

NATCA Safety & Tech Update Week of December 24, 2018

TERMINAL AUTOMATION MODERNIZATION REPLACEMENT (TAMR): Aaron Rose (NCT) is the TAMR Article 114 Representative for NATCA. Her report to the membership is below.

All good things come to an end and new opportunities present themselves on a daily basis. Jim Van Zee (GRR) who has acted as the deployment lead for NATCA TAMR has moved on and Richard Thomas (GEG) has replaced him for the remainder of TAMR deployment and implementation. Jim will be missed by all the SMEs and especially me. It is a busy time for Section 804 consolidations and the Kalamazoo cut over is approaching fast. Jim will be the lead for NATCA in the region and I wish him the best of luck. This departure has paved the way for Richard to conclude the final deployments and with his NATCA TAMR background over the last six years we are in good hands.

Mr. Rose traveled twice over the reporting period to WJHTC for both R8, R7, and R6 software testing. While in New Jersey meetings with Terminal Second Level Engineering (TSLE) and TAMR hardware took place to ensure STARS software enhancements in addition to hardware enhancements continue to deploy. New features we have asked for are in the works to include callsign readout with a single keystroke on VFR ADSB equipped A/C. This will make identifying A/C much easier for controllers on the ops floor. Continued deployment of the optical trackball and enhancements to trackball speed are coming in builds which deploy within a year. The new Operating System (LINUX Red Hat) will be deployed starting in 2022. Until then we will be pushing facilities to move to the newest software to enable the program to meet all milestones promised to congress. Safety and security of the system is still our greatest concern and if a facility needs help understanding the new software builds we are available to assist.

R4C software is needed for the remaining ARTS 2E facilities since they are using the new and improved routers. The SSM has been completed, just before the holidays to ensure no issues arise prior to transition dates in January.

Mr. Rose is working closely with James Keith, Andy Marosvari, and Aaron Katz in regard to color usage on the STARS display. Requirements, Procedures, and Human Factors have to decide which colors are approved and for what purpose. This has been an ongoing discussion and TAMR hopes a resolution presents itself prior to February 2019. New programs and facilities are pushing for increased color usage especially since color displays have been introduced with the NAS wide deployment of STARS.

There are 11 Phase 1 transitions left to complete prior to Dec 31, 2019. For Segment 2, 3 more sites need to transition prior to May 2019. The Section 804 transitions will be completed prior to June if everything stays on schedule.

Thank you once again to all the TAMR NATCA Reps, FacReps, and controllers that have made this happen. By the end of 2019, all but JCF (Re-Host) and HCF (Micro-EARTS) will have terminal STARS. JCF will transition on a Dept. of Defense timeline

in middle 2020. HCF is still up in the air whether they will receive an ERAM, STARS, or combination of the two. The off-shore program is on hold at this time.

A new scoping document is being worked at the lower levels of NATCA and the FAA for terminal support after the deployment and implementation of STARS. NATCA will continue to have a voice in development, testing, training, implementation, deployment, and evaluation of existing and future terminal automation.

TAMR Software/Hardware Report Submitted by Kyle Ness (M98)

Operational Testing and Evaluation (OT&E)

S6.R8 Drop 3 testing concluded December 13. The R8 build integrates TSAS tools and display elements into the STARS baseline. This test event was to check the latest drop to ensure existing STARS software wasn't adversely affected and to allow TAMR SMEs to test TSAS functions. Thanks goes out to the NATCA SMEs from DCC, SCT, PHL, A80, ABE, CAK, NCT, D01, D10, I90 and A80 who did a great job working with a new tool with minimal training.

S6.R7 Drop 15 was tested mid-December due to problems discovered during keysite activity. The fixes were verified and R7 will go back to keysite with a planned national release early 2019.

S6.R6a was also tested mid-December and declared suitable for keysite. R6a is a variation of the R6 build primarily consisting of tracking enhancements originally designed to augment SCT surveillance. R6a will be released to a limited number of sites with specific tracking needs.

S6.R9 OT&E is scheduled to begin January 7, 2019.

Program Trouble Report Working Group (PTRWG)

The December meeting continued significant cleanup efforts by going through old PTRs and closing several. NATCA elevated a PTR related to ADS-B information and a PTR that increases coordination list capacity. NATCA also elevated a PTR that improves Range Bearing Line functions and STARS playback accuracy.

MSAW/CA Board

During recent R9 testing, aural alarm functionality was negatively impacted by a software change. Previous to R9, the aural alarm could be adapted to the owner of the track (tower or TRACON). In R9, the aural alarm sounded regardless of track owner therefore increasing nuisance alarms. The Board unanimously agreed the pre-R9 alarm behavior is preferred. TSLE will engage with Raytheon to update the software.

Software Planning Board (SPB)

During the December meeting the SPB added air traffic content to S6.R8 Drop 4, and modified content to S6.R9. Keysite selection for upcoming builds was also discussed with SPB participants. The rollout of the new STARS Operating System will begin with sites in the Northeast and will continue westward. To shorten deployment times prior to the OS rollout, the R9 and R10 builds should follow a similar deployment strategy – northeast and westward. Stakeholders discussed outliers to the rollout plan such as the Academy in OKC and sites with specific software needs such as SCT and D01. TSLE software made the following recommendations:

- NEOSF solicit for an ELITE keysite for R9 (satisfies the ELITE keysite need).

- DEN OSF discuss when they need R9/TSAS, consider training, and if they need to be a key site (satisfies the consolidated TRACON key site need).
- Pacific OSF discuss key site of R9 (and R10, R1, and R2) with SCT (satisfies the consolidated TRACON key site need).

TAMR Deployment and Common Terminal Digitizer (CTD) Update Submitted by Richard Thomas (GEG)

Participated in the Pre-CCB meeting via telcon on Dec 6. Dialed into the CKB and HTS IOC Planning telcons this month to get familiar with the sites for the Jan 2019 IOCs. Contacted the core SME (Ross Costa) and the four floorwalkers for these sites to ensure their travel is complete. Facility release, E2, new government credit card etc. Other telcons attended for familiarity are the S804 - MFD/CAK into CLE telcon and ROC Pre-CAI telcon.

Working with ROC to fix an issue with the MDM4 on the G1 STARS not displaying filled in geo areas correctly. Tech Ops was able to improve the presentation, but still not perfect. They have seen this same issue at other facilities and are confident it will not be present after cut over to G4. ROC NATCA and Management worked with OSF to create maps to use in the interim.

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

STARS Enhancements 2 (SE2)

12/10 – 12/14 – Attended the SE2 HITL's at MITRE. The user engagement of STARS Enhancements 2 and E-CRDA is currently undergoing a benefits analysis in preparation for the Final Investment Decision (FID). SE2 has two capabilities, The User Engagement HITL focused on a subset of the tools within the SE2 Separation Management, Merging and Spacing (M&S) Capability.

Software Planning Board (SPB)

Stakeholders agreed to changes in the software release contents for STARS S6.00R8 and S6.00R9 software along with FAA.Archive.122118.

Operating Testing and Evaluation (OT&E)

OSF SMEs from SEOSF and DVOSF continued support of the S6R8 RM OT&E that started Nov 26th and went through Dec 14th.

Program Trouble Report Working Group (PTRWG)

December meeting stakeholders ranked new PTR's. Stakeholders reviewed PTRs on the watch list and reviewed several PTRs that were already ranked. In addition, closed PTR's that have been open since the S4 baseline and are no longer needed or have been corrected within the software.

- As a follow-up from the November PTRWG, recommended that 15 DMS PTRs be closed. These were all Type IV and most were written against the S4 baseline. Several of those PTRs were written about DMS response messages. TSLE will open one new PTR to cover all known deficient DMS response messages.
- Reviewed several PTRs that were already ranked, as requested by stakeholders.
 - Four notable movements into the Top 50: FAAst12111 (Remove and Replace Processor with Image from USB Thumb drive) moves from

111 to 29.500. FAAst13714 (ADS-B ACID/ICAO Search) moves from 094 to 32.500. FAAst12390 (Increase number of coordination channels) moves from 148 to 38.500. FAAst06332 (Remote Tower processor R&R procedure) moves from 155 to 38.500.

We reviewed about 20 Ranked PTRs/CCDs that had the latest assigned rank date in the first half of 2016. Six of those will be closed, one (FAAst08559 - DR&A Datasets Available Window offsets headings from data when resizing) will be Watch Listed as this may become OBE by Linux OS.

System Technical Reports Working Group (STRWG)

Stakeholders are reviewing proposed software modifications to STARS. Remember all previous TCIDS used in coordination with ERAM, MCP RADAR status icons show passed when no monitoring is active, Aircraft handed off to wrong sector (ZLA ATSAP) and Filters should be allowed to drop and freeze tracks.

In addition, Mr. Kendrick attended the SBS, TAMR Look Ahead and weekly OSF Technical telecons and on leave 12/17/18 - 1/4/19.

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

The bid for a Part Time TFDM SME to join the core team has closed and a decision will be made within the coming weeks. Thank you to all of you who applied, we were very pleased with the number of volunteers. Another bid will be out soon for a pool of 16 SME's to join the National Training Cadre pool. This detail will begin in March of 2019 and will be responsible for traveling to our first group of waterfall sites and training each controller on TFDM. Please keep an eye out for it if you are interested.

The FAA Ops and Training team participated in an internal review of the ATCS Cadre and OS/CIC/TMC 90% course material at the tech center. This review was in support of the complete Training team and their official walk-through of both courses the next two weeks. The reviews went well and the team was able to get through both course evaluations without too many difficulties. Now that those have been done, the next steps are to review the Quick Reference Guides (QRG) in early January, followed by the Official 100% Course Walk Through in late February. From there we will begin the training of our National Cadre Pool with session 1 scheduled to begin March 11, 2019. Each cadre will need to be trained on all facets of the system, so each session is schedule to be two weeks in duration. We will hold 3 sessions, with the next sessions beginning March 26 and April 9, respectively.

Coordination has begun with sites 2 and 3 in the TFDM waterfall, CLE and IWA, for their pre-site surveys (PSS) in early and mid-February. As with previous PSS's, we will be looking to discuss the sites ability to support current program timelines, training, implementation, etc. From there, we will have follow up site surveys and coordination meetings throughout the process until we begin training and finally declare Initial Operating Capability (IOC) at each site.

Advanced Electronic Flight Strips (AEFS)

We will be upgrading CLE and PHX with the 5.4 build on January 28th and February 18th, respectively. The training and actual start of live traffic with that build still needs to be finalized with each facility. We will also be participating in stress testing of the newest build, 5.5, the week of January 28th with final suitability testing scheduled the week of April 1st. Once that suitability testing is passed and completed, coordination with the sites to upgrade their systems will begin.

The issues from CLT have been found and Terminal Second Level Engineering (TSLE) has been working on a patch that will limit the number of updates the system received from ATD2.

- CLT
 - Final coordination with the site to install the patch mentioned above is underway, with late January being the target date. Until then, most of the updated times from ATD2 are off so the system remains stable.
- PHX
 - Nothing new
- CLE
 - Nothing new
- LAS
 - Nothing new

SWIM Visualization Tool (SVT)

VOLPE demoed the new SVT share capability via web meeting to the Houston Area facilities. This modification in capabilities was requested by the facilities to mirror and possibly replace their current Aerobahn operations. That determination has yet to be made, as the facilities need time to work with and gain comfortability with SVT in order to determine if it will be able to replace their current systems.

For S46, the facility is still working on procuring the necessary monitors to display SVT near the departure walls in order to gain the most benefit out of the system. Currently, it is being displayed in the TMU area, and it has been updated to now showing the baseline 5 second update rate, as opposed to the training 5 minute delay they had previously been testing.

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/TSAS

The week of December 3rd:

-Members of the TBFM Ops Team visited the Tech Center to work on Sustainment Testing. Along with assistance from Tech Center personnel and Contract Support these sustainment activities have helped to identify issues in the interim builds and helped improve the TBFM product that gets delivered to the field. As 'sustainment' has been identified as the top priority for the TBFM system, these reoccurring test weeks have begun to provide valuable feedback to the engineers and testers that deliver new releases.

-A meeting was held at ZOB to discuss early departure scheduling from PIT into the PHL arrival TBFM system. Evaluating early departure scheduling into an arrival system in the Northeast corridor is a milestone as part of the Trajectory Based Operations (TBO). The intent is to see if there are benefits in having Towers call early for departure releases into a TBFM arrival system in the Northeast Corridor. Representatives from ZOB and PIT were involved in this meeting and a followup to this will be held at PIT in January.

-Ops Team members traveled to ISP to perform an IDAC Site Requirement Survey. An IDAC Site Requirement survey involves briefing the facility on what Integrated Departure and Arrival Capability (IDAC) is and then go into the Tower with facility representatives and Technical personnel to get specifics on where the equipment should be placed. Additionally, any other specific requirements for IDAC are identified to ensure correct and complete installation is accomplished.

-TSAS Run-for-Record entered its second week as members of the Ops Team participated in the activity. This activity was intended to complete the initial requirements verification of the TSAS capability. This activity involved many personnel including STARS/TAMR representatives, TBFM Ops Team members, TRACON TSAS SMES, etc. In addition to multiple groups participating in this activity, multiple labs were involved as well and the information gleaned from this will help with the overall development of the TSAS capability.

-Northeast Corridor SME's on the Ops Team visited ZAU as well this week to continue the information gathering for the PHL Arrival system improvement task that is part of the iTBO initiative. Ops team members briefed the facility TMU on the PHL TBFM improvement plan and gathered information to help in the overall development of the system. Some local Tower personnel were in attendance and an IDAC briefing was given as well.

The week of December 10th:

-The TBFM Ops Team held their 'All Hands' meeting in DC. Due to a number of constraints this was the first 'All Hands' meeting of the team for a year. Having this meeting in DC allowed a number of FAA HQ groups to visit the team and also allowed the team to update these groups on the work that the team has accomplished over the last year. Updating training discussions, briefings on NEC/Sustainment/TSAS work, next year planning scheduling, as well as a number of other tasks were completed over the course of the week. On the last day the Ops team visited Mosaic to get a demonstration of a TBFM replay tool as well as viewing a prototype of a TBFM simulation tool that looks very promising for possible TMU training in the future. Additionally, NATCA TBFM Ops Team members visited

NATCA National. A big thank you to Matt Sullivan and everyone at NATCA Safety and Technology for a great tour and their continued support.

The week of December 17th:

-The Northeast Corridor SME's as well as a number of support personnel travelled to the Tech Center to start testing the PHL TBFM Extended Metering Adaptation. This was the first chance to run this newly created adaptation in the TBFM lab to allow scheduling of departures from each facility that will be involved in the PHL arrival/XM system. This activity involved tying in the TBFM Lab in the Tech Center VTL Lab to allow not only departures to be scheduled, but actually have the flights airborne meet the system delays to fully evaluate the system. The next steps will be to install and test additional TBFM work stations to allow each facility to visit the Tech Center this spring and actually schedule aircraft and operate the PHL system first hand. This would not be possible without a lot of continued support from a large contingent of personnel at the Tech Center. This support has been crucial to get this system to where it is now in testing and will be important for its continued development.

-Ops Team Members joined a group of Tech Ops and Program Office Technical personnel to conduct a TBFM Site Requirement Survey in Portland (PDX). This activity was similar to IDAC Site Requirement Surveys in the fact that Ops Team personnel work with the facility Reps to ensure that they understand the usage of the TBFM system and find the best location in the operation for the equipment. Detailed reports are created to ensure that all the operational and technical issues are addressed and that there will be correct installation of the TBFM system at the facility.

TRAFFIC FLOW MANAGEMENT SYSTEM (TFMS): Ryan Jacobs (DCC) represents the NATCA membership as their Article 114 Representative to the TFMS project. His report is below.

Tech Refresh – Continued regression testing on the Red Hat 7 operating system and Gnome desktop platform. Continued to encounter several issues that were related to Java and should be fixed by updating to the latest version. Also identified an acceptable workaround for window management while a fix can be found. Key site still scheduled to begin at ZHU the second week in January with waterfall deployment continuing with the lab environment at Oklahoma City and then N90, BWI and ZNY. We will monitor any issues that arise to determine whether or not to proceed with the rest of the waterfall. When discussing tech refresh, members of the program office stated their commitment to fixing the latency issues that have plagued TFMS and to increased attention to sustainment of the systems currently in place. They also recognized the Deployment Team's request for attention to issues currently in the system that may not be functionally critical yet still a high priority.

R14 – Discussed some default configurations of the surface viewer. Looked at potential icons, colors and configuration settings. An early look for the surface

viewer is scheduled with CSRA in January. Discussed labeling of runways, taxiways, ramp, deicing areas, etc.

R15 – Discussed RRIA with its current issues and lack of usage. Current plans are to bring RRIA into the core which will fix some current data anomalies but not some of the crucial issues. We discussed that without better data for RRIA to interpret, any improvements to the tool were going to be inconsequential. In order to improve the tool, we need an effective way to track airframes and need the users to provide us with that information. Better data will provide the base for being able to create a better evaluation and thus better decision making.