

NATCA Safety & Tech Update Week of March 6, 2017

AIR TRAFFIC REQUIREMENTS (AJV-7): James Keith (D10) is NATCA's Article 114 Representative to the AJV-7 Office. His update for this report is below.

1. Offshore Precipitation Capability (OPC)- We should see back out in the field soon in Miami, New York, Houston centers, command center, and San Juan.
2. Advanced IM- The concept of operations work group meet for 3 days this month on continued work on the con ops.
3. Terminal Work Package 1 (TWP-1)- Terminal CHI team has been engaged and briefed on the concepts found in TWP-1. I have worked with AJV-7 in scheduling the terminal CHI team to work with MITRE in development of specific concepts found in TWP-1.
4. Long Range Radar- The agency has formed a workgroup lead to by AJV-7 to define the need and priority for long-range radar in the post ADS-B age. Eric Labardini and I are participants on this work group. A kick off meeting was held this month. I will keep you updated on the progress of future meetings.
5. ERAW- Attended Monthly ERAW meeting.
AIMM Sig 3- continued work on the con-ops. The access to data for controllers to use for training will be addressed in the con-ops.

DATAComm: Chad Geyer (ZLA) is the Article 114 Representative for DataComm. Below is his update.

Last week Controller Pilot Data Link Communication (CPDLC) sites sent over 3500 clearances a day. The Program Office continues to work requirements for new builds to improve stability, performance and increase opportunities for facilities to use Auto Mode. The new build should be available in August. Believe it or not, Segment 1 Phase 1 of the DataComm program was deployed ahead of time and under budget. The Program Office will use the additional funds to deploy the Tower Data Link Services (TDLS) system to an additional three sites RSW, CHS and VNY. These sites will be CPDLC capable. In addition to the new towers, four PDC only sites are being upgraded to CPDLC. These sites are CMH, ADW, BUF and RNO. NATCA worked with the program office to determine where these sites would be added or upgraded.

The Technical Center hosted pilots from various airlines to discuss En Route messages and system functionality. These pilots engaged with the team that created controller requirements to make sure that the system will be user friendly and that functionality is as good as it can be. In some cases, procedures may be developed that would require a controller or pilot to go to voice to clarify certain interactions that cannot be fully understood in a CPDLC clearance. Pilots will continue to come in and view functionality and messages every few months. This will help ensure that controller and pilot training are on the same page and that the system works for all. Some information that came out of the initial meeting is

- Conduct follow-on meeting to discuss pilot/controller phraseology for Initial Services.
- Discuss altimeter avionics message display at next DCIT. Will include photos from different avionics.
- Use one of the subsequent demos to conduct a realistic scenario with both controllers and pilots to simulate different re-route scenarios.
- Discuss adding an indication of open-ended PIDs at the first intra-facility eligibility transfer in use case team meetings and discuss at DCIT.
- Discuss concatenating altimeter uplink with Monitor TOC in use case team meetings and discuss at DCIT.
- Scrub list of “canned” free text messages at DCIT 54.
- Avionics team will provide a standard flow of Initial Services CPDLC messages with screen shots to operators.
There is another meeting scheduled with the operators at the end of the month.

NAS VOICE SWITCH (NVS): Jon Shedden (ZFW) represents the NATCA membership as their Article 114 Representative to the NVS project. His report is below.

NAS Voice System (NVS) Factory Acceptance Testing (FAT) Dry Run is now scheduled to begin the second week in April. FAT is now scheduled to begin the week of July 18th. Harris is assembling the 255 position ATC Voice Node (AVN) for FAT, and is almost complete. They also continue development of the formal test procedures, which will be run on the FAT system.

Mr. Shedden and Christopher Lloyd (ZDC) received informal delivery of the 90% complete operator and supervisor manuals. Formal delivery will occur just prior to the beginning of FAT Dry Runs.

Mr. Shedden was at the Harris test facility in Melbourne, FL the weeks of February 6th and 27th.

Next Generation Air-Ground Communication (NEXCOM) continues deployment of new CM300/350 V2 radios to terminal facilities across the country. Deployment is going well.

NAS Voice Recorder Program (NVRP) is the replacement for existing NAS voice recorders (DALR, DALR2, DVRS, DVR2). The Program Office presented to the JRC and received approval to proceed to Final Investment Analysis, leading up to the Final Investment Decision. Key site for NVRP will be Seattle Center in the 2018 time frame.

Grand Rapids Tower/TRACON (GRR) is reporting multiple issues with their aging voice switch. There's one outstanding issue where a RADAR site is causing interference in the Tower Cab. That issue continues to be worked.

Potomac TRACON (PCT) is reporting a large number of tone events. The FAA sent a team of engineers from the MMAC to their facility to try to determine the cause, and any possible resolutions. This has also caused NATCA and the FAA to take a closer look at the headsets to determine if they provide adequate protection against these events. A series of meetings has occurred to review the FAA's current memo regarding the handling of tone incidences.

Mr. Shedden is participating in the rewrite of **FAA Order 6510.4 (A/G Order)**. The last version was written in 1980. There are both new and existing requirements in the order dictating how Air Traffic must use A/G frequencies. NATCA received a briefing from the Spectrum Office on September 27th. We have requested a SRM panel be convened to address the safety issues associated with this requirement. AJI is reviewing the request. The new order is currently in the review process.

RUNWAY SAFETY: Bridget Gee (DFW) is NATCA's Runway Safety Action Team (RSAT) Representative. She also serves as the Article 114 Representative to the Runway Status Lights (RWSL) Program. Below is her report to the membership.

Runway Status Lights (RWSL):

ORD: Being conducted in three phases: Phase 1, Runway 10L/28R, was turned online April 27, 2016. Phase 2 and 3 are scheduled to come online 2017.

Phase 1 (10L/28R): Initial Operating Capability (IOC) took place 4/27/16.

Phase 2 (10C Enhancement) – 10C target operational date Nov 2017. Driven by city (CDA) and FAA ES delays in completing construction, now estimating Aug shelter completion, plus three months of testing.

Phase 3 (9R Enhancement) – 9R target operational date should be July 2018. Driven by delays in CDA completion of construction, they are (very) tentatively saying the work will start this fall, testing, and optimization for IOC will take place late spring.

DTW: ORD declared 4/20/16. A site visit is warranted for shadow operations on the 21L REL's. This will occur prior to IOC.

Phase 2 (21L): 3 REL (Runway Edge Lights) to be installed Spring 2017

BWI: Pre-IOC briefing was held on 2/28/17. Shadow Ops was completed 3/2/17. IOC will take place on 3/8/17 with the RELs (Runway Edge Lights) only. The Build 3.1 is scheduled to be installed in May. I will return for another shadow ops for the THLs (takeoff hold lights. I will be on site 2/28-3/2 for shadow operations on the RELs.

SFO: IOC (Initial Operating Capability) was declared on 11/30/16. ORD planned for May/June 2017.

BOS: Pre-construction meeting to be held on 4/12/17. Site prep begins on 4/20/17.

DFW: Pre-Bid for construction to be held during the week of 1/30/17. Final bids were due 2/6/17. Work is scheduled to begin 3/15/17.

Runway Safety:

Closed Runway Occupancy Prevention Device (CROPD): Live Testing at JFK was completed last year. The FY17 focus site will be RNO. Initially, there was a probability of going to RNO and MDW this year, however the decision has been made to only go to one site to increase the chances of an operationally acceptable demonstration. MDW has thus been postponed until FY18; with the idea that results this year will inform what makes sense next year. The week of June 5th, the plan is to start setting up equipment, running the initial testing, and doing the initial train the trainer. The live use will begin July 10th.

Airport Construction Advisory Council (ACAC): The ACAC continues to support construction activities throughout the NAS and Internationally. We brief weekly on current projects in the NAS.

Automation of Construction Notice Diagrams: Multiple meetings and edits have been conducted for the detailed requirements in which myself, the ACAC, and Runway Safety office were involved in. I am currently waiting on the draft of final requirements to be completed in order to review. This project is ongoing.

Root Cause Analysis Team (RCAT): Bridget Gee is the RCAT Industry Co-Chair on the RCAT. Our last meeting was scheduled for February 23rd. At that time, we analyzed the current A and B runway incursions in the NAS since the start of fiscal 2017. We also began using data from the SRAP (Surface

Risk Analysis Process) to allow for a more in depth look into Category C events.

Airport Construction CAR – The RTCA Airport Construction Task Group’s final report is with AJV. AJV is actually in control of the way forward currently as they are reviewing the RTCA’s TOC Airport Construction Task Group’s recommendations. I am currently awaiting review and commit by AJV. Once completed, we will be able to finalize our recommendations. CAR due date is 5/1/17.

Runway Safety Call 2 Action Communication Initiative – Runway Safety Best Practices Workgroup – We identified and reviewed Runway Safety best practices and will make recommendations for formalization where appropriate. The group in collaboration with the Runway Safety group and the Runway Safety Council will formalize the “best practices”. I sit as the co-lead for this workgroup. The next workgroup meeting will be held in April.

Runway Incursion Prevention Shortfall Analysis (RIPSA)- Research was conducted at 15 airports without any surface surveillance system and we are waiting on a final report of that research. Work is ongoing.

ICAO – ADOP (Aerodrome Design and Operations Panel) – My final report was submitted to IFATCA and NATCA on 12/12. Work is ongoing with the ADOP.

ICAO - AOWG (Aerodrome Operations Working Group) - The AOWG is responsible for the development of SARP’s and the PANS procedures pertaining to emergency response at and in the vicinity of aerodromes. Mr. Jean-Louis Pirat, Chairman of ADOP, specifically asked for my assistance on this working group due to the need of air traffic experience. Work is ongoing.

ICAO - Runway Safety Action Plan Working Group – This group is promoting the implementation of strategies to reduce the number and severity of runway safety-related accidents and incidents on an on-going basis. I am on 3 subgroups within this working group in which the majority of our efforts right now are in data analysis.

SURVEILLANCE BROADCAST SERVICES (SBS) OFFICE: Eric Labardini (ZHU) is the Article 114 Representative to the SBS Office. Below is the update for SBS.

The NATCA Surveillance and Broadcast Services (SBS) team includes: **Eric Labardini (ZHU)**, National SBS Article 114 Rep, **Craig Bielek (A90)**, **Dan Hamilton (SFO)**, National Airport Surface Surveillance Capability (ASSC) Rep, **Andrew Stachowiak (I90)**, and **Tom Zarick (ZDV)**, National Interval Management Rep

ADS-B:

- As of February 1, 2017, the number of Rule Compliant ADS-B Out in the US reached 24,859. ADS-B In equipped aircraft reached 22,812.
- Current equipage levels are falling short of the projected numbers needed to reach the Jan 1, 2020 deadline to equip with ADS-B. Avionics Installation capacity NAS wide could also be exceeded the longer users wait to equip. So far, the Agency has been clear that the deadline is firm. Time will tell, as the deadline looms closer.
- Most, if not all, Air Carriers have provided the Agency with a plan to meet the Jan 1, 2020 deadline.
- The military, as previously released in the press, expects to be unable to meet this deadline for several versions of their fighter and older aircraft. They are working with the Agency on a compromise that requires DOD radar availability at key sites to be identified.
- GA equipage is a harder question and being carried as a High risk by the SBS Program Office. Increased avionics availability and competition among manufacturers continues to bring the overall cost for GA users down. In addition, the Agency has initiated another rebate program and it is showing some interest, but not as high as expected.
- The SBS PO very rough estimate of avionics installation capacity nationwide is 50,000 aircraft per year. Users that wait too close to 2020 may find that the capacity for installation falls short of demand. Facilities may see these GA ADS-B operators flying more check flights as they attempt to validate their installations and claim the rebate.
- An issue not screened by automation systems but an important assumption for future ADS-B dependent applications is the broadcast call sign of the user. ADS-B sends this information to automation systems for comparison to the filed call sign. When a mismatch occurs a Call Sign Mismatch (CSMM) alert can be generated. Data from ZAN showed over 2100 CSMM alerts were generated in just one month (March 2016). This prompted SBS Article 48 to recommend all MEARTS sites disable CSMM alerts. MEARTS sites can do the same with Build 16.01 or later. In addition, SBS Article 48 initiated a survey of all ERAM sites to gauge the extent of the problem. The number of CSMM conditions present across all ERAM sites has been such that it is unreasonable to recommend enabling these alerts in ERAM or STARS sites at present. The Agency continues to work on reducing the numbers.
- ADS-B IOCs have been completed at all EnRoute (ERAM and MEARTS) facilities.
 - All but one ERAM site has promoted ADS-B to the top of their sort cells. ZMA intends to wait until the end of FY17 to do so.
- 91 of 155 Terminal sites have reached their ADS-B IOC and 86 are operating on Fusion. The majority of the remaining Terminal sites are ARTS 2E sites awaiting an upgrade to the ELITE (STARS) build. The Terminal ADS-B/Fusion transition proceeds in this order: Kickoff meeting, ADS-B Flight Inspection, ADS-B IOC, Fusion Operational Suitability Demonstration (OSD) and Fusion Operations. The most recent and upcoming Terminal events:

- West Palm Beach (PBI) Kickoff 2/7/2017
- Colorado Springs (COS) Fusion Operations 2/7/17
- Roswell (ROW) Flight Inspection 2/8/17
- Columbia (CAE) Kickoff 2/9/17
- Greensboro (GSO) Fusion Operations 2/9/17
- Sioux Falls (FSD) Fusion Operations 2/13/17
- Tallahassee (TLH) OSD 2/14/17
- Huntsville (HSV) Flight Inspection 2/15/17
- Fort Wayne (FWA) Flight Inspection 2/22/17
- Tallahassee (TLH) Fusion Operations 2/22/17
- Green Bay (GRB) Fusion Operations 3/1/17
- Eugene (EUG) Flight Inspection 3/1/17
- Portland (PWM) Flight Inspection 3/2/17
- Bismarck (BIS) Flight Inspection 3/8/17
- Roswell (ROW) OSD 3/15/17
- Wilkes Barre (AVP) Flight Inspection 3/15/17
- Fort Wayne (FWA) ADS-B IOC 3/15/17
- Huntsville (HSV) ADS-B IOC 3/15/17
- Roswell (ROWZ) ADS-B IOC 3/15/17
- Huntsville (HSV) OSD 3/28/17
- Charleston WV (CRW) Flight Inspection 3/29/17
- Roswell (ROW) Fusion Operations 3/29/17
- NATCA SBS continues to work with the Agency toward a more proactive approach to ADS-B avionics issues. Though these are infrequent occurrences the Agency's approach to date has been hampered by a lack of resources, bureaucracy, and legal constraints associated with investigating avionics issues flagged by the SBS Compliance Monitor. These issues occur when standards for installation or configuration within aircraft or ground systems are not met. ADS-B is a cooperative surveillance source relying on the position information determined onboard the aircraft. In order to reduce or prevent the number of safety compromising events in the NAS we need a proactive, timely response. NATCA SBS continues to prompt the Agency to reopen analysis of the risk associated with erroneous position in the ADS-B SRMD. In addition, an ATSAP has been filed covering the known issues to date. The Agency has indicated potential mitigations are being worked. However, an SRM Panel is the appropriate place to determine whether the mitigations are acceptable.

Advanced IM/FIM-S

- American Airlines Merging and Spacing project now officially named AIRS (ADSB-In Retrofit Spacing Solution). Group continues to meet regularly with emphasis geared more on the airline side. Formal procedure development postponed due to the length of time American will need to equip the aircraft required to conduct the operation.

Advanced Surveillance - Enhanced Procedural Separation (ASEPS)

- NATCA National has selected JT Lenhart (ZOA) as the National ATOP Representative. JT is working closely with Eric Labardini to ensure he is

included on all ASEPS discussions, telcons, and distribution lists. ASEPS representation will be a shared responsibility between JT and Eric, but the ATOP focus means JT's role will become more and more critical.

- ASEPS continues to explore a reduced oceanic separation standard. This may be supported by Space Based ADS-B (SBA) or with changes to ADS-C, currently used in ATOP. In any environment, including oceanic, separation standards are closely tied to the combined performance of Communication, Navigation, and Surveillance (CNS). While SBA represents a dramatic change in surveillance, little is changing in the ability to communicate with aircraft. To date, the Agency has stated that communication is "out of scope" for the ASEPS effort. Reducing separation standards without a change in communication affects response times and much more. NATCA ATOP SMEs have also weighed in during our SRMPs that ADS-C backup is desired even with the introduction of SBA.
- A third SRMP was held November 29 to Dec 1 that included NATCA representatives from all ATOP facilities. The previously identified 12 hazards were given initial and final rankings based upon mitigations identified by the Panel. NATCA and other SMEs continue to identify enhanced oceanic communications as a necessary mitigation for the hazards identified. Without enhanced communication, the overall success of the ASEPS remains in question.
- Currently, the ASEPS project is focusing on HITL development. NATCA SMEs have weighed in that unique scenarios need to be developed for each facility. The Agency has indicated that the effort is pre-investment and additional HITLs will be required should a final investment decision be reached.

ASDE-X Tech Refresh:

- Efforts to update the final Baseline training course for this system are currently underway.
- The team is preparing for the next rollout of system enhancements.

ASSC:

- Field Familiarization is currently underway at CLE.
- IOC for CLE is scheduled for the weekend of March 24th.
- ORD (Operational Readiness Decision) should be decided the end of March.
- The ASSC IOA team has completed their final evaluation at SFO. There are no major discrepancies.
- All ASSC Sites after CLE are currently at risk for late deployment due to a potential hold up from FAA Internet security. The Internet security department is now becoming heavily involved in the wireless RU's (remote units) that are located in and around the airport due to a major system hack that occurred. Dan Hamilton will brief the NATCA Safety & Technology department once more information is received.

ERAM Fusion

- A Track Based Display Mode (TBDM) SRM Panel is planned for March 14-16 at Seattle Center. NATCA participants have been identified and submitted to FAA LR.

- The goal of TBDM is to allow expanded use of 3NM separation below FL230. This includes supporting 3NM separation with ADS-B regardless of any distance from a radar site or ADS-B Radio Station.
- TBDM will be an incremental step towards an ERAM Fused Display Mode (FDM) change in the future. This is currently being prototyped, and FDM will allow display rates to be independent of the speed of the surveillance sources. A faster update rate would potentially allow expanded use of 3NM separation above FL230.

FMA in Fusion:

- Safety analysis is nearing completion. Operational evaluation and SRMP have concluded. The SRMD is to be circulated for approval. Timelines continue to project an operational start by mid-2017.

GIM-S:

- GIM-S discussions continue on a bi-weekly basis at the PMO level to address issues related to the program. They are committed to providing support to resolve these challenges.

MEARTS Fusion:

- HCF started Fusion operations on February 22, 2017, a significant achievement after years of effort. Unfortunately, a number of latent radar issues have resulted in a pause in Fusion operations just days after the start. Second Level Engineering and LIDOS are analyzing the trouble tickets submitted and working on recommended solutions to address these radar-induced issues. Everyone is anxiously awaiting the outcome of this analysis.
- Coordination has begun with the next MEARTS 3nm Fusion site, ZSU. A kickoff meeting is planned for March 27-28 to discuss all steps in the transition and address any concerns or obstacles. Obviously, a prerequisite to Fusion at ZSU will be a full understanding of the issues in Hawaii.

Terminal Fusion:

- The Fusion Focus Group continues to track and resolve facility reported issues with Fusion. These are largely issues with the underlying surveillance infrastructure, and experts from all fields are available to assist. Please report any issues to your OSF and our NATCA SBS group for assistance. It is critical that actual data is recorded for evaluation and resolution.
- NATCA remains very focused on the Common Terminal Digitizer (CTD) effort necessary to incorporate numerous ASR-8 sites into STARS Elite as well as Fusion.
- An issue with TDW displays has been resolved. Both the Agency and NATCA agreed to an adaptation parameter to resolve the issue with target size. TSLE has been rolling out the change nationally.
- SCT issues continue to be a large focus. NATCA SBS is heavily involved in the Surveillance Automation Analysis Team (SAAT), which is examining long-term alternatives to help improve overall surveillance in the SCT airspace. Their efforts are aimed at mitigating tracking issues in the LA Basin, including the effect of the new Stadium near LAX.
 - NATCA and the Agency have agreed to move forward with raising the LGB radar site. This was thought to be one of the easier solutions to

put in place, but the Agency cannot seem to get out of their own way to do so.

- Meanwhile the SAAT team has been working on a costly Wide Area Multilateration (WAM) design. Agency and Stadium proponents have completed negotiations over funding and announced that a shared cost agreement allowing WAM deployment to move forward.
 - WAM in the LA Basin area will be in 3 phases: update 9 existing ADS-B Radios to support WAM via Virtual Radar (CLT configuration), add 8 new Radios to supplement the WAM coverage (still using VR), then update STARS to allow for WAM in Native format (1 second update rate).
 - The first phase is moving along rapidly. The first phase Radio updates are complete. Coordination with ZLA and SCT on contractor test flights in March/April has begun. A flight inspection could occur as early as July, and operational use by August 2017. An SCT WAM SRM Panel meeting is scheduled March 7-8.
 - Las Vegas (L30) has successfully completed their OSD but has not determined when they will transition to Fusion. NATCA SBS is trying to work with the facility on any internally identified obstacles or issues.
 - SAAT has agreed to begin analyzing Potomac (PCT) Fusion issues for potential solutions. The facility has been struggling with a number of issues related to problem radar sites or a lack of coverage. The first meeting with the facility took place on 2/28/17, and discussions of potential solutions will be ongoing.
- Vehicle ADS-B:**
- CLE is the latest Airport to deploy Vehicle transponders
 - Audits of the 18 airports will start soon in efforts to identify and mitigate various issues that have been identified through deployment thus far.

Traffic Flow Management System (TFMS): Brian Campos (DCC) represents the NATCA membership as their Article 114 Representative to the TFMS project. His report is below.

Route Amendment Dialog (RAD) classes were conducted starting the week of January 9th and finished Feb 3rd. This was a large exercise in training TMCs, STMCs from every enroute facility in preparation for using the tool to conduct ABRR (airborne Rerouting) and PDRR (Predeparture Rerouting) activity starting in later January. The training proved to be successful in meeting the goal of preparing a core group for each facility with the base knowledge in using the tool. Their role will be to assist in their facility in learning the new tool and helping to answer questions on the tools capability for their facility. Workshop training material along with other support information were given to all who attended to aid in conducting an exploratory workshop at the local level.

All enroute FTRs also participated during the 4-week workshops to understand then assist TMCs in the impact to ERAM's MDM and EDST. It also created the environment for FTRs to discuss possibilities of the tools impact within their facility.

Automatic chevron insertion of protected segments is to define the required route portion from TMU to the flight plans viewed by the controller. This is to provide the controller the information for flights needing to stay on identified route amendments, with safety, necessary to help downstream controllers in maintaining system integrity. This was to be turned on in late January but was moved up since it did not have to be turned on with RAD but prior to RAD. Prior to this turn on, numerous lab and ERAM back-up channel testing was conducted prior with identified issues resolved. Turning it on early with ERAM would give a real look if all is working to turn on the RAD. After the turn on with the live system, problems were identified with the insertion of protected segments and false indication of action required by a controller with a cyan "T" causing the information in front of the controller to be occasionally confusing and inaccurate. This prompted protected segments to be turned off for a review of the identified concerns. The resolve will involve ERAM changes for 600 and possibly 700 (late fall) with some TFMS adjustments. TFMS adjustments can be a risk for anything beyond summer since TFMS vendor contract has gone through numerous contract extension resolve ongoing software issues and the ability to extend again may not be possible. If anything needs to be resolved during the rebid of TFMS contract, it may have to wait until the contract award can get up to speed if different than the current vendor. If resolve doesn't meet controllers and TMU needs, some risks exists to possibly not use the RAD for both ABRR and PDRR. Some abbreviated version may be able for turning on such as ABRR or the possibility still exists for another delay.

Currently, work is ongoing to see what resolve to ERAM and TFMS software future releases can get this much-needed tool acceptable for use. It is deemed there are still more enhancements necessary to the current state of the tool to make it fully functional with releases planned for late April for both systems. The software system integration challenges were expected for this first-time tool between ERAM and TFMS.

Internal evaluation is ongoing within the Command Center Severe Weather area in how it may refine the way it handles protected segment required route advisories in preparation in the use of the RAD tool.

UNMANNED AIRCRAFT SYSTEMS (UAS): Steve Weidner (ZMP) is the NATCA Article 114 Representative for UAS. Jeff Richards (ZAU) is assisting Mr. Weidner on this project due to the workload and activity associated with it. Below is the update for the membership.

NATCA UAS HITL PARTICIPATION

There is a terminal Human In The Loop (HITL) study coming up at the William J. Hughes Technical Center in Atlantic City, NJ March 28-30. NATCA controllers from D01, NCT, PCT and I90 are participating. This study is focused on Unmanned Aircraft Systems (UAS) contingency operations. There are several scenarios incorporated into these studies including lost link, which is unique to UAS.

NATCA/FAA WORKGROUPS

NATCA and the FAA have formed two work groups under the NATCA/FAA Unmanned Aircraft Systems (UAS) Integration Workgroup Scope Agreement and is in the process of forming a third workgroup.

The two groups that have been formed are a Part 107 workgroup and a Standardized Lost Link workgroup. The Part 107 workgroup is a headquarters workgroup that will make facility visits in the coming months to assess how the process of implementing the Small UAS Rule (Part 107/101) is working. The goal of the work group is to elicit feedback from the field and formulate recommendations on how small UAS rule processes and procedures can be improved.

The Standardized Lost Link workgroup was formed to create recommendations on standardized UAS lost link procedures. Often times a single UAS flight in the NAS can contain dozens of lost link procedures, depending upon where the UAS is along its route. In order to move toward full UAS integration into the NAS, simpler, more predictable lost link procedures need to be developed. This workgroup will be comprised of headquarters, industry and NATCA SME's from the field.

The third workgroup, which is still being formed, is for UAS Training. The focus of this workgroup will be to ensure the development and implementation of UAS training for the air traffic workforce. The integration of UAS into the NAS is not slowing down and it is imperative that the field receives the proper training as integration initiatives increase.

LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)

The agency is accelerating its work to implement a LAANC system that will speed the process for approvals and notifications for small UAS operating in B, C, D and E surface area airspace. The goal is to begin the rollout of this system before the end of CY 2017. The FAA is not awarding a contract to a specific vendor to develop this capability, but rather working on a common data-sharing platform that may be used by several vendors to provide approval capability based on information provided to them by the FAA. The vendors will, in turn, be required to provide information back to the FAA on

Part 101/107 UAS flights that were authorized via the vendor system. This data will be provided to our air traffic control facilities. There are many items that have to be completed between now and implementation, not the least of which is training to the field. Mr. Weidner and Mr. Richards are fully participating in this effort on NATCA's behalf.

DRONE ADVISORY COMMITTEE (DAC)

NATCA Executive Vice-President, Trish Gilbert, participated in the second meeting of the DAC on January 31 in Reno, NV. Mr. Weidner, Mr. Richards and NATCA Deputy Directory of Safety and Technology, Mark McKelligan is supporting Trish on the DAC. The DAC is currently focused on three primary areas, Local vs. National Goals and Responsibilities for UAS, UAS Access to Airspace, and FAA UAS Finance. Mr. Richards is representing NATCA on the DAC subcommittee. The next DAC meeting is scheduled for May in Washington DC.

UAS PATHFINDER EFFORTS

The FAA is partnered with BNSF Railroad in a Pathfinder program to conduct research and develop procedures for UAS operations Beyond Visual Line of Sight (BVLOS). BNSF has been conducting testing and research along a 140-mile section of track in rural, eastern New Mexico. Mr. Richards and Mr. Weidner recently had the opportunity to visit the launch and recovery site in Vaughn, New Mexico. The research being done by BNSF and their operation is very impressive, enabling the safe integration of UAS into the NAS while at the same time improving the safety of BNSF's rail operation.

UAS QUESTIONS

As a reminder, any UAS related questions can be addressed to Mr. Weidner and Mr. Richards at UAS@natca.net.