NATCA Safety & Tech Update
Week of February 19, 2018

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.

> The CDM/FET subgroup had our February meetings canceled because of budget constraints limiting travel. Once a budget is passed that allows us to meet, we hope to resume work on the use of the Airborne Reroute (ABRR) and Pre-Departure Reroute (PDRR) capabilities when they come on-line at the Centers. Our next meeting is will be a Human in the Loop (HITL) testing of the Integrated Departure Management (IDM) tool with NASA. That testing is being planned for March 20-21, 2018.

NAS MONITORING EQUIPMENT (NME): Corrie Conrad (PDX) is the Article 114 Representative for Navaids Monitoring Equipment (NME), Integrated Control Monitoring System (ICMS) and Remote Radio Control System (RRCS). Ms. Conrad's report to the membership is below.

> RRCS Update
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> Vendor selection is to be accomplished by the end of February. This was a delay from the original date, which was the end of January.
>
> NME
>
> No new update

SURFACE CONCEPT TEAM (SCT): Kyle Andrews (ORD) is the NATCA Representative to the Surface Concept Team (SCT) for Collaborative Decision Making (CDM). Mr. Andrews forwarded the information below for the membership.

> All travel and meetings that were to have been held in January and February were canceled due to lack of funding and the inability to confidently schedule even telcons with impending government shutdowns. As a result, there has been no progress in addressing either Tasking 78 - Flight Operators Surface Data Sharing To Support TFDM, or Tasking 79 - Airport Authority Data Elements Provisions. CDM Program Management has not responded to inquiries on how the meetings will be handled in the future.

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

Mr. Rose traveled twice during the reporting period. Both trips involved Terminal Sequencing and Spacing (TSAS) demo and Early User Involvement (EUI). Attended the EUI at William J. Hughes Technical Center and demo/play date in Boston at the Raytheon facility in Marlborough, MA. NATCA TAMR will be working with the TSAS team and provide lessons learned for training moving forward. There is still much to overcome but TSAS is well on its way to initial operational capacity at P50. It was a pleasure working with the dedicated NATCAvist on the TSAS team.

Smaller things crept up this past month from facilities that have already transitioned and those who have not. Corpus Christi still works with Sony 2K monitors; scheduled transition to TAMR is Nov 2019. The current monitors have different color backgrounds and some are faded. Mr. Rose has made a request to install the new Main Display Monitor (MDM) well ahead of schedule to help mitigate issues until transition to TAMR. Portland, OR has an issue with scratch pads, which Scott Kendrick (North TX OSF) is working diligently.

Mr. Rose spent a couple days working on travel issues related to the government shutdown. R8 EUI, R8 play date, and R9 play dates were all effected and needed to be rescheduled.

Western and Central Service Area TAMR weekly calls, EGE STARS LITE to G4 remote tower kickoff telcon, Strategic Software planning, CCB, and Program Technical Report priority workgroup telcons all attended.

Discussions still underway with Scenario Processing and Organization Tool (SPOT) support staff to incorporate into terminal facilities. Topics covered include support and functionality of SPOT within terminal. This is an ARTCC tool for scenario support and generation. NATCA is collaborating with the agency for funds to start initial development.

Southern California TRACON has had issues with tracking over the last year. The agency and NATCA have thrown everything at the problem. Working together with the vendor (Raytheon) SCT may be at the point where issues will be mitigated via new tracking software. Matt Morter and Mike Sanders, both SCT NATCA, are very optimistic after viewing the new software on the Operational Support Facility (OSF) string. Mr. Rose, Second Level Engineering and AJV-7 will be traveling to SCT in early March to observe and OT&E the software prior to loading on the operational string.

Jim VanZee (GRR), Joe Yannone (Region X) and Mr. Rose are coordinating Common Terminal Digitizer (CTD) AP and false weather issues with the PMO. Ensuring facilities are protected and providing a quality product to the field.

Congratulations to Boston TRACON and Cape TRACON on their consolidation. It was four years in the making, the collaboration was unbelievable and something the agency and NATCA can build relationships upon.

The NATCA team has been involved since the inception of TAMR. Many subject matter experts (SME) from around the country have sacrificed time away from family and friends. In the next couple updates some of the SMEs will be highlighted. Thank each and every one of you for your dedication.

TAMR NATCA Training submitted by Ross Costa (RSW)

Over the last several weeks, Mr. Costa traveled to JAN and BFL to deliver training briefings to the facility for their transition to STARS. BGM was briefed by Mr. Falcone (MDT) in late January. On Feb 6, a meeting was held with FAA, Leidos, Raytheon and NATCA in DC to discuss TSAS training. The discussion centered around the roles and responsibilities of each vendor to provide the appropriate training materials. Training development guide will be submitted shortly for review. We discussed the review process and general timelines to receive and review materials.

Raytheon, AJV-7 requirements and NATCA have been involved in an ongoing discussion to schedule an R7 training review. Planning is underway for a 3-day review of materials within the next few months. Additionally, an overall discussion about how we can provide a better training product to the field. Mr. Costa and Bobby Faulkner (D01) traveled to A90 for the K90 consolidation into A90. We will review the training conducted prior to transition and develop lessons learned to apply to future sites. Overall, the transition appeared to be smooth. Mr. Faulkner and Mr. Costa also reviewed plans for STARS LITE to STARS ELITE training.

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

System Technical Reports Working Group (STRWG)

Stakeholders are nearing concurrence on two proposals to reduce nuisance conflict alerts when aircraft are turning to final or level off when descending or climbing. A proposal to display system off indicators in the System Status Area is on hold while stakeholders get clarification on display requirements.

MSAW/CA Board

Reports continue to come in from the field concerning MSAW alerts that did not meet controller expectations. The Board invited a member of the AJI Independent Safety Assessment Team to participate in a Board meeting to discuss how MSAW functions and why it does not alert controllers to separation requirements outlined in the 7110.65. Coincidentally, after reviewing some of these reports, some discrepancies were noted between General Terrain Monitor (GTM) bins and the obstacles contained in them, specifically obstacles less than 200 feet. The question of why was put to AVN who explained that is it due to the way the database is designed and anything less than 200 feet is not evaluated. The AVN delivery notice even states that a 200-foot buffer should be applied to GTM bins to accommodate for these obstacles. From a process perspective, the MSAW algorithms cover these areas but the Board is evaluating whether to increase the GTM buffer or change documentation.

The board is also discussing how to resolve the MSAW validation tool checks 10 nm outside the lateral airspace boundaries of the servicing ATC facility's airspace and how it examines multiple terminal sectors or noncontiguous airspace.

Operating Testing and Evaluation (OT&E)

There will be multiple testing events over the next several weeks. From February 13 to March 23, there will be testing for the S6.R6 build, Tower Display Monitor, System Archive and S6.R4c build. NATCA SMEs from MDT, PCT, P50, NCT, SCT, TPA, A80, GRR, D10, A90, M98 and PHL will be participating. On top of that, NATCA SMEs will also participate at a Raytheon software evaluation of the S6.R9 build late February in Marlborough Massachusetts. During these "play dates," SMEs get an early look at the software build and can give feedback directly to the developers who can make necessary changes before a formal delivery to the FAA. The R9 build content has several functions that show on the glass so having NATCA controllers test the build early on will be beneficial.

Program Trouble Report Working Group (PTRWG)

NATCA SMEs from PHL and SCT will participate in the February meeting. Items of interest to NATCA are: AT Coach, ADS-B functionality, Altimeter display, CA functions and assigned altitude process.

Field Support

Mr. Ness travelled to Seattle TRACON to support software cutover to the R4a build. Detroit TRACON successfully transitioned to R4a as well after a significant coasting issue was fixed in adaptation. Mr. Ness has been supporting the Nashville ATCT training department as they plan their upcoming transition to R4a.

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

February has seen TAMR related activity begin to spool up again, primarily in the area of Tech Refresh. Surveys for upgrading VFR towers to STARS LITE are spooling up, and Bobby Faulkner (D01) is our NATCA lead for all of these sites.

Segment 2 (ARTS IIE to STARS ELITE) activity continues with installs actively in progress at numerous sites, as well as working with the CTD leadership to adjust/plan accordingly around CTD deployment timelines.

The most significant activity for the month was the successful cutover of K90 to A90 on February 11th. Thanks to excellent work, preplanning, and advanced testing/troubleshooting by all involved, the cutover and STARS adaptation happened pretty seamlessly. This will be an important site from which to gather lessons learned as we prepare to move into some more complicated consolidations moving forward.

February significant TAMR activities:
Equipment deliveries
- Sarasota (SRQ) 2/2/18
- Aspen (ASE) 2/13/18
- Peoria (PIA) 2/20/18
Site Surveys (Tech Refresh)
- Eagle (EGE) (LITE to RT off Denver (D01)) 2/20/18
- Easton (ESN) (LITE to RT off Potomac (PCT)) 2/26/18

Common Terminal Digitizer
A User Evaluation took place the week of January 22nd at RFD ATCT. Many of the software fixes tested resulted in the closure or priority reduction of trouble items identified at previous evaluations. Action items remain open on three main Air Traffic related items that need to be resolved or mitigated in order to proceed with key site deployment: Proper filtering and outputting of false weather (AP), accurate display of real weather (and associated intensity) in close proximity to the RADAR site, and unexpected loss of primary search radar during CP/LP transition.
Concurrently, the program is working toward final approval of the TechOps training path for personnel certification and maintenance procedures. These are expected to be approved and finalized prior to the first scheduled CTD/STARS key site IOC in June 2018.

Recognition should be given to the fantastic work that the NATCA TAMR team continues to accomplish, even with a large amount of leadership change in the last several months:

- Ross Costa (RSW) has done an excellent job stepping into the Training Lead role with the departure of Bill Spence, and is having to prepare for new training challenges with 804 sites, remote FAA towers, and new STARS software deployments with additional functionality.

- Chris Hilbert (PHL) is our point man for assisting the Tech Refresh sites in optimizing the MDM display settings for best performance in a wide variety of TRACON lighting conditions, as well as handling the complexities with previous G4 sites transition to the ELITE systems.

- Kyle Ness (M98) does an amazing job on the technical side as a consummate professional for all things related to STARS software. This is a massive project and is ever-changing. He represents our workforce at all levels to help ensure necessary functionality is added, and missing/broken functionality is identified and addressed.

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

- Attended the S6R8 TSAS play date at Raytheon Feb 5th - 8th
- STARS E2 Terminal ATC Capability meeting Feb 13th - 17th working on final requirements and clarification to incorporate Merging and Spacing, Sequencing Tools into STARS
- Attended TAMR/ STARS TSAS telcon continuing to work issues on deploying "TBFM in a box" simulator to sites and OSF's along with potential upcoming issues.
- Attended the TSAS Ops meeting at WJHTC Feb 20th - 23rd
- Attended the STARS/TAMR Program Trouble Report Work Group (PTRWG) telcon – Reviewed and ranked current PTR's
- Attended the System Technical Reports Working Group (STRWG) stakeholders telcon and reviewed
  thinspecs for requested changes to STARS software
- Attended the TAMR Look Ahead, TAMR TAGUP and OSF Technical telcons
- STARS Strategic Planning Meeting (SSP): Coordinate and get feedback on integrated hardware and software planning among TAMR stakeholders, identify risks to the hardware and software plan and propose risk mitigation solutions with the stakeholder's input.
- Attended the STARS Pre-CCB telcon: bring forward potential Change Control Board (CCB) changes and adjudicate the benefits and impacts with all stakeholders

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

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

The shutdown moved the Build 2 System Requirements Review (SRR) back one week but no other major meetings were impacted. The FAA is still looking into whether it will have any lasting schedule impacts. While at the SRR, we were able to go over all of our issues with the requirements for build 2, which is almost fully comprised of runway balancing and surface metering. These requirements and capabilities will eventually subsume NASA's Airspace Technology Demonstration 2 prototype in CLT, see Pete Slattery's ATD-2 updates for more details on it's progress.

Equipment has begun to arrive and be set up in the tech center in preparation for the long process of testing TFDM prior to it's planned Initial Operating Capability (IOC) date in PHX of November, 2019.

The main structure of the lab is completed and the remaining equipment will arrive between now and September, allowing full integration of other systems like TBFM and TFMS.

Work continues to be done in the Implementation and Training teams in preparation of next years IOC at PHX. Site surveys have been done and discussions with PHX will continue regarding their transition from AEFS to TFDM. As they already have AEFS, space in their cab for a new TFDM system is tight in a few areas but the engineers are working on getting a switch so that AEFS can be brought up on the new TFDM monitors. When we need to test on site, we will simply turn a few of the AEFS monitors to the TFDM side, run the tests, and switch back. The training is still scheduled to take approximately 5 days but the team is working very hard to make the class as efficient as possible while still providing the level of training each facility will need in order to achieve success with the system.

Advanced Electronic Flight Strips (AEFS)

NATCA and AJV-7 (Requirements) went to the Tech Center the first full week of February for initial AEFS shakedown testing of build 5.4.0.0. The build held up nicely and had the agreed upon improvements and passed the unofficial tests. Final suitability testing for that build will be March 12-16, with additional participants from the field. Once a call of suitability is achieved for this build from AJV-7, we plan to test in CLT from April 2-6. It will then be up to the facility to decide to leave the new build operational. Build 5.5.0.0, which will have more integration capabilities with ATD-2, is schedule to go through it's initial shakedown testing at the tech center in the middle of June, with official suitability testing scheduled in early August.

- CLT
  - Nothing new
- PHX
  - Nothing new
- CLE
  - Final installation for Build 5.3.0.3 Drop 7 was completed on January 18 and CLE is now using the drop operationally.
- LAS
  - Nothing new
- SFO
  - Nothing new
- EWR
  - Nothing new

SWIM Visualization Tool (SVT)

Nothing new

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 Jan 15 Ops Team members were at ZLA testing the first IDAC TRACON adaptation with representatives from ZLA and SCT. The adaptation that was delivered was tested in the Support Lab at ZLA and seemed to be working as expected. There were a number of discussions about training, equipment, and other items that need to be addressed for rollout into operational use. A training/implementation week was set for February and Ops Team representatives will be at ZLA and SCT for this activity. The same week MITRE held TBO Scenario Walk through scenarios in which Ops Team members participated.

The week of Jan 22 Ops Team members returned to ZAU to work on Adaptation for Enroute Departure Capability (EDC). EDC utilizes TBFM architecture to allow for efficient departure releases to meet Miles-in-Trail restrictions. There are two weeks scheduled later where the Ops team will help facilitate training and implementation of the EDC tool at ZAU in February and March.

TBFM Ops team members travelled to the Tech Center in Atlantic City the week of Jan 29th to perform an Ops Evaluation of the upcoming 4.8 TBFM system. The arrival and EDC portion of TBFM was validated with one issue that was previously identified that will be fixed before rollout to the first Key site. There were issues found though with the IDAC system that necessitated some more attention. The issues were identified as necessary to be fixed prior to the IDAC Key site and due to this the second Key site schedule had to be moved to a later date. This second Key site to validate the IDAC portion of the release has been rescheduled and will be conducted in mid-March. After spending two days at the Tech Center the Ops team travelled to PHL to work on arrival metering as part of the Northeast Corridor (NEC). This was just the first visit to gather information on their current operation and lay the schedule groundwork for metering improvements in the future. Overall it was a very good meeting and a proposed schedule of future work was identified and reported to the NEC Group.

The week of Feb 5th the Team travelled to SCT and ZLA to train on SCT Traffic Management personnel on IDAC and test the Operational use of the system. This is the first operational use of IDAC at a TRACON and similar to Tower training a sub team was needed at the Host Center to set up the flows in the system to allow for training at the TRACON. Classroom and hands-on training was conducted to the TMU personnel at SCT and the plan leaving the activity was for SCT to begin operational use of the IDAC system the following week after all the remaining coordination with their associated Towers and ZLA is complete.

The week of Feb 12th the Ops Team conducted site surveys for IDAC at El Paso and Tucson Towers. The site process involves a training piece to the facility as to what IDAC is and then a survey with Air traffic and local Tech Ops as to where the equipment would be best situated.

TSAS - submitted by TSAS subgroup lead Tom Glaze (D21)
The TSAS team met the week of Jan15 at the Tech center for the first week of a 2-week EUI (early user involvement). The EUI was a combined effort of TSAS SME's and TAMR SME's to get the first look as to the affects TSAS may have on STARS. Both teams were anxious to get this early look in the labs, unfortunately the week was cut short a day and the second week was canceled by the Government shutdown. An improvised group of SME's was able to gather the last week of January to finish the second week.
February 5-8 the TSAS team met at Raytheon in Marlboro, MA to evaluate the TSAS tools and how they will appear and affect STARS. This again was a shortened week due to the CR.
The week of February 12-16 was a non-travel week for most of the team although there was some SME's helping with the IDAC install in SCT TRACON.
The week of February 20-23 the TSAS group will again be in the new TSAS lab at the Tech center.
The week of February 26-March 2 the team will be in MCO for a TSAS Training development meeting. The training development is still in the early stages and is extremely important as we consider the training of the Controller and TMC workforce. This meeting will entail delivery of the CDG "course design guide" from the TBFM contractor Leidos.

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

ABRR/PDRR activity – RAD deployment still ongoing for the use of ABRR and PDRR with most of the remaining facilities expecting to be online by mid-February. The TFMS and ERAM teams are working together with the endless oversight from Mark DiPalmo in ensuring the facilities get SME assistance where needed. Select issues have surfaced but all deemed manageable at this time, with some having future fixes in the near future.
RAD enhancements are still under review with two significant improvements slated for development being CDR code and FRC amendment in the RAD.
There was lengthy discussion surrounding mock-ups for a CDR code entry suite, in the RAD. This functionality will push the code directly to ERAM to perform the ERAM automation function. Core concept designs centered around:
• Allow users to enter a CDR Code in the RAD and apply to flights (single or multiple)

- Design a CDR entry field into the bottom section of the RAD
- Type CDR directly into the bottom route field for quick interaction
  - Include using a CDR match field while typing "EWRSFO" the options will show with scrollable options
  - Include scrollable option to select CDR, Departure fix column with route. Include add columns of Departure Center, Arrival Center, Traversed Facilities, Coordination required. Search route elements. Column sort,
  - Include tool tips on the Code to show route

2018 TFMS Roadshow Workshop - extensive development and review in creating a workshop, which includes hands on activity with TFMS simulators. The workshop topics cover TFMS releases going back 7 years. This effort is ongoing and conducted by the TFMS DT to the high using 20 enroute centers of TFMS. Its design is to get TM personnel reintroduced to recent TFMS release software. This is also an effort to piggy back on the TFMS RAD tool deployment using subject matter experts to reinforce its understanding of the tool.

- Pre-Departure Rerouting (PDRR)
- Airborne Rerouting (ABRR)
- Departure Viewer (DV)
- Collaborative Trajectory Options Program (CTOP)
- Diverted Flight List (DFL)
- Special Use Airspace (SUA)

Once the 20 enroute centers are completed, a look at select larger tracons/towers can expect to have the workshop and/or RAD turn on. TFMS Roadshow is its first of a kind and deemed necessary to reintroduce the tools relationships with the recent complex tools of the RAD and CTOP with a growing newer TM workforce.

AIMS ticket review - ongoing for ranking and future TFMS 2nd level review

January TFMS DT meetings were canceled to support the Roadshow traveling

VOR MINIMUM OPERATING NETWORK (MON): John Vogelsang (P31) is the Article 114 Representative on the VOR MON project. His update is below.

The following VORs are on track for decommissioning in FY18. The dates are the anticipated chart dates depicting the removal of the VOR from the NAS:

AOO-3/29/18

BRD-5/24/18

BUU-7/19/18

DAK-7/19/18

ECA-5/24/18

FLP-9/13/18

HLL-7/19/18

HVN-9/13/18

HZL-3/29/18

IJX-7/19/18

LAN-9/13/18

LJT-7/19/18

LWV-9/13/18

PNE-7/19/18

PSI-9/13/18

RID-7/19/18

RUT 7/19/18

It is possible that some of these dates could slip due to budgetary issues affecting the PBN office's ability to get new procedures charted to replace the ones that will be going away.

We will be having an educational briefing at ZFW on 3/8/18 to discuss changes in the Dallas area connected to the program.

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 successfully concluded the SRM panel for the Consolidated Wake Turbulence (CWT) separation standard for the NAS. The new standard combines the best of the current wake turbulence standards used in the NAS. All the benefits from the 7110.65, Wake Recat 1.5 and Wake Recat 2.0 Appendix A and B are combined. The belief is that the CWT order will be completed and signed by the end of June 2018. When the order is signed and ready to go, the agency should immediately start implementing the order at the identified Wake Recat facilities scheduled in 2018/19. The hope is that the CWT will be incorporated into the 7110.65 within the next 18-24 months and used at every air traffic facility nationwide. We have already begun preliminary discussions on how to train the entire workforce on CWT, although nothing has been decided or agreed upon on how to complete the training.

Currently DTW/D21 is ramping up to begin training the workforce on Wake Recat 2.0 Appendix B. Workforce training is scheduled to begin on or around February 26th and conclude on or around March 23rd 2018. IOC is scheduled for March 27th and 28th 2018 at DTW/D21. The new order for the CWT separation standard will not be completed prior to DTW/D21 going IOC.

Currently, initial implementation briefings at SAT and PHX are scheduled for March 21st and 22nd respectfully, for Wake Recat 2.0 Appendix B. With the new CWT order in process, these meetings could be and should be delayed until the CWT order is signed. Implementing Wake Recat, any iteration, going forward does not improve the efficiencies of the airport and airspace at the identified facilities scheduled for Wake Recat. Implementing Wake Recat now will only cost more money and induce possible training fatigue at the facilities. There is no good reason to start implementing at facilities only to change courses mid-way or change the standard in 18-24 months.