

NATCA Safety & Tech Update
Week of October 29, 2018

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. NATCA submitted its score for prioritization of 7 ADS-B capabilities.
2. October 10-11 the terminal CHI team and the national user team met with the STARS E2 program to finalize use cases on auto point out capabilities for enroute and terminal, and auto airspace transfer capabilities. We are in the early stages of requirements.
3. Terminal chi reviewed a handful of STR's for the TAMR program. The CHI team is in the early stages of reviewing to addition of more colors to STARS.
4. Attended communicating for safety.

AUTOMATED TERMINAL PROXIMITY ALERT (ATPA): Mike Sanders (SCT) represents the membership as the Article 114 Representative for ATPA. Mr. Sander's report is below.

ATPA is now available for any facility operating under a STARS platform. To enable, Air Traffic will determine airports/runways they wish to utilize and then work with the OSF on adaptation. Training is required for all controllers at facilities using ATPA, through an eLMS course and a brief lab demonstration of ATPA entries and features. Please provide feedback on training.

ATPA is **voluntary** on part of the individual controller at his/her display. Facilities are not permitted to make any portion of ATPA mandatory.

FLOW EVALUATION TEAM (FET): Tony Smith (DCC) is the Article 114 Representative to the Flow Evaluation Team (FET) for Collaborative Decision Making (CDM). His report is below.

CDM/FET NATCA update

The CDM/FET subgroup met on October 15-17, 2018 in Orlando, Florida to continue its work on all the taskings assigned to the team to include:
ADS-B – leveraging its capabilities and working with regulators on the equip 2020 integrations.

Mexico Routes – continued expansion of existing opportunities on a more regular basis.

Airspace Flow Programs (AFP) Strategies – review of how and when to best use this TMI.

Airborne Reroute (ABRR) and Pre-Departure Reroute (PDRR) capabilities – with a focus on potential for upcoming swap seasons.
Integrated Departure Manager (IDM) Tasking – beginning work with NASA to talk about the addition of PHL to the IDM HITL's being conducted to seek the potential benefits of a more gate to gate processes
The FAA Co-lead, Al Mahilo from ZOB, is retiring and the co-lead for our team will be Mark Holben from the Command Center.
The FET Team will meet next on November 5-8, 2018, at the Delta Airlines AOC in Atlanta, Georgia.
Tony Smith
CDM/FET NATCA Article 114 Rep.

TERMINAL AUTOMATION MODERNIZATION REPLACEMENT

(TAMR): Aaron Rose (NCT) is the TAMR Article 114 Representative for NATCA. His report to the membership is below.

In the TAMR world this past four weeks we have completed in collaboration with the agency 4 Initial Operating Capacities (IOC). Tri-Cities, Greenville, Little Rock, and Jacksonville all transitioned. Thanks go out to each NATCA local, also for welcoming myself and each NATCA TAMR SME on-site to ensure a smooth transition.

Mr. Rose visited Greenville S.C., better known as Greer, Las Vegas for CFS and also had a week-long trip to Washington DC. While in the District, attended the Initial Trajectory Based Operations (iTBO) kick off meeting. This was a comprehensive meeting about how each different program (TSAS, TFDM, TBFM) will interact to produce a time-based schedule to move aircraft from aerodrome to aerodrome. This will start in the Northeast corridor then to the Denver and Atlanta regions. Mr. Rose also visited and attended meetings with the TAMR program manager and FAA Requirements.

Greer visit was for the IOC transition from ARTS 2E to STARS. Joining Mr. Rose from the TAMR NATCA team was Jon Bealles (A80), Anthony Loguidice (ABE), and Richard Thomas (GEG). This is Richard Thomas's 20th site as the NATCA TAMR facility lead. Great job Richard. Thank you Chris Clack (GSP FacRep) for working with the SMEs to ensure a smooth transition and what a great facility.

There was also an in-person TAMR Article 114 meeting held in Washington D.C. Topics ranged from software issues to how we integrate Terminal Spacing and Sequencing (TSAS) software prior to Operating System (OS) migration. The OS will be upgraded to Linux RedHat during 2021. Software will be delayed due to the migration to the new OS.

In addition to the Article 114 meeting held in Washington there was an Article 114 telcon on Oct 25th. Discussions revolved around Keyboard issues at OMA and how replacements are shipped from the vendor. The R10 software build which will be the last one prior to Operating System migration

to RedHat Linux. Writing surfaces at both Greer and Binghamton. ADSB certification in R7 software and Shreveport Direct Sensor Feed (DSF) for the midnight shift. Keyboards which have been refurbished have been coming out of the depot with debris inside, TSLE (FAA second level engineering) is working with the vendor to ensure this does not happen in the future. Binghamton tower and approach have yet to ORD (Operational Readiness Decision) on their STARS equipment due to writing surfaces not being replaced which they were promised. The Program Management Office (PMO) is working with Engineering Services (ES) to ensure steps are taken to install and provide a timeline to the facility. Also, Greer which just transitioned did not have the writing surfaces delivered on time and PMO is working on a timeline. NATCA TAMR will keep an eye on these endeavors to ensure what was promised is delivered.

NATCA TAMR since its inception has worked collaboratively with the vendor, agency, and PASS. All BUMs should understand the time and effort it takes to coordinate these transitions and have patience with all involved. We are working with external entities to ensure new software, better weather on the display, and hardware issues are being worked. We are doing this on a daily basis. If any BUM would like to discuss issues pertaining to their facility please ensure to coordinate with your FacRep then contact the NATCA TAMR team at TAMR@natca.net.

TAMR Software/Hardware Report Submitted by Kyle Ness (M98) Operational Testing and Evaluation (OT&E)

Mr. Ness travelled to the Raytheon facility in Marlborough, Massachusetts with NATCA SMEs from BTV, RSW and A80 in mid-October to participate in an early evaluation of a new AT Coach training tool. Specifically, this tool will convert a STARS CDR recording to an AT coach training scenario. Raytheon demonstrated the ability to modify a converted scenario with existing AT Coach editing tools as well as manipulating events from the pseudo pilot position. Another evaluation will take place as the product matures and bugs are worked out.

Program Trouble Report Working Group (PTRWG)

NATCA attendees at the October meeting moved two PTRs related to ADS-B display information to a higher ranking. The ADS-B 2020 mandate is nearing and NATCA feels that improved ADS-B display items will benefit the controller. At NATCA's request, the November and December meetings will be an end-of-year cleanup by reviewing older PTRs for potential closure.

MSAW/CA Board

FAA Human Factors concluded a study on controller reaction time to MSAW/CA events and preliminary results seem favorable to adjusting safety alert algorithm parameters. To validate the effect of making these changes, FAA Human Factors is planning a simulation experiment to see how controllers react with various lookahead parameters programmed into the scenarios. The experiment is in the early planning stages and NCT has been selected as a data source since NCT has a variety of CA/MSAW alerts. The

next step will be to procure data and AT Coach scenarios to build simulations.

Software Planning Board

STARS will migrate from Solaris to the Linux OS in early 2022 and the effect of that transition is having a significant impact on software planning. It generally takes 12-16 months to develop and field each software build which means there is only enough time to get two more builds out to the field before the OS rollout begins – R9 and R10. The R11 build had been planned but developing and deploying R11 would put the schedule at an unacceptable level of risk of slipping the OS migration and therefore had to be moved post-OS. Working with the Software Planning Board (SPB), NATCA identified several priority PTRs in R11 that needed to be merged into R10. Taking the new R10 content into account, a new schedule was drafted and concurred on by all stakeholders.

STARS Hardware

Mr. Ness will travel to the FAA Technical Center mid-November to conduct a final evaluation STARS TCW installation on Slatwall design. The objective of the TIM is primarily to do final fit checks of representative Raytheon TCW components on final design of the Russ Bassett and Evans Slatwall consoles.

Field Support

Concurrent with each STARS software build, a Plain Language Document (PLD) is drafted to detail and clarify the build content, whether it be new functionality or fixes. Two deficiencies have been identified with the existing PLD; the “plainness” of the document itself and the distribution model of the PLD. NATCA engaged the TAMR PMO to address this issue and pursue another method to convey software changes to Air Traffic in a simple and meaningful way. Working with appropriate stakeholders, a new software training brief will be developed by Raytheon, approved by NATCA and other stakeholders, then distributed to the field. The brief will be presented in PowerPoint format with graphics and simplified bullet points. The first briefing will for the R7 build (still in keysite) was just sent out in draft format and a meeting to review the content is scheduled October 31.

TAMR NATCA Training submitted by Ross Costa (RSW)

In late August, Mr. Costa traveled to Munroe, LA (MLU) for IOC on STARS. In September, Mr. Costa traveled to Waterloo, IA (ALO) and Tri-Cities, TN (TRI) for their transitions to STARS. While on site, Mr. Costa ensured that the facility was comfortable with the new equipment, ensured that the adaptation was working appropriately, and ensured that the transition plans were followed.

Mr. Costa also traveled to Washington D.C. for a quarterly A114 TAMR Meeting. At the meeting several topics were discussed, including an overview of the IOC schedule, training topics, lessons learned, and STARS moving forward. Additionally, Mr. Costa traveled to Raytheon to review a prototype CDR replay tool for AT Coach. This product will allow for STARS to capture data and replay it for training uses or scenario development. We

discussed challenges, how it can be used and what improvements are needed to ensure proper deployment.

TAMR Deployment and Common Terminal Digitizer (CTD) Update Submitted by Jim VanZee (GRR)

As TAMR rolls into the last full fiscal year of STARS deployment NAS-wide, we can look back and be very proud of the accomplishments achieved to date. Our strong collaborative approach has been a primary driving force in making this possible. All but 13 terminal facilities in the country have been upgraded to STARS automation. Software functionality and reliability continues to be enhanced, evaluated, and upgraded throughout the country. Hardware upgrades that provide better quality displays are being installed. All of that, while also setting the bar for one of the most on-time and on-budget projects in the history of the NAS. These successes are a direct reflection of the benefits of a truly collaborative work environment between Labor and Management to find solutions to obstacles and consistency in messaging – frequently on a daily basis and in time critical situations. Two sites (TRI and GSP) were successfully transitioned to STARS in October. Three of the remaining thirteen ARTS IIE sites (ELM, ERI, and FLO) are scheduled to transition to STARS prior to December, and of the remaining ten, 7 of them (GRR, MKG, MBS, FNT, LAN, CAK, and MFD) are part of S804 consolidation efforts.

During October, two more Legacy STARS sites (JAX and LIT) were upgraded to the modern G4 hardware and software, with only 12 more that are scheduled to be complete within the next year.

TAMR Operational Support Facilities (OSF) Update Submitted by Scott Kendrick (North Texas-OSF)

STARS Enhancements 2 (SE2)

Reviewed Airspace Transfer, Point Out scenario use cases during meeting in DC Oct 9th – 12th with ENROUTE. The described function affords both STARS and ERAM facilities with a capability that improves the overall safety and efficiency of NAS operations. The TAS (Transfer of Airspace) capability will allow for the transfer of defined volume of airspace between STARS facilities, between ERAM facilities as well as between STARS and ERAM facilities.

Software Planning Board (SPB)

Stakeholders agreed to changes and schedule for STARS software build S6R10. The current software schedule will fit within the current testing timeframe barring any surprises. Prioritizing current content that moved into R10 and delaying fixes to software build S8R2 will mean no new functionality until after the new OS transition.

Operating Testing and Evaluation (OT&E)

Attended the software test approach telecon for the S6R8 OT&E. NATCA OSF provided feedback on the upcoming software test in November.

Program Trouble Report Working Group (PTRWG)

The October meeting stakeholders re-ranked and ranked new PTR's. Stakeholders reviewed PTRs on the watch list and reviewed several PTRs that were already ranked and adjusted the priority based on recent developments.

System Technical Reports Working Group (STRWG)

Stakeholders continue to review proposed software modifications to STARS. Topics include the Approach Runway Verification (ARV) tool which would consider turn rate of aircraft, another is beacon reflections during code swap and finally aircraft type undo after re-entering the type aircraft.

In addition, Mr. Kendrick attended CFS and the following telcons. STARS Enhancements 2, TSAS, SBS, Pre-CCB, TAMR Look Ahead and weekly OSF Technical telcons.

TBFM/TSAS Team Report - October 2018

TBFM/TSAS Article 114 Rep. Matt Gammon (ZID)

Below is a report from the ZFW NATCA TMU Rep. Jimmy Clouse about the DFW TBFM Extended Metering Project:

ZFW has been working on extended metering to DFW since October 2017 and have been discussing extended metering before then. During that time ZFW TMU NATCA Rep, ZFW TMO, and TBFM SME's have worked with ZFW FAST, ZFW Area Leadership Teams, Second Level Engineering, CAVAN, and the National Ops Team to design a system that will allow First Tiers (ZHU/ZKC/ZAB/ZME) to meter to DFW.

The ZFW TMU Leadership had a goal of completing this project in the first quarter of 2018, before runway construction at DFW, but finding a time that met our First Tiers, FAST, National Ops team, and everyone involved with the design was difficult. ZFW appreciates the hard work, professionalism, and dedication from ZHU, ZKC, ZAB, ZME, and everyone involved as timelines were pushed back multiple times. The success of extended metering relied heavily on collaboration and teamwork.

The latest timeline from ZFW TMU's TBFM SME, Kenny West:

Week of 10/8: ZFW workforce briefed and the makeup briefing is being put on CEDAR.

Week of 10/15: Asbestos abatement in the TBFM lab. No work scheduled.

Week of 10/22: Cavan will be in the building 10/23-10/25 working with ZKC on the extended system on the operational system. ZFW controllers can put the times on the glass and get used to looking at them. Continue individual briefings with TMCs.

Week of 10/29: Cavan will be in the building 10/30-11/1 working with ZHU, ZAB and ZME on the extended system on the operational system. ZFW controllers can put the times on the glass and get used to looking at them. Continue individual briefings with TMCs.

Week of 11/5: Load the extended system and use for metering. We will have Cavan support in the building to work on issues that arise.

Terminal Flight Data Manager (TFDM): Matt Baugh (IAH) is the TFDM Article 114 Representative, his update for the membership is below.

A meeting was held in early October with AJT (Air Traffic Services) and TFDM leadership to go over the current training and implementation plan. The meeting went well and the smaller group supports the plan, but we still have two levels of AJT to brief before final approval and support can be achieved. We were given approval to submit a request for 16 part-time National Training Cadre Subject Matter Experts (SME's) in November. Those cadre will make up approximately 1/4 of the total team of NATCA, Management, and contractors we anticipate will be needed to successfully roll out and train TFDM.

Developing the system and training concurrently continues to be a risk with TFDM, not only with the length of the courses but with any slips in the testing schedule. The current dates for Initial Operating Capability (IOC) are November of 2019 in PHX, but those dates are constantly at risk, with even minor adjustments to the testing schedule having huge impacts on the development of the training documents. We are continuing to work to stay on schedule, but if the training can't be completed on time, a slip in IOC dates will have to occur.

CFS was held the week of October 22nd and Leidos brought out a recent build of TFDM to demo in their booth. Thank you to all of the controllers who stopped by to get a demonstration of the current capabilities and offer their suggestions on how we can make TFDM better. The team looks forward to getting back to work next week to continue the process and finish build 1 and electronic flight strips.

Also, a special thank you to the NATCA TFDM team and their tireless efforts this week, both at CFS covering the booth as well as back in DC attending the meetings and ensuring the work continued getting done. None of this would be possible without their dedication, professionalism, and sheer will.

Advanced Electronic Flight Strips (AEFS)

Although the system continues to run in CLT, a loss of service for approximately 30 minutes in mid October is causing the delay of a suitability call for the 5.5 build. This build has interface additions to ATD-2 and ARMT which may be causing the issues. The tech center is looking into the logs of

AEFS from that week to see if they can pinpoint the issue. Once they find the cause, a fix will be made and installed as soon as possible.

Once Terminal Second Level Engineering has been able to schedule a timeframe to visit LAS, they will update their system so that LAS personnel can look at their last adaptation from 2 years ago to see if it's still a fit. This adaptation was build prior to them moving into their new tower so adjustments will likely have to be made to fit within their new operations. Once that is completed, LAS will make a determination of wether to move forward with the instal, training, and eventual usage of AEFS.

- CLT
 - Some lag and one freeze of the system has led NATCA and the FAA to hold a suitability call until the issues can be found and fixed.
- PHX
 - Upgrade of PHX to the 5.4 build is currently scheduled for the week of February 18, 2019.
- CLE
 - Training on the 5.4 build will begin Monday, January 14th and continue through Friday January 25th.
 - Installation/testing will begin the night of Monday, January 28th and continue through Thursday, January 31st.
- LAS
 - Nothing new
- SFO
 - Nothing new
- EWR
 - Nothing new

SWIM Visualization Tool (SVT)

Work continues to be done to lock down the IP addresses S46, ZHU, IAH, & HOU will use for their SVT monitors. At S46, an issue has come up with trying to procure the screens they will use and where they will be able to actually position the monitors to best help with their operation. Once the IP addresses are submitted and the screens are found, we will continue the process of getting the sites ready to use SVT.

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TIME BASED FLOW MANAGEMENT/TERMINAL SEQUENCING AND

SPACING (TBFM/TSAS): Matt Gammon (ZID) is the Article 114 Representative for TBFM/TSAS. His report to the membership is below.

TBFM

The week of October 8th there was a review of the TBFM Course at Oklahoma City. During this visit Ops Team members reviewed all of the lesson plans and their associated exercises. There was some updating and corrections made, but overall the course continues to receive good feedback. The same week the Ops team members were at ZAB to do the initial software verification of the IDAC system for the upcoming IDAC Installation and Training activity.

The following week of October 15 Sustainment testing was conducted at the Tech Center. This continued monthly robust testing continues to really help

identify issues early and overall has helped keep the quality of the releases as high as possible. There were some issues found with between Future Change in TBFM and IDAC flows. These issues were also present in previous releases so there should be some direction coming out in the near future reference using future change for IDAC changes. Additionally, there is an overall ticket in the works to overhaul all of future change and IDAC should be included in that. Also, Ops team members joined personnel from Tech Ops, Program Office, and Engineering Services during the install of IDAC IDST's at PHX and TUS. Their job was to ensure that the display and the operation of the IDST was correct prior to all the technical people left. There were some technical challenges during the installation but all parties got the work done and left the system running correctly for training later.

The same IDAC installation activity was repeated at ELP and ABQ the week of October 22nd and after dealing with a number of issues the IDST displays worked correctly. This was the week of CFS and Paul Carroll and I helped answer questions at the TBFM and TSAS Leidos booth. There was a lot of traffic at the booth and a lot of good questions about the current usage of TBFM and IDAC and future use of TSAS.

During the month of October the NEC subgroup continued their work of visiting facilities that will be involved with PHL metering as part of the Northeast Corridor. Briefings were held at ZTL, ZJX, and ZID. There will be a larger meeting in the near future to brief on the system after final development plans are completed at the Tech Center.

TSAS subgroup lead Paul Carroll (PCT)

During the first two weeks of the month, the Team participated on a vast amount of telcons each week to support the program. On October 6, I attended the ATCA Convention to review the Leidos TSAS demonstration and provide input. Their presentation was used at NATCA's Communicating for Safety Conference, the largest safety conference in the world. On October 7, TBFM Art. 114 TBFM Rep. Matt Gammon and I participated in the Trajectory Based Operation (TBO) Summit at FAA HQ. FAA senior leadership along with NATCA PMO Jeff Woods and Deputy Director of Safety and Technology, Mark McKelligan spoke to the group about the components of TBO and the vision towards the future. Time Based Management (TBM) and Performance Based Navigation (PBN) are the main components of TBO.

During the week of October 15, we conducted testing of the TSAS system at the Tech Center. The Team was able to use the Denver adaptation in string 2 during the week. The ANG Capabilities lab in string 16 will be migrated to the Denver adaptation after the New Year. At the request of Second Level Engineering, we conducted analysis of previously reported problems with both the TBFM and STARS functionality. We provided this feedback to both Leidos and Raytheon. Some issues were corrected and some remain

outstanding. During the week, we also participated in several telcons regarding the Leidos PR's (Problem Reports) and Raytheon DR's (Discrepancy Reports). We were able to close some of the DR's and we ranked our top priority PR's, which will be installed with the next software adaptation build. Issues that relate to STARS software have to compete with future STARS enhancements and minimal bandwidth availability. This issue will have to be addressed at the Program Management level to ensure that IOC critical functions for TSAS are fixed.