NATCA Safety & Tech Update
Week of May 14, 2018

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

El Paso and Albany both transitioned to TAMR STARS this reporting period. Welcome to the 21st century and the STARS family.
O'hare (ORD) completed the install of additional TDW suites in the main tower. Eric Toll's (NATCA ORD) collaborative approach with the program office and local management was instrumental to the successful completion. Initial adaptation issues were ironed out by Greg Jahn (NATCA OSF). Great job to all involved.
The week of convention Mr. Rose was not traveling. This gave him time to complete all CEDAR items and Recurrent Training.
The week of April 23rd Mr. Rose and Kyle Ness (NATCA M98) traveled to WJHTC for the new optical trackball demonstration. This demo included a screw that ensures controllers cannot remove the ball from the hardware. Ops testing conducted at PCT on the new optical trackballs are ongoing; initial reports are great. In addition to the trackball demo, Mr. Ness and Mr. Rose attended the Terminal Spacing and Sequencing (TSAS) SRM panel and DRB. The morning of April 25th, Jim VanZee (NATCA GRR), Joe Yannone (NATCA Region X), Kyle Ness, and Aaron Rose completed the review of Common Terminal Digitizer (CTD) weather display. It was found that in Linear Polarization (LP) the weather was adequate for deployment.
April 26th brought TLH a fully functional ASR8. Over the last two years TLH has had the inability to utilize channel B of the radar system. This has finally been fixed and reports show no issues at this time.
Operational Support Facility (OSF) training which has been under development for two years is ready to hit the streets. In early June 2018, the Raytheon developed and NATCA reviewed training should be available to the field. Big thanks go out to Mike Tate (NATCA Denver OSF) for his effort to ensure our brothers and sisters are properly trained.
The week of April 30th, Mr. Rose traveled to Washington D.C. for the TAMR deployment and implementation meeting with 11 TAMR SMEs and the TAMR program office. During the event, team building exercises and messaging issues were discussed. In addition to this meeting Mr. Rose meet with AJV-7 requirements, TAMR program manager, and NATCA National. Aaron Rose and James Keith (NATCA AJV ART 114) met to discuss STARS Enhancements 2 and how the Terminal CHI team will interact with SMEs already assigned to the program.
High Desert TRACON (JCF) will be receiving a STARS system in 2019, this facility is not on the TAMR waterfall but Mr. Rose attended a meeting on May 8th. NATCA TAMR is working in concert with Jon Wigfall (JCF FacRep) to ensure the Department of Defense (DOD) provides the proper training, equipment, and adaptation.
NATCA TAMR is working closely with Terminal Second Level Engineering (TSLE) to ensure all ARTS 1E and STARS LITE facilities to include contract towers are provided training on TAMR software. A telcon was held on May 9th with NATCA

Training lead Ross Costa (RSW), Robert Faulkner (D01), who is leading the ARTS1E/STARS LITE transitions and TSLE, TAMR PO, and Aaron Rose. Of the nine facilities, which need to transition to TAMR STARS, 4 are NATCA facilities and the rest are Federal Contract Towers (FCT). Training will be a combination of CBI and hands-on to ensure our union brothers and sisters are prepared for NextGen.

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

We kicked off the month of May with a TAMR Deployment meeting in Washington DC. These annual meetings are a critical piece of the TAMR success. We have so many stakeholders deployed throughout the country at all different sizes and types of facilities, that it becomes critical to get us all together occasionally in order to identify and address program-wide issues as well as to ensure our messaging is in alignment across all spectrums.

Installations, training, and OSF adaptation work is all in full swing as we prepare for six sites to IOC in June, three of which also include the introduction of the Common Terminal Digitizer into the NAS for the first time.

May significant TAMR activities:

Equipment deliveries

- Syracuse (SYR) 5/15/18

Site Surveys

- Memphis (MEM) 5/22/18
- Dubuque (DBQ) Remote Tower off Cedar Rapids (CID) 5/7/18
- Redding (RDD) Remote Tower off Northern California TRACON (NCT) 5/14/18

Initial Operating Capacity (IOC)

- Buffalo (BUF) 5/12/18

Common Terminal Digitizer (CTD)

The CTD program conducted a Suitability Decision Review in Washington DC on May 2nd for the purpose of declaring suitability of the system for key-site IOC activities. With concurrence from all stakeholders, AJV-723 determined suitability with appropriate Action Plans to address remaining issues via interim mitigation and final solutions.

Barring any unforeseen key-site setbacks (key-sites are ROA, RFD, BFL, and JAN), CTD suitability clears the largest of few remaining roadblocks to achievement of the remaining TAMR APB milestones.

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

<u>MSAW/CA Board</u>

SCT recently reported a false Conflict Alert between two tracks that were on diverging courses. Analysis revealed the CA algorithm could be adjusted to suppress the false alert while maintaining predicted functionality. The Board reviewed proposed changes and will move ahead with recommended settings.

Recent changes to Conflict Alert (CA) floor adaptation settings at Boston Airport has resulted in reducing nuisance alerts for BOS approach paths to parallel runways and

runways in close proximity. While the Standards and Guidelines permits OSF specialists to adapt the floor altitude with supporting data, a software change is needed to permit better processing.

Operating Testing and Evaluation (OT&E)

No testing for May. Preparations are being made for S6.R8 with Terminal Sequencing and Spacing (TSAS) testing in June. This will be a three-week event drawing on NATCA SMEs from both the TAMR and TSAS teams to evaluate TSAS functionality as it integrates into the STARS baseline. TSAS is a new automation tool that employs time-based flow data into the terminal airspace by displaying new slot marker graphics to the controller on the STARS display. This is a significant evolution in terminal automation and the first evaluation of this functionality as it incorporates into traditional STARS software.

STARS Software Planning Board (SPB)

The march toward a new operating system continues and the SPB is refining software build content to meet the end-of-life for Solaris while delivering needed fixes and enhancements to the field. The STARS program has employed the Solaris Operating System since its inception and has been through two significant upgrades in its lifetime:

- Introduced on Solaris 2.5.1
- Transitioned to Solaris 8
- Transitioned to Solaris 10

The STARS program needs to continually refresh and upgrade the system and therefore the FAA has previously requested Raytheon perform a trade study to investigate two paths to address the End-Of-Service date of Solaris 10 of Jan 2021. The first was to upgrade the STARS System from Solaris 10 to Solaris 11, and the second was to transition from Solaris to Linux. Upon completing initial investigations, a decision was made by the FAA to go to Red Hat Enterprise Linux (RHEL) because of the following reasons:

- Diminishing support for Solaris from other vendors and suppliers of equipment.
- Solaris 11 is very different from Solaris 10 and therefore represents significant upgrade effort.
- Oracle Corporation are not committed to Solaris (discontinued Open Solaris in 2010) and now offer their own version of Linux, based on Red Hat Linux, suggesting that the future of Solaris is uncertain.
- The FAA and Department of Transportation are standardizing on RHEL.

NATCA is collaborating with the STARS software stakeholders to meet new OS objectives while working to deliver much needed software fixes to the field as soon as possible.

Program Trouble Report Working Group (PTRWG)

NATCA SMES from M98, D10 and PHL will attend the May meeting. Because the new STARS OS will likely bring a temporary cessation to software deployment in 2021, the PTRWG May agenda will be focused on high priority software needs before OS transition. NATCA is working with PTRWG stakeholders to properly rank these reports to ensure important issues are acted upon. Mr. Ness has submitted new software proposals to the working group that will improve Final Monitor Aid (FMA),

provide controllers with enhanced aural alerts and give Charlotte tower/TRACON heightened monitoring of parallel departures.

TAMR NATCA Training submitted by Ross Costa (RSW)
This month, Ross Costa travelled to Greenville-Spartanburg, SC, Florence, SC and Wilmington, NC to deliver a training briefing. In addition to scheduling class dates for Cadre and scenario development, we discussed transition plans and lessons learned.
Mr. Costa also travelled to Washington, DC to have a full deployment team meeting. Discussion topics that were including but not limited to, lessons learned, improvements moving forward and a detailed overview of the TAMR waterfall. In addition, initial discussions were held with the training team to identify training needs for transitions at STARS Lite, ARTS 1E and Section 804 transitions. We followed up this discussion with a larger stakeholder Telcon to develop plans for these sites.

Operational Support Facilities (OSF) Update Submitted by Scott Kendrick (North Texas-OSF)
Mr. Kendrick attended the TAMR Implementation Summit, Apr 30th – May 3rd, in Washington D.C. that focused on TAMR transitions, lessons learned from past transitions and how to best move forward as other programs will be integrating in the future with TAMR (STARS) as well as the SBS, TAMR look Ahead and weekly OSF Technical telecons.
Software Planning Board (SPB)
STARS will migrate to the Red Hat Enterprise Linux operating system with the S6.R12 build. To prepare for the change, the SPB is working to adjust build content for R9, R10 and R11 to expedite release and provide less risk to the initial first step software release of R10.
Operating Testing and Evaluation (OT&E)
NATCA OSF SMEs from NTOSF, DVOSF and GCOSF attended the initial test planning for the S6.R8 build scheduled for June 2018. This starts the beginning which will lead to formal test events for TSAS functionality in S6.R8 later this year.
STARS Safety Risk Management (SRM) Panel
Stakeholders paneled 4 TSAS STRs being introduced in the S6R8 software build to determine if the new functionality introduces any safety risk to the NAS.
Program Trouble Report Working Group (PTRWG)
SMEs from OSF will attend the May meeting.
System Technical Reports Working Group (STRWG)
Reviewed a proposal to develop an off-line tool that will allow STARS sites to covert CDR data into AT Coach scenarios. Stakeholders are nearing concurrence on the proposed software modification.

TERMINAL FLIGHT DATA MANAGER (TFDM): Matt Baugh (IAH) is the Article 114 Representative for TFDM. Mr. Baugh's update is below.

Equipment has been installed at the Tech Center and has gone through the contractual Production Acceptance Testing (PAT). Full lab integration is expected to be complete by September of 2018. Once the lab is complete, we will start the process of development and then operational testing prior to going to full Operational Testing (OT) on site in PHX sometime in April 2019.

April 25th and 26th Leidos hosted the Build 2 Preliminary Design Review (PDR). The PDR's main goal is to go over the list of requirements for Build 2 with eh vendor and ensure that both sides have a mutual understanding of what the FAA needs our of those requirements. This is intended to help limit the back and forth design process and hopefully reduce the amount of changes in the future. The meeting was very productive and we hope, given our experiences with Build 1, that this meetings outcome will lead to better and more efficient processes in Build 2.

A swap in the TFDM waterfall received final approval from Teri Bristol, LAX and SMF have traded Initial Operating Capability (IOC) dates. LAX's new IOC is December of 2020 and SMF's is now October of 2021. This means LAX is now the first Level 12 facility to get TFDM without any prior experience on the prototype electronic flight strip system, AEFS. Having an electronic flight strip system in play will help LAX reduce some physical and verbal coordination procedures currently in play in their complex system, which will increase their operating efficiency and allow them to focus even more energy on the movement of surface traffic.

There is a new watch item/risk with TFDM dealing with the Adaptation of the local builds that will be available to all sites. Leidos initially proposed the adaptation tool be in XML format, not good for the typical controller without a computer engineering degree. They have been working on building a more user-friendly version, which we got a quick look at last week. The newer version is not much better, if at all, and has been deemed unacceptable by the FAA, both NATCA and Terminal Second Level Engineering (TSLE). We are working to change direction and fix this issue before it does any damage to the training timelines we are currently working towards.

Advanced Electronic Flight Strips (AEFS)

The next build, 5.5.0.0, and its requirements have been finalized and the working date of late August for its suitability testing with installation and site testing/approval to occur sometime in September is still the goal. This build will be dependent on what CLT will need with its interface with ATD-2. There will be other minor improvements/enhancements made, but CLT and ATD-2 are the priority driver of the build.

Prior to installing and running build 5.4.0.0 in CLT, the engineering team at the tech center found numerous bug fixes that would increase the stability of the system. With the old build, a hard reset of the system was required every 7 days in order to ensure that it would not freeze up. With the new fixes, we were hopeful

that the reset schedule would be closer to 14 days. Unfortunately, on the 13th day of testing in CLT, tech ops had to reset the system. CLT will remain on the new build with the old weekly reset schedule. We will test the reset duration again in CLE when we update their system, which we are currently still in the process of planning with the facility.

- CLT
  - Nothing new
- PHX
  - Nothing new
- CLE
  - Nothing new
- LAS
  - Nothing new
- SFO
  - Nothing new
- EWR
  - Nothing new

SWIM Visualization Tool (SVT)

WAKE TURBULENCE: John Murdock (PHL) is the Article 114 Representative to the Wake Turbulence Office for NATCA. His update for the week is below.

We went to SAT for an initial meeting in April to implement RECAT 2.0 appendix B. With data provided from SAT we were able to stop implementing RECAT 2.0 at SAT and the rest of the facilities identified for RECAT. SAT was delayed until July of 2018.

We went to PHX for an initial meeting and presented the Consolidated Wake Turbulence (CWT) to the facility. They have scheduled training the training dates and a tentative IOC date for mid-July (pending the CWT signature). We have identified an issue with implementing CWT at P50. P50 assumes airspace, occasionally, from Luke Air Force Base when they close and provides approach services to Glendale and Goodyear airports. Both Glendale and Goodyear receive their STARS and FIDO data from Luke Airforce Base. There was no intention, right now, for Luke Air Force Base to implement CWT. If Luke Air Force Base does not implement CWT either P50 will have to run .65 separation to Glendale and Goodyear or Glendale and Goodyear will not be able to provide visual separation to aircraft while P50 is providing approach services. There is only one best option for the issue; Luke Air Force Base implements CWT. If Luke does not implement CWT an airspace change may need to occur or Luke would have to remain open while the towers are open. We will be discussing the issue with the military on an upcoming TELCON. This issue is not going to be unique to P50. Both SAT and PCT, the next

two facilities on the waterfall, will have similar issues if the military does not implement CWT.

Currently, the CWT order is not signed but is not expected to be signed sometime in June. As far as we are aware there is nothing that is holding up the signature for the CWT order.

We will be meeting in Washington, DC to finalized the training for CWT. This training is what will be briefed to the facilities and workforce for CWT.