RTCA Symposium Brings Together Aviation Experts

More than 300 attendees gathered at the 2016 RTCA Global Aviation Symposium to examine top issues facing the aviation industry.

The event kicked off with a conversation between Craig Fuller, Chairman of The Fuller Company, and Mike Whitaker, Deputy Administrator and Chief NextGen Officer for the Federal Aviation Administration (FAA). In his final month with the FAA, Whitaker was asked to reflect on his tenure as Chief NextGen Officer and the progress being made in the evolution of NextGen.

“I think one of the things that has struck me through my tenure is how we need to talk more,” said Whitaker. “The industry needs to be in the building more and those in the building need to get out more. That was probably the first thing that really hit me, and it’s been a focus of mine throughout my tenure to make sure we have more engagement.”

When discussing the NextGen program, Whitaker reflected on the mandate during this time to replace outdated technology and to shift the focus to delivery and execution of NextGen. While a struggle, he said, NextGen celebrated significant improvements during this time, including a reduction in approach times and the beginnings of the realization of monetary benefits in response to the implementation of NextGen.

“NextGen celebrated significant improvements during this time, including a reduction in approach times and the beginnings of monetary benefits in response to the implementation of NextGen.”

— Mike Whitaker, FAA

When asked where he sees NextGen and the NextGen Advisory Committee (NAC) going in the future, Whitaker stressed the importance of continued collaboration. In the short-term, his focus will be on the NAC engagement among industry leaders. Whitaker expects all the basic elements of NextGen to be in place by 2025 given a good political environment and a stable budget. In addition, he sees increased involvement from RTCA’s newly created Drone Advisory Committee, which had more than 400 applicants for the 30-member committee.
An Update from the NextGen Advisory Committee: Unique Venue for Public/Private Collaboration

Moderator: Tom Haines, Senior Vice President of Media and Outreach and Editor-in-Chief, Aircraft Owners and Pilots Association (AOPA)

Panelists: Captain Tim Canoll, President, Air Line Pilots Association (ALPA)
Peter F. Dumont, CAE, President and Chief Executive Officer, Air Traffic Control Association (ATCA)
Carl Esposito, Vice President of Strategy, Marketing and Product Management, Honeywell Aerospace
Jeff Martin, Executive Vice President of Operations, JetBlue Airways
Lillian Zarrelli Ryals, Senior Vice President and General Manager for Advanced Aviation System Development, the MITRE Corporation

When asked what parts of the NAC were most helpful, the panelists cited the committee’s ability to forge consensus on priorities. Citing emerging cybersecurity issues, changes to system architecture, and roles of pilots and controllers, panelists emphasized the importance of establishing a system of change management as well. “The need to be adaptive and flexible with a level of predictability, instead of just creating capacity and efficiency at individual locations,” according to Lillian Ryals, “is a challenge.”

The panel also discussed some of the challenges of implementing NextGen, including addressing the human factors and emphasizing the importance of transparency in understanding and dealing with issues as a result of implementing NextGen. To meet the demands of these issues, the NAC has identified and involved new stakeholders; it has narrowed its focus to fewer main priorities; and it has mandated continuous assessments and accountability metrics to measure the success of NextGen.

In conclusion, the panel discussed the future of the NAC, highlighting its focus on building consensus and recommending processes that aim to minimize risks to aircraft operators, airports, staff, passengers, and the environment. They urged members to watch for signs of NAC successes in the coming years, including fully integrated planning and implementation of NextGen capabilities and enhanced outreach to the public about the benefits of NextGen.
The FAA-Industry Joint Analysis Team: 
Taking Collaboration to the Next Level to Deploy, Measure, Learn, Repeat

Moderator: Thomas L. Hendricks, President and Chief Executive Officer, National Air Transportation Association (NATA)

Panelists: Dan Allen, Senior Manager of Air Traffic Operations, FedEx Express

James T. Barry, President and Chief Executive Officer, PASSUR Aerospace

Timothy Campbell, Senior Vice President of Air Operations, American Airlines, Inc.

Ilhan Ince, Managing Director of Operations Planning and Performance Team, American Airlines, Inc.

Dave Knorr, Division Manager of NextGen Systems Analysis and Modeling, Federal Aviation Administration (FAA)

The discussion of NextGen continued with a panel of members from the Joint Analysis Team, a NAC Working Group of FAA and operator analysts working to develop common standards to measure the effectiveness of NextGen implementation, including measurable effects from the point of view of airlines. Panelists discussed the development of a NextGen database to enable the independent evaluation of performance data to build a common set of facts and analysis around NextGen implementation.

The panel emphasized the importance of independent data collection and an understandable dashboard when spreading the word about NextGen implementation to policy makers. When both industry and the FAA are speaking with one voice about the performance impacts of NextGen, that is a powerful voice. They agreed that the significant progress toward a joint dashboard was only possible this year because of the trust that has been built up over the past several years through the NAC.

The panel announced that the NAC NextGen database was deployed in late Spring, and provides executive overviews as well as the ability for in-depth analysis of data. In addition, the panel confirmed that in an effort to maintain the confidentiality of respondents and avoid misuse of data, the data would not be made available publicly. They were encouraged by the shift from implementation-based to outcome-based performance evaluations of NextGen and hailed the dashboard as a step toward greater cooperation between the public and private sectors.
Congratulations to RTCA’s Award Winners, honored during the Symposium for their achievements that span the aviation spectrum, from policy to procedure and technology. The work of these award winners and their respective committees has helped to facilitate the implementation of benefits, yielding NextGen capabilities.

**PRESIDENT’S AWARD – MICHAEL G. WHITAKER**

The RTCA President’s Award is given only on special occasions to an outstanding leader who is deemed by the RTCA President to have gone above-and-beyond in helping RTCA and the aviation industry achieve its goals. This year’s awardee was Michael G. Whitaker, Deputy Administrator Chief NextGen officer, of the Federal Aviation Administration, for his leadership in reaching out to industry to seek input on key NextGen implementation challenges and for incorporating RTCA, the aviation industry, and the NAC’s recommendations into FAA plans for the NextGen project.

“Mike worked with his leadership across the agency to accept those recommendations, incorporate them into the plan, and deliver on the commitments.”

— Margaret Jenny, RTCA

Whitaker took a moment to thank the employees at the FAA for their work in breaking down barriers and to thank RTCA and its members for supporting the FAA and its NextGen initiative. “I really want to accept this on behalf of all the FAA employees, because what we’ve seen in the last three years is really a group of people working very closely and putting in huge hours, as you know”.

“Also, thank you for your leadership,” he said to the attendees. “We couldn’t do it without you, and we just have to keep up the good work.”
ACHIEVEMENT AWARD – ED WAGGONER, PH.D.

The RTCA Achievement Award is the organization’s highest annual honor, recognizing those who have made the most significant contributions to RTCA’s mission and the aviation community over the last year. Each year, the RTCA Policy Board selects a recipient who is to be honored at the Symposium.

This year’s Achievement Award winner was Ed Waggoner, Ph.D., Director of the Integrated Systems Research Office, of the National Aeronautics and Space Administration. Waggoner is responsible for the overall planning, management and evaluation of the directorate’s efforts to conduct integrated, system-level research on promising vehicle and operational technologies.

RTCA President Margaret Jenny lauded his achievements in developing standards for integrating unmanned aerial systems into the U.S. national air space. “His commitment to publishing timely standards to facilitating the integration of UAS into the NAS has been nothing short of amazing,” Jenny said. “The thorough verification and validation efforts at NASA are helping to ensure that the standards for Special Committee 228 will be robust as published and expedite the safe integration of UAS into the NAS.”

“I want to thank the FAA and RTCA for giving us the opportunity to focus [on] the work that we had the capabilities to do. We had the budget and we knew what needed to be done, but the FAA and RTCA gave us the forum to really hear from industry and other government agencies about where we really needed to put our efforts.”

—Ed Waggoner, NASA

WILLIAM E. JACKSON AWARD – KENNETH CHIRCOP, PH.D.

The William E. Jackson Award is given to an outstanding graduate student in the field of aviation electronics and telecommunications as a memorial to William E. Jackson, who was an enthusiastic supporter of student engineers.

This year’s recipient was Kenneth Chircop, Ph.D., lecturer at the University of Malta. Chircop graduated from University of Malta in 2004 with a degree in electrical engineering. After conducting research in avionics systems at Cranfield University in the United Kingdom, he then spent four years working as an engineer at Hunt Engineering Ltd. In 2008, Chircop returned to Malta to work on the European Commission flagship project, Clean Sky. Chircop received his Ph.D. from the University of Malta in 2014.

“The work for which I am being recognized today started in 2009 through my involvement in European-funded projects, primarily Clean Sky. The 1.6 billion Euro initiative in which the University of Malta was tasked to develop is a trajectory optimization tool.”

—Kenneth Chircop, University of Malta
### OUTSTANDING LEADER AWARD

The RTCA Outstanding Leader Award recognizes the added demands placed on the RTCA Committee Chairs and other RTCA participants who serve in leadership roles, to ensure that their respective Committee publishes high-quality documents by agreed-to dates.

#### Congratulations to RTCA Outstanding Leaders!

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<tr>
<th>Name</th>
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<td>Joseph Bertapelle</td>
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<td>Carmen Bonillo-Martinez</td>
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<td>Sophie Bousquet</td>
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<td>Randall Burdette</td>
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<td>Mike Burski</td>
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<td>John R. Dermody, P.E.</td>
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<td>John H. Kasten</td>
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<td>Dr. E. F. Charles LaBerge</td>
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<td>Ian Levitt</td>
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<td>Melissa McCaffrey</td>
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<td>Glenn Morse</td>
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<td>Chris Oswald</td>
<td>Airports Council International-North America</td>
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SIGNIFICANT CONTRIBUTOR AWARD

The RTCA Significant Contributor Award recognizes individuals for very important and noteworthy contributions to their respective Special Committees.

Congratulations to RTCA Significant Contributors!

Geetisri Baishya  
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Bombardier Aerospace

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formerly of National Safe Skies Alliance

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Federal Aviation Administration

Felix Turcios  
Rockwell Collins, Inc.

Sam Van der Stricht  
EUROCONTROL

Paul Von Hoene  
Federal Aviation Administration
Making Top Priorities a Reality (From Surface Runways to PBN to Controller-Pilot Data Communications and Beyond)

**Moderator:** Melissa K. Rudinger, Vice President of Government Affairs, Aircraft Owners and Pilots Association (AOPA)

**Panelists:**
- Steve Fulton, Senior Test Pilot and PBN Advisor, Sandel Avionics
- Joshua E. Gustin, Program Manager of Performance-Based Navigation, Federal Aviation Administration (FAA)
- Glenn Morse, Director of Industry Affairs NOC, United Airlines, Inc.
- Stephen Vail, Senior Vice President of Strategy, Mosaic ATM
- Jesse Wijntjes, Data Communications Program Manager, Federal Aviation Administration (FAA)

The panel featured members of the NAC’s NextGen Integration Working Group (NIWG) discussing the challenges and successes of NextGen collaboration as well as some of the significant outcomes. The NIWG is currently focused on the NAC’s top four priorities: DataComm, PBN, Surface, and Multiple Runway Operations.

Panel members discussed the work on data communications and the move to En Route airspace services and capabilities. Plans are currently ahead of schedule and the administration expects to integrate single data authority fully beginning in 2019. In addition, one priority of the NIWG, wake turbulence recategorization, was explained by Glenn Morse, who has experience with wake recategorization at Chicago O’Hare International Airport. Morse and his team have implemented a phased recategorization that allows them to reassess and reprogram to address challenges and opportunities as they arise. He stressed the importance of this kind of flexibility as wake recategorization at any airport will look different depending on fleet composition and other factors.

Steve Fulton highlighted the work of the NIWG’s PBN Team by saying, “the most challenging thing to do is connect the EnRoute airspace to the runway, this effects social(cultural) aspects, changes in roles and also technologies, when we do that well, efficiency benefits and more importantly predictability giving us a system that runs with less variance which is really important to tighten block times and run aircraft at their optimum.”

The panel also outlined achievements from the year that emphasized the importance of flexibility in planning including the advice to “do more, learn more, and integrate more.” Moderator Melissa Rudinger summarized the conversation with one of her favorite quotes: “If you think there’s an easy answer, then you don’t understand the problem.”

The panel concluded with a discussion of the NIWG’s plans for the future, which includes a tower flight data program with electronic, real-time updates on flight status and additional wake turbulence recategorization sites.
International Harmonization - Initiatives Underway to Ensure Safe and Seamless Global Operations

Moderator: Dorothy (Di) Remold, Head of Global Policy and Procedures for Safety and Flight Operations, International Air Transport Association (IATA)

Panelists: Carlos Cirilo, Regional Director of Safety and Flight Operations for the Americas Region, International Air Transport Association (IATA)
Steve Creamer, Director of Air Navigation Bureau, International Civil Aviation Organization (ICAO)
Margaret Jenny, President, RTCA
Masahiro Kudo, Director-General, Electronic Navigation Research Institute (ENRI)
Christian Schleifer-Heingärtner, Secretary General, EUROCAE
Don Thoma, Chief Executive Officer, Aireon
Dr. Karlin Toner, Director of Global Strategy, Office of Policy, International Affairs and Environment, Federal Aviation Administration (FAA)

"We’re here today to bring disparate voices together with a goal of creating consensus on policies and standards," according to Steve Creamer. This sentiment effectively summarizes the discussion on international cooperation taken on by a panel of leaders from a number of international aviation organizations. The panel emphasized the importance of cooperation as a driver of effective air traffic management. This kind of industry cooperation in the United States has, according to Creamer, been important for companies to develop effective nation-wide and worldwide standards for aviation safety, and he believes cooperation is a powerful tool for expediting global standards. This encourages innovation and expanding markets.

One example of effective international cooperation came from Masahiro Kudo, who's company is based in Japan and is responsible for research and development in the field of electronic navigation in Japan with a staff of fewer than 60 individuals and an annual budget of around $14 million. Kudo iterated that his work would be almost impossible if it weren't for the collaboration and cooperation of groups like ICAO and RTCA.

In addition to the need for cooperation in developing standards, the panel underscored the importance of proper training and a generous timeline to help ensure that standards are not only adopted, but properly implemented. These measures are necessary to ensure that standards can adapt to all of the location-specific accommodations that need to be made to espouse the support of constituents outside of the aviation industry, namely the communities that sustain their local airports.

Margaret Jenny stressed the importance of developing standards that are risk- and performance-based. "As we turn our attention to integrating new enhancements with commercial space and UAS into the airspace, we should be open to learning from one another," she said.
Airports and NextGen - Connecting the Final Link in the System

**Moderator:** Mario Diaz, Director of Aviation, Houston Airport System

**Panelists:**
- James Bennett, Director of Aviation Services, City of Phoenix
- James Crites, Executive Vice President of Operations, Dallas/Fort Worth International Airport
- Margaret McKeough, Executive Vice President and Chief Operation Officer, Metropolitan Washington Airports Authority (MWAA)

The final panel from Day One of the Symposium featured leaders of operations from four US airports who discussed the various challenges that airports face when implementing NextGen procedures, especially from the communities directly affected by changes to flight paths and procedures.

“Don’t get me wrong, I’m a fan of NextGen. But you have to do it correctly,” said James Bennett, who shared his story of unhappy citizens after Phoenix Skyharbor Airport abruptly implemented NextGen without input from the local community. After the implementation, Bennett said, the City of Phoenix received an estimated 65,000 noise complaints, up from only 22 the year before.

Margaret McKeough shared a similar story, with the Metropolitan Washington Airports Authority also seeing a rise in noise complaints after implementing NextGen, made all the more difficult by existing airspace restrictions in the District of Columbia. However, McKeough took the opportunity to engage with the FAA and chief pilots at American Airlines, which culminated in the creation of a roundtable of designated local officials who provided feedback about NextGen’s effects on the local community.

James Crites summed up the conversation well when he said, “Engaging [with the community] in a robust way is understanding the environment and the intimacies of the environment to find a way to success.”

“I liked the panel format. It was more interactive and candid and was a good representation of all the stakeholders here. I was happy to see airports represented at the session. As noted in the NAC’s PBN Blueprint, NextGen begins and ends at airports, so it’s necessary to involve airports early in the process.”

Sandra Lancaster
DFW Airport
Conversation on FAA Reauthorization: Outlook for What’s Ahead

**Moderator:** Stephen Van Beek, Vice president, ICF International

**Panelists:**
- Mark R. Baker, President and Chief Executive Officer, Aircraft Owners and Pilots Association (AOPA)
- Edward M. Bolen, President and Chief Executive Officer, National Business Aviation Association (NBAA)
- Carl D’Alessandro, President, Critical Networks, Harris Corporation
- Captain Stephen M. Dickson, Senior Vice President, Flight Operations, Delta Air Lines, Inc.
- Gerald L. Dillingham, Ph.D., Director of Civil Aviation Issues, Government Accountability Office (GAO)
- Sean Kennedy, Senior Vice President of Global Government Affairs, Airlines for America (A4A)
- Paul Rinaldi, President, National Air Traffic Controllers Association (NATCA)

The second day of the Symposium began with a discussion among industry leaders about the pending Federal Aviation Administration Reauthorization Bill that establishes funding levels for the FAA. There are different versions being debated in each legislative body of Congress: the timelines are different and the version being debated in the House would remove the FAA’s ATC operations, establishing it as a non-profit entity. This would affect FAA funding, how ATC operations are managed, and overseen. The current funding mechanism makes it difficult for the FAA and industry to make long-term investments in capital and major modernization projects. The panel highlighted the various perspectives of the debate about the future and the differing opinions of the FAA bills.

Additionally, conversation centered on budget challenges and the problems that arise with a lack of long-term funding plans, as well as alternatives to Congress’ recommended restructuring of FAA. Among these alternatives, panelists suggested that reducing excessive oversight, providing stable and long-term funding, and reworking the FAA’s governance structure could potentially meet the same demands of the currently proposed reauthorization bill.

“Making this change is significant for the safest air system in the world,” Panelist Carl D’Alessandro told attendees. “The benefits of restructuring have to be weighed against the risks that will come along with it.”

But deciding the process by which the government moves forward is a major point of contention. “The Senate bill contains a lot of the good elements without having some of the controversial provisions that I think are going to be seemingly problematic to get anybody to support,” said Mark Baker. “There are some real fundamental differences in the House bill that are problematic from a general aviation [perspective], namely user fees.”

Regarding the split of FAA aviation services from the rest of the administration, Steve Dickson voiced the sentiment that, “we’re strong believers in collaboration, and we think that it’s not an easy process. Building industry consensus requires a lot of hard work and it requires some trade-offs. It requires some policy decisions, and the path is not linear to get to the destination.” He said that separating the ATO from the rest of the FAA would be disruptive to the process. Having personally experienced the restructuring of an organization, “just the people aspect alone is something we feel would be disruptive to the momentum we’ve experienced over the last few years.”
A4A’s Sean Kennedy had a different perspective. “...the idea of separating the operations folks from the [safety] oversight function was considered a very novel approach—but 50 countries have done it now. It’s part of ICAO’s best practices. There are so many lessons that can be learned from that.” He reiterated that the US is the largest, safest and most complicated airspace in the world, but we are still using old technology. “Change is difficult, change is hard, but what would be worse, is if we don’t adapt.”

Gerald Dillingham from the Government Accountability Office said that his office is currently working on a study examining the potential benefits and risks of FAA restructuring and hopes to release a report before final votes are cast on the reauthorization bill. Dillingham added that the cooperation among the GAO, FAA and industry leaders could have a big impact on the final decision.

Paul Rinaldi described the working conditions of many air traffic controllers he speaks to, including decrepit buildings and infrastructure, poor access to technology, and a shortage of new controllers to take the place of a rapidly retiring workforce. “We shouldn’t have to have our controllers working 6-day work weeks, 10-hour days, and be riddled with fatigue,” Rinaldi said. “These things are not fine. And we continue to say, ‘Yes everything’s great, the system is running.’ But at the end of the day, we’re stretching a Band-Aid. We’re stretching it, and it’s going to come off.”

Offering his organization’s perspective about the debate surrounding the future of the FAA, Ed Bolen emphasized that continued conversations like the one at the RTCA Symposium were critical for determining a path forward. “I think that the challenge that we’ve had through the years is that when we identify issues rather than really digging into the issue and coming up with thoughtful, targeted solutions, there’s always this pull to just privatize,” he said. “We never really focus on how we enhance what we have—how do we make significant improvements?”

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**NAS NAV Roadmap Strategy, Delivering Incremental Benefits from Ground-Based to Flight Deck-Based Traffic Flow Management Capabilities**

**Moderator:** Bruce E DeCleene, Division Manager, Federal Aviation Administration (FAA)

**Panelists:**
- Captain Mark Bradley, Chief Technical Pilot for Industry Affairs, Delta Air Lines, Inc.
- Rick Dalton, Director of Airspace and Flow Management, Southwest Airlines
- Captain Joe DePete, Vice President, Air Line Pilots Association International (ALPA)
- Tony P. Ng, Ph.D., Aviation Solution Architect, Lockheed Martin
- Jim Ullmann, Deputy Director of Safety and Technology, National Air Traffic Controllers Association (NATCA)

Experts from across the industry discussed emerging capabilities in the field of aviation communications, navigation and surveillance (CNS) and air traffic management (ATM), including performance based navigation (PBN) and flight systems.

Introducing the panel, Bruce DeCleene explained how the FAA began 15 years ago working on a plan to progress NextGen with navigation. He explained the “Roadmap Strategy”, and provided statistics on the successes of the progress. “We’ve expanded the system and increased access pretty dramatically...we’ve transitioned to huge equipage,” said DeCleene. “Because of our long-term planning, we have been as successful as we are, but now we are asking what should be our plans for the future, for the next 15 years?” Panelist Mark Bradley said “in the near-term, we need to utilize what we have, like visual flight guidance procedures, LPV procedures, and performance-based procedures. Longer-term goals will include streamlining NAV and conducting community outreach.”

*continued on page 14*
Joe DePete explained that PBN increases situational awareness and efficiency of operations. But he also cautioned the importance of flexibility in some situations where workarounds may be necessary to meet immediate needs.

“No doubt that the implementation of using these procedures has had an effect on the workforce,” Jim Ullman said of PBN. “Controllers are just good at making things work, so there hasn’t been a whole lot of pushback. But I will tell you that the longer I’m studying this issue and out in the field talking to people, I think we have some of the same issues that users have. And it’s about equipage and predictability, especially when it comes to using these procedures in high-volume airports.”

Rick Dalton recommended giving controllers and others the leeway needed to innovate and adapt PBN. He cited the benefits of such innovation for increasing required navigation performance approaches at Denver International Airport. “We’ve had more RNP approaches at Denver this year than at all other airports combined,” Dalton told the audience.

Panelist Tony Ng echoed Dalton’s optimism saying that he’s excited by the aviation industry’s prospects. “There are a lot of enabling technologies and engines that are in place today that were not in place five years ago,” said Ng, listing a series of recent advances, including PBN, the re-architecture of time-based flow management, and DataComm implementation. “There are a lot of very exciting things happening with the base that we’ve built so that we can deliver further decision-support tools.”

Challenges and Opportunities of the Increasingly Sophisticated and Integrated Cockpit

Moderator: Andy Cebula, Vice President of Strategy and Programs, RTCA
Panelists: Todd Donovan, Vice President of Strategy and Marketing for ATM, Thales
Steve Fulton, Senior Test Pilot and PBN Advisor, Sandel Avionics
Christopher Hegarty, Ph.D., Director of CNS Engineering and Spectrum, The MITRE Corporation
Richard E. Heinrich, Director of Strategic Initiatives for the Commercial Systems Business Unit, Rockwell Collins, Inc.
Ron Stroup, Chief Systems Engineer for Air-Ground Integration, Federal Aviation Administration (FAA)

Experts discussed rapid technology changes and the challenges that advances in technology and the increasingly integrated nature in cockpit and ground systems pose for the industry in the near- and long-term. As Sandel Avionics’ Steve Fulton remarked, “In the near term, we’re not really talking about much equipage change. However, future equipment upgrades will spur the need for rich investment both on the ground and in the fleet.”

Beyond financial challenges, there are other risks that the industry will need to consider as technology changes and the pace of technology refresh increases, according to Panelist Rick Heinrich. Among these are balancing conflicting data communication needs for ground-centric operations versus plane-centric operations. While much of the current bandwidth is allocated to passenger needs like in-flight entertainment, Heinrich explains, technological and capability advances in the cockpit will require an increasing amount of the data in the pipeline between the plane and the ground.

Ron Stroup added to Rick’s comments that facilitating implementation of new technology and capabilities is crucial. In the end, the panel agreed that the aviation industry should strive for safety while making it easier to suggest improvements, and roll out new procedures and technologies that provide proofs of concept and ultimately improve technology implementations.
The luncheon began with each executive giving an overview of his/her organization’s role in safety, air traffic services and procedures, and modernizing the system. They provided an insider’s view of the FAA and the work done to promote collaboration, both internally and externally, through the NextGen program and the NAC.

All agreed that the work with the NAC has facilitated increased collaboration among the lines of business within the FAA. Panelist John Hickey said that in his 26 years in the aviation industry, he had never seen so much collaboration within the FAA.

Jim Eck explained that the process to conduct cost benefit analysis and bring in the various lines of business has led to better results.

“The case for collaboration was an easy one to make,” Jim Eck told the audience. “When you give stakeholders a voice, you get better outcomes.” However, he stressed the importance of deadlines in the process, telling attendees that “you don’t have to agree on everything, but you do have to make decisions and make them quickly.”

Teri Bristol also underscored the importance of continued collaboration both within the FAA and among industry leaders. “It’s one thing to put out technology and install it in the field,” she said, “but it’s another matter entirely to operationalize it and really get the full functionality and benefit out of that capability in a very large and complex national airspace system. Ultimately, programs like the NAC allow the FAA to more easily build consensus and prioritize work,” Bristol explained. “Industry consensus,” she said, “is much easier for the FAA to deal with than hundreds of stakeholder’s opinions.”

Looking to the issue of Unmanned Aircraft Systems, Hickey explained, “it is effectively integrating a whole new aviation business into the NAS in such a short time. The Drone Advisory Committee, or DAC being established at RTCA at the request of the FAA, is going to be important in this process.”

“New entrants such as commercial space and UAS need to understand their place in the overall NAS,” stated Bristol.
Tackling Tactical Operational Challenges in the NAS

Moderator: Captain Brian Will, Director of Airspace Optimization and Aircraft Technology, American Airlines, Inc.

Panelists: Mark Hopkins, Director of Air Traffic Management and CDM, Delta Air Lines, Inc.
Robert “Bob” G. Lamond Jr., Director of Air Traffic Services and Infrastructure, National Business Aviation Association (NBAA)
Elizabeth “Lynn” Ray, Vice President of Mission Support Services, Air Traffic Organization, Federal Aviation Administration (FAA)
Captain Bart Roberts, Vice President of Flight Operations, JetBlue Airways
Ralph Tamburro, Program Manager, Port Authority of New York and New Jersey
Dale Wright, Director of Safety and Technology, National Air Traffic Controllers Association (NATCA)

Continuing the theme of industry cooperation at the Symposium, a group of aviation experts gathered to discuss operational challenges in the national airspace and solutions to the real-world problems that have been developed through RTCA’s Tactical Operations Committee (TOC), which is comprised of senior aviation industry leaders.

Panelist Lynn Ray characterized the committees work as invaluable and as playing a significant role in guiding the work of the FAA by posing important questions about procedures. “There’s a lot of investment from the industry that goes into the task groups and the things we identify, so being able to understand the questions are important.”

The panel provided examples of the questions the FAA posed to the TOC as well as the solutions the industry leaders and FAA worked together to create. Among these was the VOR Minimum Operating Network which produced a procedure allowing facilities to shift seamlessly to a back-up in the case of a VOR outage.

But when asked to describe the issues that keep them up at night, panelists highlighted training for pilots and air traffic controllers, and safety issues. As a pilot himself, Moderator Brian Will expressed his own concerns with the lack of lateral and vertical guidance systems on aircraft, saying it was his personal goal to implement these systems across the industry.

“For United, maintaining visual approach rates is a huge issue. If the ceiling goes down, our arrival rate drops because pilots can’t complete visual approaches,” Stone said.

“I think advanced interval management may be a solution.”

Rocky Stone
United Airlines, Inc.
Integrating Unmanned Aircraft Systems into the NAS—Performance Standards, Performance-Based Regulations

Moderator: Al Secen, Vice President of Aviation Technology and Standards, RTCA
Panelists: Marke “Hoot” Gibson, Senior Advisor for UAS Integration, Federal Aviation Administration (FAA)
Earl Lawrence, Director of Unmanned Aircraft Systems Integration Office, Federal Aviation Administration (FAA)
Ed Waggoner, Ph.D., Director of the Integrated Systems Research Program office, National Aeronautics and Space Administration (NASA)

The Symposium concluded with a conversation on the rapid proliferation of unmanned aerial vehicles in the US national airspace and the implications for both the UAS industry and the FAA.

“In the national US air space today, there are about 270,000 conventional aircraft,” moderator Al Secen told the audience. “To date, since registration opened for the UAS registration database, there have been over 450,000 UAVs registered.”

Earl Lawrence stressed the importance of registration activity among UAS operators, including commercial registration which the FAA recently launched. Instead of viewing the growing population of unmanned aerial systems as competition, the panel instead focused on solutions the FAA and NASA are developing to work with and support the UAS community.

Ed Waggoner described NASA’s recent research, which he said aims to “allow ubiquitous [UAS] use safely, with as much automation as possible in the next 10 to 15 years.” To achieve this, Waggoner and the other panelists advocated for partnerships with insurance companies which, as risk management entities, have played a key role in understanding the potential pitfalls of UAS activity.

Lawrence elaborated on the aviation rule-making committee’s Flight Over People program, which he says has taken steps to measure the impact of UASs on communities in the US and around the world, and will eventually inform rules for UAS operation over populated areas. He also pointed to the pending release of the Part 107 rule that would be a significant step in UAS regulations.

“This is the most fundamental aviation change in our lifetimes,” Marke Gibson stated. “This is fundamentally about humans and change. That’s the hard stuff in most venues.” But Gibson remained confident that the varied input from industry leaders, the public sector, and the UAS community would generate a concerted effort to safely and fairly share the national air space.

“The networking opportunities were outstanding.”
—Symposium Attendee
SYMPOSIUM ATTENDEES IN ACTION
“Sometimes I like to think that RTCA stands for ‘Results Through Collaboration in Aviation’, and this year’s symposium really is all about communication. It’s all about collaboration, compromise, and a lot about trust,” said RTCA president Margaret Jenny. “We get to where we need to go only when we can develop trust among all the players. No matter what we’re talking about, that’s really what is helping us move forward in our organization, in airports, and in NextGen in general.”

We hope the 2016 Global Aviation Symposium was informative and worthwhile. You helped make this event a great success, and your enthusiasm helped to make our time together productive and enlightening. We look forward to seeing you next year!

—Sincerely,
YOUR RTCA Staff