

**NATCA Safety & Tech Update**  
**Week of October 17, 2016**

**AIR TRAFFIC PROCEDURES (AJV-8):** Andy Marosvari (BOI) is the Article 48 Representative in the AJV-8 Office. Mr. Marosvari forwarded the summary below for this update.

- Changes to 65 workgroup
  - The structure of the 7110.65 Revision Steering Committee will be discontinued and the work done by the group will be done by AJV-8 with NATCA representation. The participation by industry and management was minimal and very few NextGen issues were addressed. The cost of the workgroup was high for the benefit gained.
  - NATCA discussed the issue with AJV-8 and agreed to sunset the group in favor of utilizing the NATCA Procedures representative in all of the changes generated by the field and worked through the Procedures office. NATCA will have the ability to submit change ideas outside of the established process, to be vetted by NATCA and the FAA.
  - Controllers will still be able to submit change requests utilizing the established process.
  
- TALPA
  - TALPA (Take Off and Landing Performance Assessment) is a change to the way runway conditions are reported and disseminated. Braking Action reports have been modified, and MU numbers are replaced with Runway Condition Codes. In addition, NOTAMS indicating Field Conditions (FICON) will be changed to align with the new reporting classifications. TALPA became effective October 1, 2016.
  
- 65 Change suggestions for FY17
  - Controllers wishing to suggest changes to the 7110.65 can use the following survey form for submission: Please be very specific when suggesting a change.
  - [FY17 7110.65 Change Requests](#)
  
- Professional Standards
  - The Professional Standards National Workgroup just completed the last class for FY16 at Atlanta ARTCC. BUEs from facilities nationwide participated in the 3-day class that focuses on communications, problem solving and methods to maintain and promote professionalism throughout the NAS.

- To date, the Professional Standards Program has accepted over 2000 submissions with approximately 90 % of those issues being successfully resolved.
  - The National Workgroup is planning for 5 training classes in FY17. The first class is scheduled for November 1-3 in Denver and another class will be held in Tampa November 29-Dec 1.
- If your facility is in need of a Professional Standards committee member, please send an email to [ps@natca.net](mailto:ps@natca.net).

**AIRSPACE TECHNICAL DEMONSTRATION 2 (ATD-2):** Pete Slattery (CLT) represents the membership as the Article 48 Representative for ATD-2. His report for is below.

Activity at the NASA ATD-2 Lab at Charlotte (CLT) has increased tremendously in recent weeks. NASA researchers are at the Lab on an almost continuous basis monitoring live CLT airport traffic and creating algorithms that will help the program better predict future demand/capacity imbalances. Controllers and TMCs are involved one week a month to ensure that NASA understands the traffic flows, and why we make the decisions we do.

Last month, we had TMCs, controllers and Ramp tower personnel together in the lab. Each group explained traffic flow methods and constraints from their perspective. The NASA folks were thankful to have the different groups together explaining each side of the equation. They indicated that the insight they gained was of immense value for their understanding of the challenges that occur on the surface of this or any airport.

Research sessions are scheduled each month through next spring. Members from the various interest groups will participate both together and separately as needed. Come next spring, research will slow down as NASA needs to firm up the software and begin Human in the Loop (HITLs) studies of both ATC and Ramp personnel using the system. First with pseudo-traffic, and eventually with live traffic as the equipment is installed in our respective work places.

Also last month, the FAA/Industry Surface Collaborative Decision Making (SCDM) team held their quarterly meeting at CLT. While here, they were given a tour of the NASA ATD-2 lab. Kyle Andrews (ORD) represents NATCA on this team. The exchange of information between those two groups appeared to go very well.

Later this month representatives from the TMU Unit at ZDC will be visiting the NASA ATD-2 lab to receive a briefing on how the technology will affect their interaction with flights between CLT and the Northeast.

Myself and each of the other NATCA members who participate in this activity are keenly aware that our purpose in this activity is to look out for the needs and best interests of our fellow controllers. That understanding is at the forefront of every decision we make while we represent our profession during the development of this new and emerging technology.

**DATAComm:** Chad Geyer (ZLA) is the Article 48 Representative for DataComm. Below is his update.

The Tower Data Link Services (TDLS) Version 12 has been deployed to 59 sites and only 14 remain. 48 of those sites are Controller Pilot Data Link Communication (CPDLC) capable and only 7 remain. Across the country, approximately 1900 CPDLC clearances are being sent everyday with that number increasing as more sites become operational and additional aircraft begin to participate.

This week the Program office has personnel at DFW and Midway conducting file and fly activities. File and Fly is the part of service activation where CPDLC is turned on at the site and controllers send clearances directly to the flight deck. Each site is sending over 100 clearances a day. When the facility is conducting file and fly, controllers are required to receive a read back for every clearance sent. This process will continue until the local 48 team decides that they are ready to accept the service. Some of the reasons that the program office uses this approach to declare Initial Operating Capability (IOC) is so that controllers can verify that the clearances that are being sent contain all of the information they view in the editor window. This also allows the controllers to become familiar with the system while program office personnel are in the facility with them. The program office provides support during the day and evening shifts to answer any questions that might arise while using the system. This support will remain on site throughout the file and fly activities and also for one to two weeks after IOC is declared

**ENROUTE AUTOMATION MODERNIZATION (ERAM):** Julio Henriques (ZNY) leads the ERAM efforts for NATCA. This update is provided by Dan Mullen (ZID).

We held an Airborne ReRoute (ABRR) Steering Committee Meeting Sep 20 to continue addressing deployment issues. Members of the ABRR, TFMS and ERAM teams were in attendance. We plan to begin the national rollout in late January and be completed in March 2017. Operational testing can begin after the next patch to the TFMS system, which is expected November 12. Each ARTCC will send a Traffic Management Coordinator (TMC) and STMC to the Tech Center to become thoroughly familiar with ABRR and act as Subject Matter Experts in their facilities. One issue being worked is the automatic insertion of "FRC" in flight plans revised by Pre Departure ReRoute (PDRR). The Full Route Clearance may not be applicable at all sites, so some Centers may need to delay using PDRR until a software change can be delivered.

The EnRoute Automation Workgroup (ERAW) met all day Sep 22 at the Tech Center. We were briefed by the Datacomm Program Manager and worked on some of the logistics needed to deploy such a major change into ERAM. NATCA has added 13 new SMEs to help conduct Datacomm testing over the next few years. ERAW reviewed the requirements for upgrading the automation systems of Anchorage, Honolulu, Guam and San Juan, including the funding and administrative needs. We also worked on the prioritization of proposed future enhancements.

The National User Team (NUT) continued work on issues including:

- ER 142808      Handoff Immediately Flashed OLD
- ER 76279      ADSB Broadcast Call Sign
- ER 163208      Hold Menu
- ER 166860      NEXRAD Strata
- Table Top Exercise
- PDRR FRC
- TBFM re-sequence/Swap

ERAM Tech Refresh will begin in 2017 and will begin the process of replacing hardware. Members of the NUT and CHI teams have been evaluating possible R-side monitor replacements including larger displays. Many of the coming new programs, like DataComm and ABRR, will increase the amount of views the controllers will want to keep open, so bigger displays could be desirable. The extra space needed for bigger monitors may be a problem at sectors that rely on strips, or are located side by side with other R-sides. Any new changes to sector configurations create additional expenses and requirements, so this will be a lengthy process.

Thirteen NATCA members went through training to become Subject Matter Experts (SMEs) at the Tech Center. These new SMEs will primarily be used to test DataComm, since that program will bring the biggest changes to ERAM for the next few years.

**NAS VOICE SWITCH (NVS):** Jon Shedden (ZFW) represents the NATCA membership as their Article 48 Representative to the NVS project. His report is below.

**NAS Voice System (NVS)** demo labs are currently running on Build 12B. Harris continues to focus on stability and fixing bugs as we lead up the FAA Stability Demonstration. The Stability Demonstration is the precursor to the beginning of the FAA's Factory Acceptance Test (FAT). FAT was scheduled to begin in November 2016, but it has been delayed until February of 2017. Harris also continues to work on feature integration. THE FAA Stability Demonstration is scheduled to occur the week of November 14th.

Don Schmeichel (NATCA Engineer), Ed Hand (NATCA Engineer), and Mr. Shedden were at the Tech Center on September 26th evaluating the new ERAM display in conjunction with the larger NVS displays. The NVS and ERAM program offices will continue to work together to resolve the outstanding issues.

Chris Lloyd (ZDC), NVS Training Lead, is currently participating in Task And Skills Analysis (TASA) for the controller, supervisor, and configuration specialist user roles on NVS. The 50% Operator Manual was delivered on October 14th. Comments are due November 1st.

Mr. Shedden was in Atlantic City and Washington, D.C. the week of September 29th for the quarterly NVS Program Management Review (PMR). Mr. Shedden will be in Anchorage and Kenai the week of October 17th to work on NVS requirements for Alaska FSS. Mr. Shedden will be in Seattle the week of October 24th to work on Seattle's Key Site site surveys.

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

Testing of a new RCAG at **Houston Center (ZHU)** has begun. This RCAG will replace the ARINC's VHF Extended Range Network (VERN) in Cancun. The FAA successfully replaced the Key West VERN last summer. These RCAG/VERN radios provide long-range directional radio coverage in the Gulf of Mexico. The area rep, Shawn Sharpless, indicates that initial testing shows the site works as well as the VERN in regards to signal strength and coverage.

**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. Key site for NVRP will be Seattle Center in the 2018 time frame.

Plantronics was awarded the **Headset** contract so almost everything will remain the same. There will be a few headset models that will no longer be available under the new contract due to obsolescence. A briefing on the changes went out to the Service Centers P & R reps and should be distributed to controllers as a briefing item soon.

The **Headset Splitter** final design has been completed. The splitter, which is designed to allow three or four headsets to be connected to existing voice switches, should be produced and deployed later this year. A SRM Panel was completed on July 19th and 20th. The splitter will also be a part of the headset contract and may be ordered in the same manner as headsets. Air Traffic Services is attempting to obtain funding for deployment of the splitter.

**Grand Rapids Tower/TRACON (GRR)** is reporting multiple issues with their aging voice switch. The Voice Switching Team in Oklahoma City (AJW-173) is working closely with GRR to resolve their issues. There's also a radio coverage/spectrum issue being worked. The controllers have presented a list of issues to Tech Ops and AJW-173. Air Traffic and Tech Ops continue meeting to develop a plan to address the outstanding issues.

**Waterloo Tower/TRACON (ALO)** is reporting issues with the phone system used operationally in the tower. One of the issues has been resolved (inaudible phone) while the second one remains in work.

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 are having internal discussions regarding the best way to proceed to ensure the safest use of NAS frequencies.

**RUNWAY SAFETY:** Bridget Gee (DFW) is NATCA's Runway Safety Action Team (RSAT) Representative. She also serves as the Article 48 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) –Completion date shift due to south airfield shelter. Completion now scheduled for Spring 2017.

Phase 3 (9R Enhancement) - Scheduled to begin Spring 2017.

DTW: Hardware issues fixed and Commissioned on 4/20/16.

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

BWI: Construction is ongoing. System set to come online in 2017.

SFO: Construction is ongoing. Shadow Ops scheduled for 11/15-11/17. Pre-IOC scheduled for 11/16. Initial Operating Capability (IOC) scheduled for 11/30/16.

BOS: Draft MOA for review. Pre-CSER (Contractor Site Engineering Report) scheduled to be delivered 10/19. Design review meeting to be held on 11/15.

DFW: Final CSER (Contractor Site Engineering Report) scheduled to be delivered 11/2.

### **Runway Safety**

Closed Runway Occupancy Prevention Device (CROPD): Live Testing at JFK was completed. No report with JFK results has been provided at this time. RNO and MDW will also be testing sites, which will take place next year.

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.

Root Cause Analysis Team (RCAT): Bridget Gee is the RCAT Industry Co-Chair on the RCAT. The RCAT met on September 22<sup>nd</sup>. We reviewed the current A and B runway incursions in the NAS as well as began a data dig on category C incursions. Myself and my FAA counterpart briefed the RCAT results at the Runway Safety Council (RSC) meeting on October 12<sup>th</sup>.

BNA CAR: BNA due to the airport being expanded twice since the control tower was opened in 1981. The expansions have resulted in multiple runway and exit areas having limited or completely obstructed views from the tower. The inability to observe aircraft exiting the runways, or holding in position makes it difficult for BNA controllers to effectively control traffic. The CAR was submitted to the ERC 10/6.

Timely Airport Maintenance Notification CAR: This CAR was in briefed on June 21<sup>st</sup>. Research and outreach are currently being conducted. This CAR is also part of the Top 5 additionally two SRM panels will be commenced this month. Work is ongoing.

Airport Construction CAR – The RTCA Airport Construction Task Group’s final report is with AJV. I am currently awaiting review and commit by AJV. Once completed, we will be able to finalize our recommendations.

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. Work is ongoing.

Runway Incursion Prevention Shortfall Analysis (RIPSA)- RIPSA is funded by the Runway Safety group. This Runway Incursion Reduction Program (RIRP) is tasked to investigate, develop, test, evaluate, and deploy low cost runway incursion prevention technologies. This is the result of the NTSB recommendation to “require, at all airports with scheduled passenger service, a ground movement safety system that will prevent runway incursions; the system should provide a direct warning capability to flight crews.” Currently, research is being conducted for 15 airports without any surface surveillance system, which should be completed at the beginning of 2017. The hope is to have a low cost technology solution to reduce the risk of runway incursions and be production ready within the next 3 years.

NBAA article – I recently conducted an interview with the NBAA to comment on an informational video, which highlighted HNL airport and its infrastructure. Article will be out shortly.

NTSB – the NTSB is commencing a special investigation into runway incursions. The plan is to develop a Special Investigation Report (SIR) initiating a comprehensive discussion on runway safety in the National Airspace System (NAS) focusing on runway incursion cause, effect and mitigation. The report would include an overview of runway incursion history, mitigation efforts to date, areas of concern, and recommendations and suggestions to reduce the frequency and severity of systemic NAS wide and airport specific runway incursions. As the NATCA runway safety and RWSL subject matter expert, the NTSB as requested my yet to be defined support for this project.



**SURVEILLANCE BROADCAST SERVICES (SBS) OFFICE:** Eric Labardini (ZHU) is the Article 48 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 48 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 this update 17,697 of 25,578 equipped aircraft are broadcasting ADS-B Rule compliant avionics in the NAS. The numbers above reflect about 10% of all traffic in the NAS are ADS-B Rule compliant and the difference in the two numbers represents problem avionics, that are normally screened by ATC automation systems.
- 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 2017). This prompted SBS Article 48 to recommend all MEARTS sites disable CSMM alerts and poll all ERAM sites to gauge the extent of the problem. In July 2017, over 44,000 CSMM conditions were present in all ERAM sites! Obviously, a lot of work is needed and fortunately CSMM alerts are disabled in all ERAM, STARS, and ASDE/ASSC sites. MEARTS sites can do the same with Build 16.01 or later.
- The SBS PO rough estimate of avionics installation capacity nationwide is 50,000 aircraft per year. With the January 1, 2020 deadline to equip quickly approaching, concern is high that equipage levels will fall short of the estimated total NAS fleet (100,000-160,000). Users that wait too close to 2020 may find that the availability of installers falls short of demand. The Agency has launched a new incentive \$500 rebate program for a limited number of piston single engine aircraft.
- ADS-B IOCs have been completed at all EnRoute (ERAM and MEARTS) facilities.
  - ZSE, ZAB, ZAU, and ZMP completed their planned sort cell promotions on Oct 13.
  - All but one ERAM site has promoted ADS-B to the top of their sort cells. Still awaiting a decision from ZMA.
- 83 of 155 Terminal sites have reached their ADS-B IOC and 75 are operating on Fusion. 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:

- Fort Smith (FSM) Kickoff meeting Sept 20
  - Burlington (BTV) Kickoff meeting Sept 20
  - New York (90) Kickoff (repeat event) meeting Sept 27
  - Gulfport (GPT) IOC completed Sept 28
  - Atlantic City (ACY) IOC completed Sept 28
  - Amarillo (AMA) Flight Inspection completed Oct 4
  - Fairbanks (FAI) IOC completed Oct 4
  - Chattanooga (CHA) transitioned to Fusion on Oct 5
  - Gulfport (GPT) OSD completed Oct 7
  - Green Bay (GRB) Flight Inspection completed Oct 13
  - Atlantic City (ACY) OSD completed Oct 13
  - Spokane (GEG) IOC completed Oct 13
- NATCA SBS continues to work with the Agency toward a more proactive approach to ADS-B avionics issues. Though these issues are rare, the Agency's approach to date has been hampered by a lack of resources devoted to investigating flagged issues within 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.

#### **Advanced IM/FIM-S**

- Advanced IM ConOps work continues. Next meeting scheduled for middle of November
- Meeting scheduled with the Agency and ALPA on Sept 20th was largely a success. Agency is now committed to developing the IM applications with "defined interval" in mind, rather than delegated separation.

#### **Advanced Surveillance - Enhanced Procedural Separation (ASEPS)**

- Formerly known as Space Based ADS-B (SBA), formerly known as Reduced Oceanic Separation (ROS). Ah yes, the time honored Agency tradition of renaming and renaming a program. :)

- ASEPS has now had two SRMP meetings. The second held Aug 23-25 in SFO included NATCA representatives from all ATOP facilities. 12 hazards were identified, and actual rankings and more discussion will occur at the next SRMP planned Nov 29-Dec 1 in Phoenix.

- ASEPS continues to explore a reduced oceanic separation standard. This may be supported by Space Based ADS-B 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. While SBA represents a dramatic change in surveillance, little is changing in the ability to communicate with aircraft. This affects response times and much more. NATCA ATOP SMEs have

weighed in during our SRMPs that ADS-C backup is desired even with the introduction of SBA.

- Outside of the SRMPs, a fairly obvious campaign is underway to keep the status quo. Misinformation and statements to the effect that “there is no problem” lead decision makers to believe that SBA introduction is questionable at best. It is hard as controllers to understand how surveillance would be a bad thing, but the arguments surround business cases more than safety.

**ASDE-X Tech Refresh:**

- Training meetings continue as the team updates the CBI.
- This program continues to run smoothly with minimal issues

**ASSC:**

- ASSC achieved IOC at SFO on September 21st! This is the culmination of years of effort and numerous challenges. NATCA guidance through it all has been instrumental in ensuring the product deployed met operational needs.
- The new tower at SFO commissioned with ASSC on Saturday October 15th.
- CLE is the second Key site for the system. Initial training is currently scheduled to begin in December.
- Another SRMP will be taking place the first week of November. The agency is requesting the panel re-evaluate the need for SMR (surface movement radar) due to the ADS-B rule scheduled to take effect in 2020.

**FMA in Fusion:**

- The safety analysis work is the remaining major step in this process. Operational evaluation and SRMP have concluded, but the safety analysis documentation needs to be incorporated before the SRMD can be circulated for approval. Timelines continue to project an operational start by mid-2017.

**GIM-S:**

- ZDV and ZLC still finalizing procedures for the operation to be conducted with SLC arrivals from ZDV’s airspace. ZLC will also be using GIM-S for the DEN arrivals in their airspace hopefully by mid-December.
- ZKC adaptation work continues in the facility’s support string.
- ZFW GIM-S Kickoff was held on Sept 27th. Due to the fact that the TBFM Ops Team was unable to attend, any further site scheduling was not discussed until they can visit the site.

**MEARTS Fusion:**

- Coordination continues with Honolulu (HCF) to execute a transition to Fusion. An onsite TIM is planned Oct 18-19.
- The SRMD and Order allowing 3nm Fusion in MEARTS have been fully approved by the Agency.
- The transition to Fusion in MEARTS is complicated by the fact that Fusion is an “all or nothing” display mode in MEARTS. Unlike STARS, sectors cannot change easily between display modes. Instead, the entire facility and all facilities that receive a feed from the MEARTS facility go to Fusion at once. This means all on site Fusion evaluations and training for all sites needs to be

accomplished within 45 days per the SBS MOU. A complex and resource intensive effort.

**Terminal Fusion:**

- 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 seems to be close to resolution. Both the Agency and NATCA agreed that an adaptation parameter could resolve the issue with target size. After Operational Eval, the change was pushed forward to our key site, Evansville (EVV). Provided on site evaluation is successful, the pixel size change will be forwarded on to all other affected sites.
- SCT issues continue to be a large focus. NATCA is heavily involved in the SAAT team, which is examining long-term alternatives to help improve overall surveillance in the SCT airspace. The first efforts are aimed at mitigating the effect of the new Stadium near LAX. NATCA and the Agency have agreed to move forward with raising the LGB radar site. We are also working on a Wide Area Multilateration (WAM) design. Agency and Stadium proponents are in negotiation over funding.
  - 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.

**Vehicle ADS-B:**

Outreach meeting for HNL are scheduled for mid-November.