UAS in the USA: ATCA Annual Might Be Over, But the Work Has Just Begun

Aviation discussions about unmanned aircraft systems (UAS) used to have a negative tone, but over the last year or so that tone has become positive, said Craig Marcinkowski, Gryphon Systems, during the Oct. 19 session “UAS in the USA.”

Marcinkowski and the audience posed questions to a panel of experts from industry, government, and academia. The Q&A included:

Do you see the positive tone regarding UAS continuing, and what will be the catalyst?

Dallas Brooks, Mississippi State University: The Federal Aviation Administration (FAA) has embraced these technologies and staffed itself appropriately, and that is picking the momentum up. I think this will continue until a major halting event like an accident or inappropriate re-search. It’s our job as researchers to bring forward solutions that will fit in existing standards and within the air traffic environment.

Pasha Saleh, AirMap: Open source software, third party service apps, and continued commoditization of hardware parts have fueled the UAS innovation. The FAA has done a great job of getting its arms around drone growth.

Ron Pappas, FAA: Our job is to meet the needs and desires of society. UAS takes a measure of the entrepreneurial spirit in this country, and I think we can all agree that spirit is quite strong.

John Cavolowsky, NASA: The climate we have now is a clash of cultures. The operator/industry side has little prior understanding of the

Multigenerational Panel Ends 61st Annual Conference Program with a Look Back

A panel of aviation industry members in the early, middle and “golden stage” phases of their careers closed the 61st ATCA Annual on Oct. 19 with their perspectives on the sessions they attended throughout the conference.

Although the session was billed as “a cross-generational industry perspective,” the panel only answered a few questions about generation-gap issues, including:

How would you characterize the differences between the generations in terms of their technology expectations and sense of the possible?

Mike Ball, Northrop Grumman, who described himself as a “pre-baby boomer,” said he doesn’t see major differences between the generations on this issue. “I think why a lot of pre-baby boomers are still hanging around is because we’re excited about the new technology,” he said.

Sarah Staab, DTIS, a Generation Xer with 15 years’ experience in the aviation industry, said DTIS has several younger employees who are very frustrated with some of the company’s cutting-edge prototype projects. “They’re using touch screens, but are asking why we’re working with such archaic technolo-

Continued on page 8
FAA Discusses Spectrum Auction and Surveillance Strategy

In recent years, it’s become increasingly clear that many people and businesses are interested in the FAA’s spectrum.

Now, thanks to a new Congressional action, the FAA is working with other government agencies to examine the feasibility of auctioning off some of its spectrum and using the proceeds to help fund future surveillance activities.

During a Oct. 18 session, four FAA directors and managers explained this plan in detail, and discussed why they’re so excited about it.

“People in our agency are working outside the normal swim lanes to try and pull this together, and are working with other agencies to lay the foundation for this,” said Carl Burleson, deputy assistant administrator, FAA Office of Policy. “I’ve been with the FAA a long time and have seen few efforts that are working this hard to get something done.”

Burleson said the FAA has recently wondered if it can surrender some of its spectrum, but concluded there was no money to explore a top-down, systematic look into this.

But in its last update, Congress approved $500 million for federal agencies to explore the idea of re-leasing spectrum, and also agreed to compensate agencies at a rate of 110 percent for the spectrum they give up in a 2024 auction.

“It’s not every day you have the ability to access tens of millions of dollars from the private market to fund surveillance technology in the United States,” Burleson said.

Robert Nichols, FAA manager of surveillance services, said the FAA is moving toward an automatic dependent surveillance-broadcast (ADS-B) network and is doing a surveillance portfolio analysis. This involves working with the DOT, DoD, Department of Homeland Security (DHS) and the National Oceanic and Atmospheric Administration (NOAA) on a program called SENSR (spectrum efficient national surveillance radar).

SENSR is designed to assess the feasibility of acquiring new surveillance solutions—radar or non-radar—that could potentially consolidate short-range, long-range and weather radars. The goal is to decide by 2024 if it’s feasible to vacate long-

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Continued from page 1

is learn about the past technological advances in aviation, and how they were considered huge innovations when they debuted. “They really set the path forward to continuing innovation on top of the framework that’s already there,” he said.

Dave Rhodes, CSRA, said as a baby boomer, he’s noticed that the younger generation is much more comfortable with services than acquisitions—as evidenced by how many of them prefer using Uber rather than owning a car.

What do we need to do as an industry to attract the best and brightest professionals to air traffic management?

Scheier said this question isn’t unique to aviation or air traffic management—it affects many industries. She believes aviation attracts new generations because they see an opportunity for growth.

Staab pointed out that Silicon Valley has no problem getting the best and brightest because it attracts people passionate for change. “But is that the type of people air traffic management wants to attract?” she asked.

What do companies and em-
Will PBO Help Aviation Industry Straighten Up and Fly Right?

When it comes to men’s pants, the expectations are simple. “The standard is just that a man needs to keep his pants up,” said Marc Warren, an aviation attorney with Crowell & Moring. “The tensile strength of the suspenders or the width and color of the belt don’t apply.”

But when it comes to aviation safety standards, “we can do better than that,” Warren said. And performance-based oversight (PBO) is the accessory that can make that happen.

During a Oct. 17 session, Warren moderated a panel discussion on how PBO can produce better safety results in the aviation industry.

Rob Puentes, The Eno Center for Transportation, said PBO is the application of data and metrics to make sure the system is performing as well as it should, and is doing everything both public and private stakeholders want it to accomplish.

Rather than measuring outputs, PBO measures outcomes, Puentes said. “It’s not necessarily about how many planes, trains, and automobiles you move; it’s more about thinking of what you’re actually trying to accomplish.”

Puentes said the movement from compliance-based regulation or prescriptive oversight to PBO is driven by new tools offered by big data, the desire to squeeze as much as possible out of the existing safety system, and increasing constraints in both resources and finances.

Peggy Gilligan, FAA, said PBO is the “natural evolution of how we’re going to continue to build the safety standards we’ve already accomplished. It’s the natural evolution of where our partnership with the industry is going. Now we have the ability to understand so much more about what’s happening in the system as it’s happening. Quite literally, it’s something we couldn’t have done 10 years ago.”

Gilligan said PBO has been well received by the FAA workforce. It allows the aviation industry to work together to figure out how to address big risk areas, like weather, that aren’t encompassed in traditional safety management systems.

There are varying levels of PBO, Gilligan said. For instance, a new airline may have different safety oversight than a legacy airline like United or American. “It’s more of a change for the industry than it is for the FAA,” she said. “We’re working with industry to see the emerging risk, and what performance-based outcomes need to change to mitigate that risk.”

Matt Hampton, Office of the Inspector General, US Department of Transportation, said PBO is viewed as big paradigm shift. “Having the right staffing levels and capability in house is very important,” he said. “A key question we get is does the FAA have the right number of inspectors and the right expertise?”

Martin Rolfe, NATS, said the UK has used PBO for about eight years. “When we started we knew we had a safe system, but we could see safety wasn’t going to improve by just doing more of the same. PBO enabled us to focus on things we worried about,” like infringement of aircraft into controlled airspace.

Compared to compliance-based regulation, “PBO allows us to fill in the gap,” Rolfe said. “It encourages people to think much more broadly. There are people in this industry who know where the problems lie and how to fix them, so this gives them a voice in the whole process.”

AUVSI’s Brian Wynne said along with drones, PBO could also apply to automated vehicles and railway transit.

“I expect that 10 years from now, performance-based oversight will be a very different conversation,” he said.

Huerta: Today’s FAA is Not Your Parents’ FAA

As he walked the Exhibit Hall floor at the 61st ATCA Annual, FAA Administrator Michael Huerta marveled at the state-of-the-art equipment and products.

“Seeing the latest technologies being showcased, sometimes it makes me ask this question: What is not being showcased? What are things being conceptualized that we may see in coming years?” he asked during his Oct. 19 keynote address. “What advanced projects are under development that have the potential to change our lives?”

Huerta said one historic example is Lockheed Martin’s Skunk Works, which was created during World War II to develop jet fighters and still exists today.

The first American jet fighter was completed in 143 days in 1943, he said. The Skunk Work engineers were successful because they had the freedom to be creative and explore futuristic ideas. In fact, Huerta said, many times they started a project before the contract was signed.

“The idea is that with less bureaucracy, less process, we can create an environment where [innovation] can thrive,” he said.

Today, Huerta said he’s wondering what Skunk Works-like projects are in development, and how the government and industry can help facilitate those projects.

“innovation in our industry is moving at incredible speed, and many of you have heard me say that we can’t afford to move at the traditional speed of government,” he said. But he noted that this is not just a call for the FAA, but for the entire industry.

An example is unmanned aircraft systems (UAS). Huerta said after the FAA’s Part 107 rule for UAS went into effect in late August, within six weeks about 19,000 people had applications completed or in process for their drones.

“We’re thinking in very different product lifecycles with UAS—four to six months” he said. But Huerta believes the FAA is up to the task. The drone registry, for example, didn’t follow the FAA’s “traditional process or assumptions,” which allowed it to be up and running before the 2015 holidays, when drone gift-giving was expected to skyrocket.

In the 10 months since the registry debuted, Huerta said there have been more 476,000 registered users.

“The success of the registry shows what we can achieve when government and industry get together,” he said.

Huerta said one example of how the industry is working on compliance and safety is when an employee at the FAA’s Mike Monroney Aeronautical Center in Oklahoma City wanted to conduct a drone flight to highlight the Center’s work with unmanned aircraft.

There was just one problem—the Center is located on the grounds of the Will Rogers Airport. Huerta said the employee did everything right—registered his drone, earned his licensing. But the drone had geo-fencing software built into it, so when the employee tried to fly it, the drone wouldn’t leave the ground without special dispensation from the manufacturer.

Huerta also touched on another hot topic: the FAA’s Drone Advisory Committee, which was modeled after the NextGen Advisory Committee. “One thing that is abundantly clear is we have to have buy-in from a variety of stakeholders to get a project like NextGen done right.”

Data Comm is an example of this buy-in, Huerta said. It was developed with input from pilots, controllers, and airports. At the start of this year, it was operational at five air-
FAA Ready for UAS and Space Vehicle Traffic Growth

NextGen’s air traffic management technologies will also help integrate more UAS and commercial space vehicles into the National Airspace Systems (NAS).

Demand for airspace access from UAS and commercial spacecraft is quickly increasing, and the challenge for the FAA is to safely and efficiently accommodate these new entrants into the NAS with minimal or no impact to the operation and safety of other aircraft.

NextGen communication, navigation, surveillance, and automation technologies are expected to help with the unique performance of UAS and space vehicles. In the past three years, the number of UAS has skyrocketed. They are transforming many industries and are improving the operational safety by performing work that is dangerous or costly for manned aircraft.

“Safely integrating drones into a system that already includes everything from commercial airliners and business jets to helicopters and general aviation airplanes is one of our industry’s top priorities,” FAA Administrator Michael Huerta told the Aero Club of Washington in September.

The FAA launched an online registration system for unmanned aircraft in December 2015 to help educate the public about using unmanned aircraft safely and responsibly and to ensure operators are in compliance with federal aircraft registration law. The agency also formalized a government and industry partnership in September by establishing the Drone Advisory Committee, which will help the FAA prioritize unmanned aircraft integration-related activities, including the development of regulations and policies.

For commercial space, the FAA is developing an automated tool, known as the Space Data Integrator, to replace the current manual task of tracking space vehicle launches and re-entries. It takes data directly from space operators and translates it into a real-time format that air traffic managers can use with their current equipment. This will help controllers quickly move aircraft out of hazard zones and close smaller portions of airspace, which will save time and resources.

With UAS, commercial space vehicles and other new entrants, the FAA and industry are preparing for lasting changes to the NAS.

“The United States has always been a global aviation leader,” said Huerta. “And that’s because we haven’t shied away from making the big investments.”

Michael Black, JMA Solutions, takes part in one of the games at the World ATM Congress booth. Plan on attending World ATM Congress 2017, 7-9 March, in Madrid, Spain.

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Across the Twain: Enterprise Architecture and Budgeting

When it comes to air traffic management financing, is the budgeting process simply pie in the aviation sky? During a Oct. 17 session, panelists discussed FAA funding and how it affects enterprise architecture.

“People spend a lot of time making NAS budgets, but money comes in ‘colors’ like operations and R&E [facilities and equipment] funding,” said panel moderator Rich Golaszewski, GRA Inc.

Panelists agreed that the FAA’s capital budget is unpredictable and needs to be stabilized. And issues like the rapid growth in UAS are challenging the FAA’s flexibility and agility in budget setting.

The result, said RTCA President Margaret Jenny, is that “often the loudest bully in the room gets the funding.”

“The result is that often the loudest bully in the room gets the funding.”
—Margaret Jenny, RTCA

To counterbalance, during the federal budget sequestration, RTCA worked on setting priorities for FAA enterprise architecture funding.

Jenny said the top four priorities now include performance based navigation, including time-based flow management and optimization of metropolex operations, data communications, airport surface data sharing, and wake re-categorization.

Melissa Rudinger, Aircraft Owners and Pilots Association (AOPA), said the association’s funding priorities include flight service, certification reform, the Piston Aviation Fuels Initiative (PAFI), contract towers, and the Airport Improvement Program (AIP). AOPA also wants no user fees and FAA reauthorization.

The result is that the loudest bully in the room gets the funding.

Panelists devoted the bulk of the session to answering questions from the audience, including:

So give us your opinions on how to get stable funding?
Victoria Wassmer, FAA Acting Deputy Administrator: The FAA’s funding authorization has been extended to Sept. 30, 2017. This gives the agency the opportunity to work

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International ANSPs Brainstorm About Prioritizing Resources

The panel for the Tuesday morning international air navigation service provider (ANSP) discussion represented “as broad a spectrum of capabilities globally as you will ever see,” said moderator Neil Planzer, ATCA chairman.

“Each one of these ANSPs has different issues. So when we say how’s NextGen working, how’s SESAR doing, they each have different answers,” Planzer said.

Micilia Albertus-Verboom, Dutch Caribbean Air Navigation Service Provider (DC-ANSP), said corporatization of her country’s ANSP means it’s not engaged in political discussions like other Caribbean island ANSPs that aren’t separated from their government. Consequently, DC-ANSP is better able to

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“Introducing automation into complex human challenges can be very, very challenging — removing the controllers doesn’t remove all other areas of human error,” said National Transportation Safety Board (NTSB) Chairman Christopher Hart in his keynote address on Oct. 19, which among other issues, brought to light certain vulnerabilities to consider with remote ATC tower technology.
Planzer: The Next NextGen Needs to Focus on Outcomes

In his final keynote address as ATCA chair Oct. 18, change was on Neil Planzer’s mind. “Change is hard. But just because it’s hard doesn’t mean you shouldn’t do it,” said Planzer, who is retiring from Boeing but will continue working in the industry.

The air traffic control (ATC) industry is not quick to change, he said, but change is a necessary successor to NextGen and SES-AR implementation.

That’s because NextGen was designed to promote efficiency, capacity, and safety, but not outcomes, Planzer said.

“The US has done a very good job of deploying NextGen technology, but we haven’t changed the process and procedures to match that. We won’t finish what we have in NextGen until we address the outcomes,” he said. “We as an industry need to be part and parcel to driving that change. The personnel in the FAA are no different than we are—they want that change too.”

With NextGen, the ATC industry has the ability to change the very framework of how it approaches safety in the future, Planzer said.

Historically, change in the ATC world has been driven by mistakes and accidents, Planzer said. He recounted how as a boy, he was profoundly affected by seeing the debris from a horrendous plane crash in his Brooklyn neighborhood. That 1960 crash, known as the Park Slope accident, forced change because it was unsafe to continue using the existing system.

“TCATS (transportable command and telemetry system) was part of the outcome of that accident. It was the greatest safety innovation in the last 50 years,” Planzer said. “But we’re in a place now where we can’t wait for a tragedy to change the system.”

“We cannot be risk averse to change,” he continued. “We have to understand where the outcomes are and make them happen,” both domestically and globally.

Risk aversion doesn’t allow an airplane and a ground system to do what they do best. “Today’s airplanes are no longer stupid. Look at a new 787, a new A380—they’re unparalleled in capability,” he said. “And controllers are a very valued part of the system—another tier of the safety system.”

Together, they can work with the rest of the ATC industry to create a “Next NextGen” or a NextGen Phase 2, Planzer said.

“I don’t care what you call it, but it better not be the end. That spectrum, that calculus, that arc of NextGen must go on,” he said. “What we want to do is use the system smarter, use it better, use it more valuably. Catastrophic motivation is not how you change the system. Intellect, outlook, and strategic outcomes are how you change the system.”

Congratulations to the top three The Journal of Air Traffic Control articles of the year:

The Drones Are Coming: Is the National Airspace System Prepared? (Summer 2016)
Frederick Wieland, Ph.D., Intelligent Automation, Inc.

Coping with Adverse Winter Weather: Emerging Capabilities in Support of Airport and Airline Operations (Fall 2015)
Matthias Steiner, National Center for Atmospheric Research; Amanda R. S. Anderson, National Center for Atmospheric Research; Scott Landolt, National Center for Atmospheric Research; Seth Linden, National Center for Atmospheric Research; Benjamin R. J. Schwedler, Cooperative Institute for Research in the Atmosphere, NOAA/NWS Aviation Weather Center

Dr. Rusty Baldwin, CISSP Riverside Research; Dr. Terry Hofecker, Unmanned Science, Inc.; Greg Carter, Electronic Warfare Associates
Paul Rinaldi Receives 2016 Glen A. Gilbert Award

Paul Rinaldi, left, receives the 2016 Glen A. Gilbert Memorial Award from ATCA President and CEO Peter F. Dumont.

“"To see my name included on that award alongside aviation greats such as the Honorable Jane Garvey, the Honorable Norman Mineta, and — God rest his soul — my dear friend, Chairman Oberstar, is surreal. It really is. I truly am honored and humbled," said Paul Rinaldi in his acceptance speech after receiving the 2016 Glen A. Gilbert Memorial Award.

Teri Bristol, FAA, talks about Paul Rinaldi’s many contributions to the NAS during the Oct. 19 awards dinner.

The country band Delta Spur provided the entertainment for the Glen A. Gilbert Award Banquet.

NATCA Executive Vice President Trish Gilbert introduces award-winner Paul Rinaldi at the Oct. 19 banquet.

Neil Planzer welcomes guests to the 2016 Glen A. Gilbert Memorial Award Banquet.

Paul Rinaldi shares a laugh with his family and the audience during a video presentation.
How would airspace-access user fees for UAS operations change the UAS business model?

Saleh: We’re seeing the greatest innovation in aviation since the Wright brothers have flown, so I think the user fees will just be added into the business model, rather than being a deterrent.

How does the FAA intend to deal with UAS that don’t conform to the rules and regulations?

Pappas: Part 107 puts tremendous burden on the operator to conform to the rules. Nevertheless, we see the number of noncompliant UAS rising, and expect to see the number of sightings and accidents increasing in the future. The big tool we’re using is education. These new aviators are people who, by and large, want to do the right thing, so education is key.

Should authority/governance/enforcement be transferred from the federal to the state level for small UAS?

Saleh: There are a lot of local and hyperlocal rules that need to be understood. For instance, at Stanford University, UAS users need to comply with seven different rules. We have to consider local ordinances like trespass and nuisance. These are things the AirMap platform is managing.

Cavolowsky: There’s technology being created to help surveil people who aren’t cooperating.

Marcinkowski: My company, Gryphon Sensors, is developing non-cooperative programs. One uses ground radar to clear the space of non-cooperators.

What role does “Counter UAS” have in future UTM systems?

Cavolowsky: Everything we do in the national airspace has an element of cooperation. UTM doesn’t have a counter UAS element built in, but it does allow for an immediate filter of people who can be detected by the surveillance abilities we just talked about. Protection of critical asset areas, like the White House, schools, and stadiums during events, can be put into place.

Over the next two years, how do you see your organization focusing on safety and integration?

Brooks: To understand UAS safety, the industry has been referencing decades-old studies like what happens when a baseball hits someone, but UAS are not baseballs. We’re working on specific studies regarding UAS safety, including directly tested evaluations saying this is what happens, and this is what is safe enough.

Saleh: We’re building the data layers a drone will need to change routes on the fly—things like obstrucive data, wildfires, and TCATS-like readouts on manned aircraft.

Pappas: In the past, perhaps the FAA has been viewed as an obstacle, and the industry has had to push us. That pushing has been positive for the FAA, but I think we can also do a lot of pulling. The registration rule, Part 107, and the UAS Safety Team are good examples of pulling. The FAA is open for business regarding UAS. We want to work with the industry and the user community to achieve our goal of safe integration.

Cavolowsky: In the next couple of years, NASA expects to be into the third round of the UTM project. We want to make sure we’re supporting the FAA in understanding what a full national airspace safe-access strategy needs to be, and we’re trying to understand challenges for “tweener airspace” between low and high altitude. Overall, one of the key opportunities for our industry is to be a global leader in UAS technologies and capabilities.

Despite the progress Europe has achieved under SESAR, the system is still fragmented and more expensive than Gatwick would like, McMillan said.

Maurice Georges, Direction des Services de la Navigation Aérienne (DSNA), said in France, “what’s driving the future today is demonstrable technological innovations.”

For instance, SESAR’s new technology has changed flight drastically in the last five years. “In Europe, flight plans used to be very stupid,” Georges said. “But SESAR helps us change flight plans on a daily basis—creating new, stronger customer relationships.”
Multigenerational
Continued from page 2

and dreams of the FAA, and the Agency’s resources and budget constraints, Rhodes said. “The panel did a great job of explaining the budget issues on the ops and F&E [facilities and equipment] side and how to prioritize,” he said.

“The panel dealt with a lot of hard questions,” Rhodes said, but he would have liked to have heard more about how NextGen could free up money for F&E and other budgetary issues.

Ball pointed out that this session had a “historic panel. We had four women who are very strong leaders in their organizations on that panel.”

Paul Engola, Leidos, reported on the Oct. 17 session “Join the Club: How Many Stakeholders Can We Integrate?”

“I found it interesting that we are being proactive in addressing new entrants to the airspace. It should make for a smoother, long-term integration,” he said.


The session showed that there’s a “huge shift from compliance process to doing things based on data capabilities,” Ryals said. Helping to move regulators out of the critical path as the speed of technology grows becomes the biggest challenge. “How do you move from activity and output to outcomes? That really, truly, is going to require stronger and stronger collaboration with industry,” she said.


“It’s exciting that NextGen’s number one priority is PBN strategy,” she said. “This isn’t just the future anymore: NextGen is NowGen.”

PBN is going forward; the strategy has been published, Staab said. “As we remove legacy equipment because it’s no longer necessary, and having people who are dependent on that equipment saying ‘Oh, we accept it,’ you could see we’re all working toward the same goal.” But she was left with a question: What is the PBN implementation strategy and who is responsible in this collaborative environment for executing this plan?

Hoag discussed the Oct. 18 session “Flying Through the Air with the Greatest of Ease: How International ANSPs Prioritize Resources.”

He said the session highlighted four key themes: Collaboration between air navigation service providers (ANSPs), especially the smaller ones; prioritizing safety and efficiency above everything else—and doing that using effective technology; innovating whenever possible in order to serve the customers; and the need for ANSPs to stay out of politics in order to prioritize services and supply a good product to the end user.

“One of the great things I thought Ed Sims of Airways New Zealand said was ‘disrupt or be disrupted,’” Hoag said. “Look at the outcome before the technology and what constraints are out there.”

Engola reported on the Oct. 18 session “Acquisition Programs: Too Big Not to Fail?”

“Most of the dialogue was really around the acquisition process,” he said. “Is it broken, and if there are breaks in the process, what is required to fix them?”

There was a lot of discussion about how the FAA makes acquisitions, how the timeline from initial to final investment can be prolonged, and how technological needs can change during the process, he said.

“There was great dialogue about whether budget funding is the problem, or is it more that the funding can’t be moved around to different areas that need it,” Engola said. “Budget unpredictability is a challenge, and not just a feature of government.”

Ball discussed the Oct. 18 session “FAA Surveillance Strategy.” He said he learned that the new FAA Spectrum Efficient National Surveillance Radar (SENSR) project “might fit into an acquisition program that’s

Continued on page 12
Air traffic is expected to grow 4.7 percent annually over the next 20 years. This growth coupled with existing demand means that the global aviation community must prepare the skies today for the capacity demands of tomorrow. In order to provide improved situational awareness and increased predictability of traffic demands worldwide, Metron Aviation is introducing its latest air traffic flow management (ATFM) product, Harmony Horizon.

Harmony Horizon is the latest evolution to Metron’s Harmony product suite, which is in use on five continents. Harmony Horizon is a cutting-edge situational awareness tool that offers strategic, pre-tactical and tactical demand predictions for airports and airspaces. Harmony Horizon also includes a system-to-system data exchange platform while promoting collaborative decision making (CDM) amongst aviation stakeholders.

“The addition of Harmony Horizon to our air traffic flow management product portfolio provides Metron Aviation with a continuum of ATFM products to offer ANSP customers,” stated John Kefaliotis, President of Metron Aviation.

Metron’s top-end Harmony product offers demand predictions, automated demand and capacity balancing, and stakeholder CDM, including slot substitution capabilities. Together, Harmony and Harmony Horizon offer stakeholders the tools needed to prepare their airspaces for tomorrow’s demand.
Surveillance
Continued from page 2

range radar, 1300-1350 MHz.

SENR will hopefully answer questions like, “What additional layers do we need in the national airspace as a backup to the ADS-B layer, which is the preferred surveillance layer?” Nichols said. If the SENSR plan is approved by Congress, the collaborating agencies are expected to release a request for information (RFI) in early 2017.

Another SENSR goal, said Rebecca Guy, FAA manager of emerging solutions, is to discover if it’s feasible to do a more efficient spectrum consolidated surveillance system.

“We don’t know, which is why we are looking for honest feedback from industry,” Guy said. This is expected to happen during Phase I of the program, from 2016-18. “This is the phase where we define the scope and what the industry can do,” she said. The goal is to get to a 2021 decision of whether the program is feasible.

Paul Fontaine, FAA director of advanced concepts and technology development, said SENSR also offers unprecedented opportunities for industry. “The challenge we would lay to the industry side is that this is really your time to innovate,” he said. “You’re competitors, but you’re also collaborators. Probably no company here can singularly bring long-range, short-range, and weather radar into one system.”

Both Fontaine and Guy stressed the need for honest, transparent feedback and commentary from industry. “We know industry will say, ‘Of course we can do it,’ but the timeframe matters,” Guy said. “If we say in time for the 2024 auction that we can get out of the spectrum, but it will take 60 years to do it, the value of the sale of the spectrum tanks. We don’t expect to be out of the spectrum in 2024, but there’s a big difference between 20 years and 60 years, or getting out of the larger metropolitan areas first.”

Added Fontaine: “There’s a fine line between vision and hallucination. This is the challenge we are putting out to the industry because you all have the solution sets we want to explore.”

Huerta
Continued from page 3

ports. Now, it’s up and running at 50 airports nationwide, two years early, he said.

However, Data Comm is “not without its controversies,” Huerta said. It concentrates noise in a smaller geographic area, which is resulting in resident complaints. He said the FAA is responding to complaints, but “truly engaging with a community is more an art than a science. We need to spend more time with explanations upfront rather than on the back end of a project.”

Huerta said the FAA would be happy with an 80 percent improvement in flight efficiency if it can avoid years of litigation and debate with disgruntled community members. But the FAA can’t do it alone—industry and aircraft stakeholders also need to participate.

“This pace of change we’re seeing in aviation is going to keep accelerating,” Huerta said. That means the FAA needs to be “comfortable with always being a little uncomfortable. We can’t always anticipate what will happen or have all the answers before mov-
Funding
Continued from page 5

with the new administration and
Congress to get more stable funding.
Priorities include examination
of public-private partnerships
for maintenance and facility
improvements, along with workforce
policies and procedures.

Does our funding structure
prevent the FAA from quickly
responding to industry game-
changers such as space-based
ADS-B? Other ANSPs have
moved fast. What about us?

Wassmer: We’re looking at that
right now. By this spring we should
have an update, including how to
pay for enhanced surveillance.

Elizabeth “Lynn” Ray, FAA: One
issue is making a business case for
ocean navigation.

Controller staffing is low,
often resulting in mandatory
overtime and controllers mak-
ing over $100,000 a year in
overtime pay. What kind of
plan is in place to address this?

Ray: Hiring plans are in place and
are on target. We did take a big hit
during the sequester, so it’s going to
take time to build the numbers back
up. There are some agreements in
place for dealing with hard-to-staff
facilities.

Wassmer: We met our staffing
goals (over 1,600 controllers hired)
for this year, and have a goal of over
1,700 controller hires next year.

To what extent are delivered
programs staying in the F&E
budget further crowding out
NextGen, because operating
cost savings are elusive?

Wassmer: One of the big things
Michael Huerta has emphasized is
the importance of collaborating with
all types of stakeholders: industry,
labor partners, and general aviation
users. As we propose different
things that we think look good, if
we don’t sit down and talk with our
stakeholders, it doesn’t really do us
any good. I think we’re making prog-
ress in that area. The majority of our
operational cost savings that came
out of the sequester has been in our
information technology (IT) commod-
ty arena: about $40 million in
continued cost savings.

Jenny: It’s really about a new way
of managing new programs, includ-
ing addressing F&E, along with un-
derstanding and addressing all the
operational aspects from the very
beginning and making that part of
the initial funding.

How does the FAA intend
to change out aging infra-
structure?

Ray: The high-level answer is that
it will be done programmatically and
collaboratively. You can’t do it with-
out that; there are too many pieces.
For instance, there have been some
locations that say if we want to keep
our VHF Omni Directional Radio
Range (VOR), can we pay for it?

“We’ve learned we’re not
that good at predicting the
future or outcomes. We’ve
been doing ATM about
the same way for six de-
cades, and that’s how we
entered the stage to dis-
cuss UAS.”—Ariel Scheirer,
Ascent Consulting

Multigenerational
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too big to fail. Panel members gave
us good background and setting for
a major program that’s critically im-
portant to many of us. They really
gave us something to think about.”

Scheirer closed with a report on
the Oct. 19 session “UAS in the USA.”

“We’ve learned we’re not that
good at predicting the future or out-
comes,” she said. “We’ve been doing
ATM about the same way for six de-
cades, and that’s how we entered
the stage to discuss UAS.”

Scheirer said this was the first
UAS panel during which she heard
congress concrete solutions and ideas.
The key theme was that there’s going
to be a strong emphasis on the op-
erator to assume the risk in both de-
veloping the management systems
and the operations. “One area not
touched on is the question of how
we are going to manage the risk and
costs of insurance,” she said.

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