operations center, integration and communications. Procedures going forward have been modified to meet an end of year deadline for recommendations.

The TSA update provided information on a study by the Homeland Security Institute for airport biometrics and analysis of current or planned usage and best practices. The survey is approximately 70% complete. Space is being held in the Biometrics Section for this report. The TSA is not planning

to require biometrics for airport use anytime soon and there is no anticipated mandate.

The second days of the last three committee meetings have accommodated over 30 vendor presentations. The variety of presentations and perspectives provided are valuable to the committee for their window to the future, variety of current implementations, lessons learned and possible considerations to be included in the committee's deliverables. ■

Next Meeting: November 15, 2012

Co-Chairs

Craig Mosford, DHS/TSA
Christer Wilkinson, AECOM System Solutions

RTCA Program Director

Harold Moses, hmoses@rtca.org

"...the course was rated highly as a quality learning experience ... taught by excellent instructors ... providing good interaction with others in the industry..."

—Evaluations from course attendees

Software Considerations in Airborne Systems and Equipment Certification: RTCA DO-178C Training

RTCA has teamed with The MITRE Aviation Institute to offer a three-day training course on understanding the requirements and parameters for avionics software development necessary to obtain FAA certification.



Using their extensive experience and expertise in software development, project management, safety

management systems and quality control programs, instructors John Charles Angermayer, DER, and Kent Hollinger will provide training on the new standards and recommended practices contained in DO-178C, *Software Considerations in Airborne Systems and Equipment Certification*.

The training takes place in the modern facilities of RTCA Headquarters, 1150 18th Street, Suite 910, Washington DC.

The last opportunity for training in 2012 is December 4-6.



Don't miss this opportunity to receive this important avionics software training!

For complete details and registration information on the RTCA training program see <http://rtca.org/training/DO-178C.asp>

For additional information and to order documents, visit RTCA's store at www.rtca.org. RTCA Members may download electronic documents at no cost and qualify for a 60% discount on paper documents.

DO-276B, User Requirements for Terrain and Obstacle Data

ISSUED 9-26-12 | PREPARED BY SC-217

This document defines the minimum user requirements applicable to the origination and publication of terrain and obstacle data from creation through the entire life cycle of the data. It provides guidance for data gathering by data originators, for data processing by data integrators, for implementation by system designers and for end use by the aviation community (e.g., air carriers, air traffic services, procedure designers). It is supplemental to the data processing requirements included in RTCA DO-200A and the exchange of data included in RTCA DO-291B.

DO-276B provides a minimum list of attributes associated with the terrain and obstacle data and a description of associated errors that may need to be addressed. Four areas of applicability have been defined: Area 1 – The State, Area 2 – The Terminal Area (vicinity of aerodrome), Area 3 – Aerodrome Movement Area and Area 4 – the CAT II or III Operation Area. The requirements for accuracy, integrity and resolution have been tailored to meet these needs. Guidance for certification or approval of systems or procedures that use terrain and obstacle databases is also provided. The requirements stated in this document address the areas viewed by industry to be of most importance to certification.

DO-340, Concept of Use for Aeronautical Information Services (AIS) and Meteorological (MET) Data Link Services

ISSUED 09-26-12 | PREPARED BY SC-206

This document provides an aviation industry view on how AIS and MET data link services would be used to support flight operations. In this ConUse, the data link services are considered as either the primary (Category 1) or useful (Category 2) means for communicating AIS and MET information, and voice becomes a secondary means for such communications. The implementation of such services will

be evolutionary beginning with expected widespread use of useful (Category 2) AIS and MET data link services.

The document identifies the stakeholders, the operational needs, the justification for AIS and MET data link services and the needed change processes. Operational scenarios and use cases are included along with examples of AIS and MET information that could be delivered by these services.

The AIS and MET data link services are expected to be used to support tactical/near-term as well as strategic/planning decisions in multiple operating environments. In addition, there are multiple applications, both ground and airborne, that can benefit from the data link transmission of aircraft-derived meteorological information.

DO-341, Minimum Aviation System Performance Standards (MASPS) for an Enhanced Flight Vision System (EFVS) to Enable All-Weather Approach, Landing and Roll-Out to a Safe Taxi Speed

ISSUED 09-26-12 | PREPARED BY SC-213

This document provides the high level system requirements for EFVS when installed in aircraft with the express purpose of enabling specified straight-in instrument approaches with published vertical guidance to touchdown, landing and roll-out to a safe taxi speed in visibility as low as 300 ft RVR (100 m) by use of an approved EFVS without need or reliance on natural vision. This MASPS follows from and expands upon the concepts and requirements established under DO-315A and the precedents established under 14 CFR §91.175 (l) and (m), which identified performance standards for an EFVS to enable approach, landing, roll-out and taxi, down to 1000 ft (300 m) runway visual range (RVR). The operational concept follows a fail-operational design.

The operational scenarios used for design context and concepts discussed in this document are written to describe the intended use of the proposed systems and from this context, associated minimum performance standards are derived. They do not define current or future operational regulations or limitations of these technologies.

2013 Annual Symposium

Walter E. Washington
Convention Center
Washington, DC

JUNE 5-6, 2013

RTCA

ANNUAL SYMPOSIUM



Participate in THE Premier Gathering of Aviation Leaders!

SC-222, INMARSAT AMS(R)S

SC-222 met September 11-12, 2012. The committee reviewed a near-final version of the generic MASPS for Aeronautical Mobile-Satellite (R) Service (AMS(R)S). This will be a new document incorporating RTCA DO-270 satellite subnetwork material with content directly traceable to ICAO Global Operational Data Link (GOLD) document. The draft document will be released for final review and comment in November. The committee expects to complete its work on this document by January 2013 and present it to the Program Management Committee (PMC) in March 2013.

The committee is also working on a technique-specific appendix to RTCA DO-262. This material will serve as the MOPS for FAA Technical Standard Orders (TSO) of avionics equipment

providing Swift Broadband (SBB) Safety Services. The committee intends to present this work to the PMC for consideration and approval in June 2013. ■

Next Meeting: January 22-23, 2013 in Montreal, Canada

Co-Chairs

E. F. Charles LaBerge, EFC LaBerge Engineering and Analysis, LLC
Daryl McCall, Avionics Engineering, Inc.

RTCA Program Director

Jennifer Iversen, jiversen@rtca.org

RTCA

New Members *(continued from page 7)*

Peregrine

Englewood, CO

Carey John Malom

Peregrine provides advanced systems engineering services and integrated electronic solutions to the general aviation industry. Peregrine is also involved in the development, integration and, ultimately, supplemental type certification (STC) or type certification (TC) under both Part 23 and Part 25. Peregrine also has an electrical laboratory which enables them to build, test and certify what they design. Their lab is an ideal environment for bench-testing and is equipped with

today's most advanced Data Acquisition software to capture and report data.

Synconess Inc.

Westminster, CO

Dave Hughes

Synconess designs, manufactures and supports high-quality, innovative solutions for use in the commercial, military or general aviation aerospace markets. Synconess is a leading provider of engineering solutions for complex, technology-based products. They focus on accelerating time-to-market and ensuring a profitable outcome for their clients.

Tek Fusion Global, Inc.

Dickson, TN

Vivian Stocko

Tek Fusion manages and develops quality technical solutions for mission-based government programs involving aircraft.

VictorTango LLC

Manchester, NH

Vince Zahornasky

VictorTango LLC supplies FAA Designated Engineering (DER) services to a number of commercial aviation companies.

Calendar of Public Events

Visit www.rtca.org for up-to-date information

October 2012

12-17 SC-227

16-18 SC-226

22-26 SC-206

November 2012

8 SC-135 (Ft. Worth, TX)

27-29 SC-225 (Rosslyn, VA)

27-30 SC-216

December 2012

4-6 RTCA DO-178C Training

10-14 SC-214

10-14 SC-217 (Salt Lake City, UT)

18 Program Management Committee

January 2013

7-11 SC-203

15-17 SC-226

17 SC-224

February 2013

6-7 NAC (Salt Lake City, UT)

7 SC-147

11-15 SC-206

March 2013

4-8 SC-186

15 SC-159

25-29 SC-217 (Dublin, Ireland)

20 PMC

Unless otherwise specified, all meetings are held at RTCA, 1150 18th St, NW, Suite 910, Washington, DC, 20036. The information in this calendar is deemed to be reliable as of the date of publication, but is not guaranteed and is subject to change. Please visit www.rtca.org for updates. All RTCA Federal advisory committee meetings are open to the public and are free of charge. For additional information, email RTCA at info@rtca.org.

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