More than 250 experts and leaders from around the world gathered at the RTCA 2018 Global Aviation Symposium to explore and discuss current and emerging issues across the spectrum of aviation. The Symposium offered nine information-packed sessions, covering driving issues of comprehensive FAA legislation, NextGen, Unmanned Aircraft Systems (UAS), Global Leadership, Harmonization and Standards Development.

The Symposium was the first since RTCA’s transformation into a Standards Development Organization, and several sessions centered on standards. Given the rapid evolution in aviation, a desire to maintain safety, and the increasing globalization of manufacturing and regulatory oversight, panelists emphasized the need and challenge in developing timely standards. Look inside for more details!
NEXTGEN IN THE NORTHEAST CORRIDOR: LET’S DO THIS!

Moderator: Steve Brown - Chief Operating Officer, National Business Aviation Association (NBAA)

Panelists: Captain Warren Christie - Senior Vice President, Safety, Security and Air Operations, JetBlue Airways
Captain Steve M. Dickson - Senior Vice President - Flight Operations, Delta Air Lines, Inc.
Huntley A. Lawrence - Director of Aviation, Port Authority of NY & NJ (PANYNJ)
Glen A. Martin - Vice President of Air Traffic Services, Federal Aviation Administration (FAA)
Paul Rinaldi - President, National Air Traffic Controllers Association (NATCA)

Captain Warren Christie of JetBlue began the discussion by commenting on why the NextGen Advisory Committee (NAC) had been focusing on the Northeast Corridor (NEC). “In 450 miles, from Washington to New York to Boston, you have 50% of the delays in the National Airspace System. You have a huge amount of commerce from aviation, with 700,000 jobs in the New York area alone,” he said.

The panel also highlighted the challenges impacting the Northeast, given the level of demand. Paul Rinaldi of NATCA said, “the Northeast is highly saturated and when the operation is busy, controllers must work to the least common denominator of capability in the system.” Glen Martin noted that “changes in technology continue to be deployed to air traffic controllers and we are working to provide the maximum benefits in a market given the operations and the toolkit.” A key policy challenge for the NAC is how to synchronize investment and capability on the ground and in the air to achieve operational improvements.

Captain Steve Dickson focused on the need to examine the entire system when working on improving the Northeast. “We have many lessons learned over the last decade that teach us to look at the entire system,” he said. “It is important to collaboratively invest with all stakeholders, particularly in an area as constrained as New York.” He went on to say, “we have moved away from a wish list and are looking at everything through the operational performance lens. There are many great systems and technologies out there, but we succeed when we apply it to a problem and invest in a synchronized manner to add value.”

Huntley Lawrence reminded the audience, “synchronized investment is not just on the airside but on the groundside as well. We are investing a lot on the ground in New York, with hundreds of millions of dollars in investments, in runways, taxiways, and terminals. We are working to marry these investments with the airspace and we are collaborating to do it effectively.” Mr. Lawrence pointed out that airports generally develop 5-year plans independently, but the work of the NAC has highlighted the value of implementing in a manner synchronized with the rest of the industry. “We are all concerned about the overall customer experience, so it’s critical to continue the collaboration and transparency of the NAC,” he concluded.
Need to look at effectiveness of implementations to improve performance of ATC system in the NEC

Given the challenges to making changes in the highly complex Northeast, Mr. Martin and Mr. Rinaldi explained the importance of gathering front-line controller feedback in the collaborative process. Mr. Martin explained that “the FAA took ideas from industry for the Northeast out to the [air traffic] facilities and worked with managers and controllers on the ground.” The effort to address the Northeast corridor involved multiple iterations of discussion and feedback with Northeast facilities. “It’s the best process – hands-on collaboration between local facilities and the users where you see the best results,” Mr. Rinaldi said. “It seems simply logical and the way to move forward to modernize the NAS in the most timely manner.”

Industry needs to lead effort to improve NEC in a collaborative manner
BREAKING THE BARRIERS TO NEXTGEN: EQUIPAGE, ENVIRONMENT AND FUNDING

Moderator: Melissa Rudinger - Vice President of Government Affairs, Regulatory Affairs, Aircraft Owners and Pilots Association (AOPA)

Panelists: Craig Drew - Senior Vice President, Air Operations, Southwest Airlines
Captain Chuck Stewart - Chief Technical Pilot, Communications, United Airlines
Captain Brian Townsend - Principal, Technical Pilot, Flight Technical Operations, American Airlines, Inc.
Pamela Whitley - Acting Assistant Administrator for NextGen (ANG), Federal Aviation Administration (FAA)
Nancy Young - Vice President, Environmental Affairs, Airlines for America (A4A)

The panel focused on key barriers to NextGen with an emphasis on equipage and the environment. The panel began by focusing on the Data Communications (DataComm) program, a key success story of NextGen. Captain Chuck Stewart began by saying, “progress [in equipage] was funded through an incentive program however, the regional operators were not included in that incentive, so it is a mixed equipage scenario with DataComm. But, with the advantages of the incentives, it eased the synchronization of investment. Not all airlines took the $80 million in incentive, and now they are investing on their own.” Captain Craig Drew from Southwest Airlines said, “we save 53 seconds per flight with DataComm and that equates to 2.5 airplanes for us. It is paying real dividends. We spent about $175 million since 2007 equipping, and we are now 100% equipped. We see great benefits when we get to use the technology and want to see more of it.”

Discussing ADS-B, Ms. Pamela Whitley commented, “We are currently showing about one-third of commercial and GA aircraft equipped with ADS-B. Going forward, we plan to maintain and follow this data.” Captain Drew said of Southwest Airlines, “we are working on the wiring process for ADS-B right now and will be on schedule for January 1st 2020 mandate. The commercial operators are on track, but as operators, we were promised some things with ADS-B and we are not seeing it come to fruition. For example, less spacing.” Captain Stewart continued, “there’s not much

DataComm is shining light of modernization with collaboration between operators, manufacturers, service providers
benefit to the airlines, except we are looking forward to space-based ADS-B and reduced separation on the [North Atlantic] tracks. We are also very interested in ADS-B In. It is great for situational awareness but, also potentially for reduced separation and interval management.” Captain Brian Townsend said, “our company [American Airlines] has committed to retrofitting the full Airbus 321 fleet of over 300 aircraft with ADS-B In. We are excited about the opportunity to improve performance and recognize the need to work with NATCA and the controllers to ensure this helps and is not a detriment to controllers.”

Regarding environmental challenges, Nancy Young of A4A noted, “we have reduced noise 94% since the late 1970s while increasing enplanements 325%. We have an objective noise story to tell. But, as we roll out new procedures, moving, and in many cases, concentrating the noise, a lot fewer people are exposed but it is worse for those who are.” Ms. Young continued, “We have a legacy issue where we may have not done the best job on community engagement in the past. The current approach is getting out in communities to let them know about NextGen. And we have to ensure local officials also understand the full picture.”

When questioned about other risks to NextGen, Captain Stewart noted, “we need a good longer-term picture of what we want the airspace to look like, and what the CNS [communications, navigation, surveillance] platform is that gets you there. The greatest risk is that we take little bites of capability, but will they build up to what we want in a longer-term vision?” Ms. Whitley echoed this sentiment, stating operational integration is important. “We know all the tools, capabilities, and how different things operate, but how do we line them all up so that in 2025 or 2030 we have a new operation that is time driven and delivers the benefits?” Ms. Whitley noted that the Northeast Corridor is an important effort in this regard. “The NEC is a huge step for the industry,” she said. “It represents a huge initiative to integrate the multiple capabilities we have all been working on in parallel for NextGen.”
This panel focused on the unique challenges of writing standards for unmanned systems. RTCA Special Committee (SC)-228, Minimum Operational Performance Standards for Unmanned Aircraft Systems, is tasked with this monumental challenge. Rick Heinrich began by discussing the “value in the process of having a wide cross-section of stakeholders participating--not just engineers and developers, but also people who are involved in air traffic operations.” With all of these key voices participating, Stephen Van Trees proudly acknowledged, “SC-228 never missed a scheduled deliverable.”

The panelists delved into the numerous challenges with writing standards for a new technology. Mr. McDuffee explained the tremendous complexity in the system. “In traditional aviation,” he said, “if you lose communications, there are known processes and procedures. In unmanned
The Symposium Sessions can also be viewed online. Please visit www.symposium.rtca.org and click on the Agenda Page.

systems, the communication is critical, as the pilot is on the ground. If you lose communication, you have a legitimate air traffic emergency, and this needs to be considered in the standards.”

The group also discussed the challenges and balance of defining prescriptive versus risk-based standards. “The standards are intentionally not prescriptive – they’re intended to apply latitude in defining how something should perform,” Mr. Heinrich noted. Mr. Saurez continued, “writing performance-based standards is hard. It is hard to know a system or operation well enough to define the performance. But it allows us to keep things open for innovation.”

Mr. McDuffee noted that, “we now have some air worthiness definitions from small UAS all the way to the largest commercial aircraft. Historically we’ve taken military technology and sized them into commercial vehicles. Going forward, we’re also going to learn from small UAS and build this into larger vehicles.” In conclusion, he said, urban mobility is a new developing area of interest that is forcing us to look at autonomous operations and other new questions that we have not dealt with before. “We are on the tips of these icebergs.”

It is hard to know a system or operation well enough to define the performance.
Mr. Mark Swan addressed the Symposium and provided a regulator’s perspective on standards and modernization. Mr. Swan began by highlighting the challenge of regulators to define and approve standards for new technologies in a timely manner. He noted, provocatively, “If you want to do something new, you really needed to start with the rules and regulations two years ago, so you’re already too late when you begin.”

Mr. Swan stressed the desire of the UK CAA to encourage and support innovation. “The regulator’s role in innovation is to provide the education and the sandbox to create opportunities to innovate,” he said. Mr. Swan emphasized the importance and responsibility of regulators to educate industry through facilitation, advice and information. “For example,” he noted, “with drones, there are a lot of new people in our industry, but they are not part of the aviation club. So there is a big need to educate.”

Reflecting on his role, Mr. Swan commented that his job as a regulator is to look at the overall system risks in the industry and the system. “To that end,” he said, “the UK CAA focuses on being data rich, information savvy and having actionable intelligence. The regulator is only as good as the information you get, so we have invested into gathering all scraps of available information into the Cloud, and we are sharing it with industry. The goal is not to simply gather more data to write new rules,” he continued, “but instead to develop a joint understanding with industry about the regulator’s assessment of risk. This is important but has taken time to align our understanding with the industry.”
Contributions from volunteers are what makes RTCA a success, and each year the organization recognizes those who provide extraordinary leadership. The award categories highlighted are Outstanding Leaders, Significant Contributors and The William E. Jackson Award.

Because of the hard work and dedication of RTCA volunteers, RTCA continues to be the premier public-private partnership venue for aviation modernization issues in an increasingly global enterprise.

WILLIAM E. JACKSON AWARD WINNER

RTCA Presents the William E. Jackson Award to an outstanding graduate student in the field of aviation electronics and telecommunications. This award is a memorial to William E. Jackson, a pioneer in the development and implementation of the nation's air traffic control system and an enthusiastic supporter of student engineers.

Adam Naab-Levy is a Software Engineer at Blue Ridge Envisioneering, currently developing algorithms and tools to improve signal processing systems. His work focuses on machine-learning-based signal detectors and tools to mitigate uncalibrated geolocation error sources. Before working in the private industry, he earned a B.S. (2012) and M.S. (2015) in Electrical Engineering from Ohio University. His current interests include photography, space exploration, and potentially obtaining a private pilot license.
Significant Contributor Award

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

Congratulations to RTCA Significant Contributors!

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RTCA GLOBAL AVIATION SYMPOSIUM AWARDS

Outstanding Leader Award

The RTCA Outstanding Leader Award recognizes the added demands placed on RTCA Committee Chairs and participants who serve in leadership roles, to ensure their respective committees publish high-quality documents.

Congratulations to RTCA Outstanding Leaders!

Tammy Bowe
Jeppesen
Steve Brown
National Business Aviation Association
Camille Caruhel
Airbus
Sean Cassidy
Amazon Prime Air
Warren Christie
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Federal Aviation Administration
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AvMet Applications
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Thea Feyereisen
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Mark Hopkins
Delta Air Lines, Inc.
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Yasuo Ishihara
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AECOM System Solutions
Heidi Williams
National Business Aviation Association
Radek Zaruba
Honeywell International, Inc.
GLOBAL LEADERSHIP, GLOBAL HARMONIZATION

Moderator: Richard MacFarlane - Deputy Director Air Navigation, International Civil Aviation Organisation (ICAO)
Panelists: Peter Cerdá - Regional Vice President, The Americas, International Air Transport Association (IATA)
Christian Schleifer-Heingärtner - Secretary General, European Organisation for Civil Aviation Equipment (EUROCAE)
Al Secen - Vice President, Aviation Technology and Standards, RTCA, Inc.
David Silver - Vice President, Civil Aviation, Aerospace Industries Association (AIA)

This panel discussed the value of standards development, its criticality in ensuring a globally harmonized air traffic management system, and the challenges of developing timely standards. Al Secen spoke about RTCA’s recent transition away from an FAA Federal Advisory Committee into an independent Standards Development Organization. “RTCA has a long history of standards development, dating back to 1935,” said Mr. Secen. “The US Department of Transportation and the Federal Aviation Administration recognized that RTCA’s strength in standards development was something no one in the industry wanted to break. So, despite the structural changes RTCA was going through, the role in standards development will continue.”

Christian Schleifer-Heingärtner of EUROCAE said, “Our work program with RTCA is 50% the same standards, and we expect to strengthen our relationship.”

Peter Cerdá stated that the industry is evolving quicker than it has ever evolved before, and standards are critical. “Developing regions are where the growth is for the next 20 years,” he said. “It is not just Europe and the US anymore. If we do not consider emerging markets, we will suffer. We are in a global industry with global players and we need the standards.” Mr. Secen noted that “the ‘Tiger economies’ in Asia are expected to innovate existing technologies and will need to be an important part of the standards development process in the future.”
Focus of standards, safety and efficiency needed for developing areas for emerging and developing areas around the world

While discussing the challenges of developing timely standards, David Silver pointed out that when we innovate, we have to maintain an equivalent level of safety. “This is hard,” he said, “and we wait until we are very comfortable, and so the process slows down.” Mr. Secen said, “we need to make sure the research is completed before the development of standards.” And Mr. Schleifer-Heingärtner added that we have learned from past mistakes of developing standards too early in the engineering process. “The heavy lifting must be done ahead of time. However, we can not develop the standards after the regulation is out. There is a sweet spot for the standards development to be done,” he said. The panel agreed that the more nascent the technology, the greater the burden and need to evaluate possible impacts. This greater skepticism requires time.

In closing, the panel was asked about the progress on Aviation System Block Upgrades (ASBUs). Mr. Cerda commented that in concept, it is the right vision, the right plan. “The execution has worked in some areas but overall we are struggling,” he said. “It is hard to find the business case to move all the players on the board – the ANSP, the regulator, the airports, the users. It is a total system initiative. Rarely do we get the political and financial commitment simultaneously.”

A CONVERSATION WITH FAA’S ALI BAHRAMI

Mr. Ali Bahrami, FAA Associate Administrator for Aviation Safety, spoke with RTCA Chairman, Craig Fuller about his perspective on a number of topics including safety in the National Airspace System (NAS), and the future of aviation, utilizing RTCA.

Mr. Bahrami began by emphasizing the number one principle in aviation being safety. “We will always need standards in this process. These standards keep us safe. And also not negotiable is the involvement of the industry. Looking out here today, we see the very proud history of RTCA and we see little change going forward, as RTCA evolves into a Standards Development Organization.”

Mr. Fuller asked Mr. Bahrami what he thinks about ensuring the safe implementation of NextGen. Mr. Bahrami commented that the four NextGen priority areas – Multiple Runway Operations, Performance Based Navigation, Surface and Data Sharing and Data Communications – have provided a strong foundation of what to focus on for NextGen. “These are the areas that define the implementation goals. This clarity of expectation drove accountability across the FAA and industry and gave focus within NextGen, to focus our efforts on ensuring safety,” he said.

Mr. Bahrami and Mr. Fuller also discussed Commercial Space operations and the challenges associated with protecting airspace during a space launch. He said collaborative teams were working on improved understanding of an acceptable level of risk to guide airspace protection in the future.
The Symposium began with RTCA Chairman, Craig Fuller, moderating a discussion of political observers reviewing issues under consideration in the draft comprehensive FAA reauthorization bill in Congress.

The panel discussed the future of the concept of ATC Reform, the idea of removing the FAA’s Air Traffic Organization from the government, to a private entity. Lauren Gardner began by stating that “privatization [of the FAA] does not appear to be part of the debate anymore.” Stephen Morrissey expressed disappointment on this, adding that “the bill has a lot of good information regarding the safety and certainty of funding for the FAA, with six years of funding in the House bill. Where it is light, however, is on efficiency and modernization.” Mr. Morrissey explained that his company believes “there is evidence from around the world that proves there could be a better way to move technology quicker and in a manner that is sustainably funded.” He continued, “Managing modernization in the FAA is like working in an organization where your Board sets your budgets quarterly and it gets extended every few months.” Ms. Gardner pointed out that whether or not privatization returns to the Congressional agenda is dependent upon the November 2018 midterm elections. “Whether the House [of Representatives] flips to Democratic control is a big unknown. If it does not flip, privatization may stay in the discussion.”

The panel also discussed industry progress on Unmanned Aerial Systems (UAS). “There has been a lot of movement and progress on bringing the drone community into collaboration with traditional aviation,” Mark Aitken observed. He applauded the FAA’s UAS Pilot Program.
(IPP) stating “it could help identify models for cooperation among states and federal authorities,” a challenging issue for the drone and government communities. Mr. Aitken also noted that both the House and Senate draft bills were “trying to move UAS Traffic Management from research to make it more operational.” All of these were examples of the steady progress on UAS integration into the NAS.

Collaboration with facilities and staffing crucial to success

INTEGRATING DRONES INTO THE AIRSPACE: WHAT’S NEXT?

Moderator: Sean Cassidy - Director, Safety & Regulatory Affairs, Amazon Prime Air

Panelists: Mark Blanks - Director of Mid-Atlantic Aviation Partnership (MAAP) and UAS Test Site and UAS Integration Pilot Program (IPP), Virginia Tech (VT)
Captain Tim Canoll - President, Airline Pilots Association, International (ALPA)
Todd Graetz - Director, Technology Services, Burlington Northern Santa Fe (BNSF) Railway UAS Program
Kevan Stone - Executive Director, National Association of County Engineers
Matt Zuccaro - President, Helicopter Association International (HAI)

Sean Cassidy kicked off the conversation by expressing the industry’s interest to “continue to push for UAS use cases that go beyond, beyond visual line of sight (BVLOS).” He noted that stakeholders have a common interest in safety, but it’s a question of when, not if, UAS will be integrated into the air traffic system. “There are many operations in the three D’s – dull, dangerous, dirty – that will continue to demand UAS integration,” Mr. Cassidy said.
Integrating new aviation users is a historical issue – Drones new category use this successful formula

Todd Graetz shared BNSF’s experience of flying over 700 miles of beyond BVLOS UAS operations in the Southwest US. “We found that even while flying in the middle of nowhere, there is general aviation traffic and, in some cases, even commercial traffic,” he said, “There was a higher frequency of traditional aviation operations than we would have expected. This has forced us to think about co-habitation of the airspace.”

Matt Zuccaro shared the helicopter community’s perspective. “You could either embrace, or resist the technology, but resisting was illogical,” he said. “For us, as helicopter operators, we are in the same mission space as drones. We looked at the emergence of UAS not as a challenge, but as an opportunity for our organization to get into the drone business. We have the same missions and the same altitudes. We have identified 55 different missions for helicopters and almost all are potential territory for drones to replace or assist...and replace is not a profane word. We see that we can help integrate drones if we are operating both helicopters and drones.” “As an industry,” Mr. Zuccaro continued, “we have 100 years of experience of integrating new aircraft, whether they be jets, gliders, ultra lights, etc. If we already have experience integrating new types into the airspace, why is this any different?”

Captain Tim Canoll highlighted the challenges of safe integration of drones. He noted that there were no gaps in the commitment of all stakeholders to operate safely. “There is pilot concern about the high risk of non-conformists. We need to get pilots to get in the game and the way to do it is ID and track,” he said. “It’s not a question of if, but when we run into one of these, and progress on integration could come to a screeching halt. I’m not worried about the Amazons or the Googles,” Captain Canoll continued. “It’s the hobbyists and the recreational drone operators. This is the biggest segment which far outnumbers the commercial operator and can operate in the same airspace. At least there should be ID and tracking of the vehicle.”

Mr. Kevan Stone shared the local government perspective on UAS integration. “Engineers and elected officials embrace the technology,” he said, “but local entities need education to learn about drones. The lynchpin is around the regulation of airspace, for which there is a major disagreement. UAS can do things that a hot air balloon, helicopter or aircraft cannot do. For example, a helicopter cannot weave through houses at 30 feet in the air,” Mr. Stone said. “There are privacy concerns, public nuisance concerns, and safety concerns. Local jurisdictions have no interest in regulating one iota of national airspace, but we worry about the one-off person who gets a UAS and does something but can’t get their hands on an aircraft, helicopter or hot air balloon. Education is the single biggest ally the industry and Federal government have with local governments.”

Mr. Mark Blanks added, “the focus on the right level of restriction is problematic. The need is to focus on what education is required for officials and the public.”

Display, ID and tracking crucial to safety of drones and commercial aviation.
Mr. Zuccaro commented, “It is not one for all. There are regulations for helicopters, some for sport planes and there should be rules for drones, too. We work with local jurisdictions and understand that they have land use preferences that define where air vehicles can and cannot land. However, when we get off the ground, we feel strongly that there should be one authority that manages the airspace. We do line inspection. When we follow along, we may go through 30 municipalities – do we need to know the individual rules of every one of them? Fragmenting the regulatory system will be dangerous.”

UAS technology unique, local officials want ability to have role in regulation low altitudes

ASSESSING THE RISK OF DRONES: NATIONAL ACADEMIES REPORT

Moderator: Dr. George Ligler, Consultant, PMEI
Panelists: Brian M. Argrow - Chair of Ann and H.J. Smead Aerospace Engineering Sciences, Director of the Integrated Remote and In Situ Sensing Program, University of Colorado Boulder (CU)
Karen B. Marais - Associate Professor in the School of Aeronautics and Astronautics in the College of Engineering, Purdue University (PU)
Paul McDuffee - Business Development Executive; SC-228 Co-Chair, Boeing Horizon X

The panel offered perspective of the Chairman (Dr. Ligler) and Members of the Committee on Assessing the Risks of Unmanned Aircraft Systems (UAS) Integration. The Committee’s report, released on June 11, 2018, was a congressionally mandated assessment of the risks of UAS integration.

Dr. Ligler provided an overview of the report and noted the need for FAA to evolve its current risk assessment methodologies. “The report,” he said, “provides a variety of recommendations
RTCA GLOBAL AVIATION SYMPOSIUM SESSIONS

Unmanned aviation risk-based certification likely—more data needed

on future risk assessment, including the value of comparative risk analysis.” Professor Marais commented that there is a lot of risk that is accepted in life. “We don’t think about the risk of crossing the street, and this is risk we tolerate daily. We should look at the UAS mission and compare it to a risk that is acceptable on a comparative basis,” she said.

Professor Argrow began by speaking about how risk assessment is conducted today for drones. He noted that applications are generally done under a Certificates of Waiver or Authorization (COA). “We look at population density of where to propose to fly and conduct a probabilistic assessment of risk,” said Professor Argrow. “We do a self-certification of our aircraft, using the applicable components of the military handbook 516B standard. We then conduct a risk matrix and use our expertise to determine our opinion of the risk and map back to the risk matrix. We identify mitigations until it’s acceptable. Then, we propose that back to the FAA as part of the COA.”

Mr. McDuffee noted that commercial UAS operations have followed a similar process as the one described by Professor Argrow. He said that for various Insitu UAS operations, “we first identified the Concept of Operations, identified the risks and mitigations and brought back the results to the FAA for consideration.” He noted that approval and certification of aircraft were risk- and performance-based, and on the leading edge of this process.

The panelists touched on a variety of unique risk considerations for UAS. Professor Marais said, “pilots on manned aircraft are concerned about people in their aircraft, and people on the ground, and also for themselves. The pilot of a UAS does not have the same skin in the game as the manned pilot.” Professor Argrow explained that there is UAS risk for people on the ground as well as in the air but, “the primary concern is about collision with other aircraft.” Mr. McDuffee continued that despite what some have said in the media, no one on the Committee was willing to compromise safety. “We want to go faster but we want to do the right thing,” he declared.

Responding to a question about the extent of future regulation of UAS, Dr. Ligler concluded that the plan is to delegate the risk manage process to the applicant through well-defined procedures.
WHAT’S HAPPENING IN THE AUTONOMOUS AUTOMOBILE WORLD?

Speakers:
Bryan Budds - Transport and Safety Section Manager and Aeronautics Commission Advisor, Michigan Department of Transportation (MDOT) Office of Aeronautics
Michele R. Mueller - Senior Project Manager in Connected and Automated Vehicles, Michigan Department of Transportation (MDOT)
Collin Castle, P.E. - ITS Program Manager, Michigan Department of Transportation (MDOT)

The Symposium’s final panel featured a unique and intriguing discussion with experts from the Michigan Department of Transportation, working on the integration of autonomous automobiles to the nation’s roads.

Ms. Michele Mueller informed the audience that there are connected and automated vehicle technologies. “Connected represents vehicles that are connected to other vehicles or information sources, while automated are those that are connected and conducting some control of the vehicle.” Ms. Mueller discussed trials that the state of Michigan has conducted in recent years, noting that various local jurisdictions in Michigan have deployed infrastructure on local roads that inform connected vehicles. These deployments include bar codes on road signs or even on worker’s vests to inform vehicles about upcoming conditions or the location of workers.

Mr. Colin Castle spoke about a variety of state legislative steps in Michigan that have provided greater latitude for the pursuit of autonomous vehicles in the state. He stated, for example, that driverless is no longer a restriction in the state of Michigan. “While trials continue to feature a passive human driver, this is no longer a legal requirement,” he said. Mr. Castle also discussed opportunities for truck platooning in which a platoon of vehicles may include a human driver in the first vehicle with systems controlling some or all of the driving of trailing vehicles.

The speakers spotlighted multiple test facilities that were setup in Michigan, for pursuing autonomous vehicle technology research. A facility known as “M City” has a closed track that simulates and allows for testing of multiple use cases of autonomous vehicles. The state is also building the American Center for Mobility, which is an expanded version of M City and will provide additional opportunities and environments for testing autonomous vehicles.

Finally, Mr. Bryan Budds shared the state of Michigan’s perspective on UAS. He said Michigan was pursuing an extension of the law of self-principle as it related to UAS. “If you do something illegal like drop drugs into prison, it is also illegal to do this with your UAS,” he said. This principle offered the state a mechanism to simplify the encoding of what was legal to do with one’s drones.
The Symposium Sessions can also be viewed online. Visit www.symposium.rtca.org and click on the Agenda Page.
IN CONCLUSION

Margaret Jenny, RTCA President, concluded the Symposium with reflections of her tenure at RTCA. Ms. Jenny retires from RTCA in August 2018, so this was the final Symposium over which she was presiding. She expressed satisfaction at leaving RTCA on a solid, strategic and financial foundation as it embarks on its new role as an independent Standards Development Organization. Ms. Jenny thanked all of the sponsors and participants for their contributions to the event.
The Symposium Sessions can also be viewed online. Visit www.symposium.rtca.org and click on the Agenda Page.
We hope the 2018 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,

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