NATCA Safety & Tech Update
Week of October 31, 2016

AIR TRAFFIC REQUIREMENTS (AJV-7): James Keith (D10) is NATCA's Article 48 Representative to the AJV-7 Office. His update for this report is below.

- Aircraft type CAR- the CAR is still being worked. The software fix solution is under review with the national user team.

- E-IDS- Attended bi-weekly workgroup meetings on this program. A request for SME's to attend storyboard sessions in January has been sent to NATCA. The storyboard sessions are vital to shaping the product to what is needed at the field facilities.

- Traffic Flow Management (formally SFMA)- CATM work package 5- prioritization process is moving forward. A few months ago the operational prioritization was completed. The programmatic prioritization is in progress.

- Advanced Interval Management (A-IM)- The workgroup met for the first time this month and the agenda is set for future meetings. The workgroup will be developing the concept so to provide the controllers the necessary information on the RADAR displays so to ensure separation during IM operations.

- Sector Enhancement- Sector enhancement completed step 2 of the prioritization process. Step 3 is for the program office to establish the final prioritization of sector enhancement.

- Airspace Technology Demonstration-3 (ATD-3)- NASA briefed NATCA on ATD-3. ATD-3 consists of 3 concepts: Dynamic Routes for Arrivals in Weather (DRAW), Multi Flight Common Route (MFCR), and Traffic Aware Strategic Aircraft Request (TASAR). The concepts are traffic management related. I will be traveling to NASA AMES in the near future to get a better grasp of the concept and will report afterwards.

- Terminal Work Package-1 (TWP-1)- AJV-7 is providing a series of briefings to Investments, planning, and analysis (IP&A). The process is to show and document the benefits of TWP-1.

- Offshore Precipitation Capability- AJV-7 is waiting for AJT to determine what path to take to get this back to Miami and Houston centers.

- An issue was discovered by the PMO while doing site visits to replace RADAR channel changer panels for ASR-9 sites. The standard configuration is one in the TRACON, one in the equipment room, and a spare. The PMO discovered that several up/down facilities have installed one in the tower. The replacement program does not provide for this configuration. I have sat on meetings regarding this subject and relayed the importance of the configuration in use today. The PMO will put together a cost assessment and report back.

NAS MONITORING EQUIPMENT (NME): Corrie Conrad (PDX) is the NME Article 48 Representative. Ms. Conrad's report to the membership is below.

NME
The Investment Analysis Readiness Decision (IARD) meeting has been pushed back to the end of November because it was lacking all of the proper signatures from the PMO.
So far, the NME in SFO has been reported to be working well and the switch over into the new tower also went well.

UIC
AJW in OKC wanted to update UIC systems that are currently in the field. The PMO suggested updating ONLY if there would be an operational impact that would benefit or fix a problem in a facility. If not, he suggested waiting on the IARD.

ICMS
Our engineer, Steve Hard, is back in the office and we have discussed a plan for testing and implementing the new ICMS software version. Our proposal is to install the new software version at Cleveland as a Test Modification. The Test Modification will allow the new software to be installed for a year and, after the year is up, we will either be in a position to install the new software as a National Modification at all ICMS sites, or we can extend the Test Modification for another year, or the site can keep the new version installed via a Local NCP.

To install the Test Modification, our office first has to perform a Safety Risk Management (SRM) analysis and submit the proper documentation. That will take a couple of weeks (at best) and then we can prepare a Letter of Authorization (LOA) that will allow us to install the new software at Cleveland as a Test Modification. Due to the amount of time required to get the SRM approved and the LOA signed, in addition to the Maintenance Moratoriums around Thanksgiving and Christmas, the best time-frame for us to install the new version at Cleveland will be in early December sometime (between the Maintenance Moratoriums).

TERMINAL AUTOMATION MODERNIZATION REPLACEMENT (TAMR): Aaron Rose (NCT) is the TAMR Article 48 Representative for NATCA. Below is the report from the TAMR Project for the past month.

Terminal Automation Modernization & Replacement (TAMR)
Report submitted by Aaron Rose (NCT) Article 48 Rep

NATCA TAMR has been blessed from the beginning to have Doug Peterson (D10) as the Software and Engineering lead and Segment 1 deployment lead. Doug will be departing the pattern on Oct 31st to start a well-deserved retirement. Doug's leadership throughout the last five years ensured the success of this one of a kind program. TAMR is on time and on budget largely in part because of Mr. Peterson's hard work and dedication. "Controllers are always my first thought when making decisions" Mr. Peterson said. That is the way he worked everyday with a "controller first" view of the program. NATCA TAMR and NATCA as a whole will sorely miss Doug and all he brought to the table.

October was a busy month for NATCA reps associated with TAMR. A deployment meeting was held the week of Oct 11th with the program office. The meeting included discussions about CTD, ASR8 radars, training, and lighting of older terminal approach controls. The CTD (Common Terminal Digitizer) program office briefed the entire TAMR deployment team about the impacts to TAMR IOCs (Initial Operational Capacity). Rockford and Roanoke transitions will be moved to the fourth quarter fiscal year 2017 because the CTD is not ready for deployment. Both facilities do not have the ability to transition because there is no way to digitize the ASR8 radars, which is needed within STARS. TAMR is trying to find more TDX2000 radar digitizers but as of now none are available.

The week of Oct 24th Scott Robillard (K90), Tim Samsel (NCT), Doug Peterson (D10), and Hugh Wyckoff (TLH) attended an onsite CTD operational test in Rockford (Oct 26-27). The test did not go as planned and a new issue has surfaced dealing with the ability to reset high voltage on the offline channel, this reset produces false targets and false weather on the MDM (Main Display Monitor). The issue has now been elevated to the vendor and deemed operationally significant. It will have to be fixed prior to a suitability call for use of the CTD in the National Airspace System.

Oct 18-20 Aaron Rose and Tim Samsel (NCT) attended a meeting for offshore automation. Offshore includes Guam, San Juan, Hawaii, and Alaska Centers. Discussions revolved around requirements in the transition from Micro-

EARTS to a combination of STARS and ERAM. Jim McAllister is the NATCA Article 48 representative on the offshore project.
TAMR transitioned two more facilities, Charleston, WV on Oct 3rd and Bismarck, ND on OCT 9th. Congratulations and welcome to the club.
Mr. Rose worked closely with NATCA Safety ERC reps. Committees throughout the country receive numerous ATSAPs from facilities that have transitioned to STARS. Many of the new ATSAP reports are due to adaptation during the cutover to STARS. Mr. Rose helped answer CAR (Corrective Action Requests) reports with assistance from the TAMR program office and the OSF (Operational Support Facilities).
San Francisco moved into their new tower on 10/16/16 with no major issues.

TAMR Systems Engineering Update submitted by Kyle Ness (M98)

The S6R3d software build was declared suitable for key site activity. NATCA SMEs from SCT and TPA were involved in the testing of the build in late September at the Tech Center and were very thorough in their testing and evaluation. Fortunately, significant discrepancies discovered during operational testing that may have delayed the release were attributable to simulation and were discarded. The build will soon key site at Potomac and Denver TRACONs and will eventually be available to the TAMR facilities on the S6R3 baseline.
Work continues on a solution for Predicted Track Line (PTL) behavior in the R27 and R4 software builds. Short-range sensors that occasionally deliver a bad report may cause PTLs to move irregularly and work is being done to mitigate the behavior. NATCA will evaluate a prototype resolution the first week of November.
NATCA SMEs from TPA, RSW and PHL attended the PTR (Program Technical Report) prioritization meeting at William J. Hughes Technical Center to evaluate and rank STARS software fixes and improvements. The team reviewed roughly 25 new and existing trouble reports and improvements including but not limited to AT Coach, Surveillance and Conflict Alert.
Work continues to resolve issues in the field. N90 has been running an improved version of AT Coach on their training string with some success, however simulated aircraft speeds are not realistic at 10,000 feet. Representatives from the agency and Raytheon were on site to resolve this and other AT Coach issues and while they provided some relief, more work will be required in regards to aircraft speed and simulated ILS approaches.
A meeting held at PCT identified their primary software concerns moving forward with ORD (Operational Readiness Decision), some of which are coming in near-term builds. A group from FAA engineering spent a week on-site to resolve surveillance problems with good results.

C90 has confirmed a repeat SRM (Safety Risk Management) panel for November 8 and 9 to address changes in adaptation to alleviate nuisance conflict alerts.
Mr. Ness will be spending extra time at the Tech Center in November to meet with cohorts and plan software related activities for the coming year. He will also be assisting our NATCA SMEs over the next two months as they brief legacy STARS facilities on the R4 "merge" software.

TAMR Deployment Lead report submitted Scott Robillard (K90)

The TAMR Program has been transitioning facilities for 5 years. It started with the 11 ARTS IIIE TRACONs and then moved to the 91 ARTS IIE facilities. During this time the 54 legacy sites had to be maintained. The entire project is called TAMR Phase 3. One main objective of the TAMR3 waterfall is to finally, after several decades of trying, bring the entire NAS under a single baseline for software and hardware.
The benefit of achieving a single hardware and software baseline is cost associated with maintaining three different systems (STARS, ARTS IIIe, and ARTS IIe). With all terminal facilities operating on STARS the agency can reduce software production costs, eliminate testing across multiple baselines, simplify deployment of hardware and software, and improve supportability. Eliminating equipment platforms removes the need to qualify multiple sets of hardware for a single purpose and it eliminates the need to maintain tech ops training in parallel. Simply, you eliminate two-thirds of Tech Ops training and tech center testing by having all facilities on STARS.
During the transition of the 11 ARTS IIIE and 37 ARTS IIE (48 total CARTS sites to date), facilities STARS software was changed significantly to provide the functionality required by facilities like N90, C90, and D10 as well as ARTS IIE sites. These changes are so significant that NATCA has again partnered with the TAMR Program Office to bring a quality product to the field. During the last 3 months, the parties have worked with Raytheon, AJI, TSLE and OSF to deploy at key sites the R4 Software Merge Build. This merge build will bring the 54 legacy STARS sites up onto NEXTGEN software which will provide new functionality that has been previously unavailable. The next step is to develop a waterfall to roll the software out nation wide. NATCA will be in each facility briefing the transition and providing solutions where problems develop or exist. In addition to transitioning the remaining 54 ARTS IIE sites NATCA in concert with the TAMR PO will continue to upgrade legacy STARS sites to G4 STARS.
As we progress towards the Thanksgiving and Christmas moratorium, the STARS deployment activity takes a natural down turn in the number of facilities that are actively transitioning. Even with the slowdown, the TAMR team has transitioned BIS and CRW from ARTS IIE to STARS G4 ELITE and reached Initial Operating Capacity (IOC) at the new SFO tower. Like any major program, this does not mean the work stops. The break allowed for the

TAMR Program Office full deployment team to meet with NATCA's full deployment team for three days in DC. The team used this opportunity to review lessons learned from the previous year, view what is upcoming in 2017, accomplish strategic planning, and tackle issues related to the aging ASR8 radar systems still deployed throughout the NAS.

During the week of October 24-28, a NATCA team met at RFD to test the Common Terminal Digitizer (CTD). This is the second look at the CTD; the first was on non-operational radar at the Tech Center in ACY. During the latest test, the configuration of the system was a digitized ASR8 via the CTD side-by-side with the same ASR8 but on an analog feed into the RFD ARTS IIE. RFD continued using the ASR8 during this real-world test. The results were mixed at best. While the test team did see significant improvements in primary radar returns and tracking, the system displayed significant issues with weather. More troubling was cross channel feedback that caused the off-line channel to affect the operational display. The CTD does have an upside; the test team observed that the CTD was able to track a target where the legacy equipment could not. However, the timeline required to produce a quality product is placing immense pressure on the TAMR3 SEG2 waterfall. If the CTD cannot be fielded in time to support the remaining analog ASR8s then TAMR will not be capable of completing the TAMR waterfall. If this does come to fruition the NAS will be left with 9 ARTS IIE facilities.

TIME BASED FLOW MANAGEMENT (TBFM): Eric Owens (I90) is the Article 48 Representative for TBFM. His report to the membership is below.

The National TBFM Ops Team was busy during the month of October with several scheduled activities. The week of October 10, we continued Integrated Departure and Arrival Capability (IDAC) training at ZOB, DTW, BUF, ROC, and CLE. All the facilities except for CLE were using IDAC after the second week of training. We returned to CLE to complete their IDAC training the week of October 24. However, prior to using IDAC the controllers wanted the system relocated. Fortunately, while we were at the facility conducting the training, CLE's Tech Ops moved the IDAC system to a more desirable location for the controllers. As a result, the controllers are now using the IDAC system. We are also working with DTW and PIT to get their IDAC workstation moved to a better location for the operation.

The week of October 10th, the National TBFM Ops Team had a team meeting in Washington, DC. The team will have a minimum of two team meetings per calendar year. During the team meeting we discussed ways to better assist facilities with timely information regarding TBFM software updates and issues identified in site reports. We are also discussing the idea of developing a TBFM newsletter.

The week of October 17th, we had members of the team at multiple events. I was at Denver TRACON for a TSAS Ops Meeting and facility briefing. On Tuesday, the TSAS Ops Group met to continue discussions about requirements and TRACON airspace for TSAS use. On Wednesday, we conducted a TSAS briefing for ZDV and D01. We will be returning to brief Denver Tower. After the briefing, I went to DC to attend a 3T meeting at MITRE. I also had NATCA SMEs Matt Gammon at ZAB and Kevin Bell at ZDV for a TBFM 4.6 Discovery Site. During the discovery effort it was identified that the Integrated Departure Routes (IDR) were causing some scheduling issues. As a result, I contacted the Leidos group and asked them to turn the IDR off until we get the issue resolved. They complied and the IDR's are currently suppressed.

The week of October 24th, I had a NATCA SME at ZFW to take a look at the TBFM current use and settings. We will be supporting ZFW with coupled scheduling and GIM-s in the near future and needed to get an advanced look. We also tested TBFM to TBFM (T2T), which allows facilities to use IDAC during metering. Currently, IDAC can only be used for miles in trail restrictions. This activity went very well. We will schedule another key site to make sure T2T works at an additional site prior to moving forward to additional sites.

This week the National TBFM Ops Team is in DC to train and implement IDAC at ZDC, IAD, DCA and BWI. We will continue IDAC training the week of November 7th and add RIC to the list of facilities to be trained. We are working with RDU to determine a time to conduct their training. Next week I will be in Atlantic City for s TBFM Ops Evaluation.