NATCA Safety & Tech Update
Week of November 27, 2017

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 did not meet in November. Our work on the assigned tasking of identifying classes of scenarios and benefits with submitting Trajectory Option Sets (TOS) has been put on hold due to budget issues restricting travel/meetings with the FAA
> Starting after the first of the year we hope to resume work on the use of the Airborne Reroute (ABRR) and Pre-Departure Reroute (PDRR) capabilities when they come on-line. We are also expected to participate in a Human in the Loop (HITL) testing of the Integrated Departure Management (IDM) tool with NASA when workgroups resume meeting.

NEXTGEN: Kevin McLaughlin (SCT) is the National NextGen Representative for NATCA. His report to the membership is below.

> This update cycle was very busy, due to a significant spike in Commercial Space Integration activities. The Commercial Space Integration Team (CSIT) met on October 24. Among the priorities of this Team are finalizing a JO 7400.2 Procedures for Handling Airspace Matters change scheduled for March 2018, scheduling Commercial Space Aviation Rulemaking Committees (ARCs) that will address Airspace Access Priorities and Spaceport Categorization, and finalizing an ATO CSIT Charter.
> I participated in a SRMP on Launch and Recovery Aircraft Hazard Areas on October 25, along with Mark Prestrude and Enroute SME representatives from ZNY and ZJX. The Space Integration Stakeholder Forum was conducted on October 26. This is an effort out of AJV-7 to organize the various Commercial Space Teams into a coherent effort that can be managed using Problem Cause Impact (PCI) Analysis.
> On October 27, MITRE held its quarterly Aviation Advisory Committee meeting in at MITRE HQ in McLean, which NATCA attended. This group is widely attended by industry, both airline and GA, as well as FAA and MITRE leadership. A variety of aviation topics were briefed out including ADS-B equipage rates, airline fleet mix changes and profitability metrics, and potential improvements to ATC recruitment using cognitive screening.
> On November 1, the Joint Space Operations Group (JSpOG) met at the ATCSCC in Warrenton. Among the topics discussed at this meeting were updates on upcoming launch events and the status of various LOAs with Space Operators.

November 6 was the kick-off for the semi-annual Program Management Review series at FAA HQ. For the subsequent two weeks, FAA Program Managers present status updates on their NextGen Programs.
On November 7, NATCA participated in the regular monthly CDM Collaborative Steering Group (CSG) at the ATCSCC.
November 8 and 9 were Commercial Space Industry Days in D.C. Space X, Sierra Nevada, Virgin Galactic, Blue Origin and other Commercial Space entrants were in attendance and made presentations on their respective Concept of Launch and Recovery Operations to the group. The increasing tempo of launch and recovery operations was one the hot topics, as was how to more effectively and efficiently segregate Space Ops from Legacy NAS operations. On Day 2, opening remarks were delivered by Mr. Tim Arel, Deputy Chief Operating Officer, ATO, who expressed the FAA Administrator's commitment on accelerating the acceptance of new technologies such as Drones and Space Ops into the NAS. NextGen's Philip Bassett made a presentation that highlighted Aircraft Hazard Area design. MITRE made a presentation on Data Sharing, and Greg Byus from the ATCSCC made a presentation on the Collaborative Decision Making process and advantages of including Space Operators in the CDM process. Also, on November 9, Jeff Woods and I met with Assistant Administrator for Nextgen (acting) Pamela Whitely to discuss deployment of Trajectory Based Operations into the NAS and associated Human Factors issues. On November 15, the Space Integration Enhancements Field Outreach met to discuss the current analogue state of FAA Space tools and how to leverage Agency work to date to develop ATO capabilities, services, systems and procedures to more efficiently integrate space operations into the NAS.

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.

The SCT and CAT held a joint meeting at the ATCSCC on November 15. Also attending were representatives from major airlines, NBAA, and representatives of CDM airports.
An interesting discussion developed around the topic of how does an airport handle data about itself. Currently, only the Core 30 airports are requested to become CDM members, which would imply that they would submit and update data in real time on airport conditions such as throughput rate for deicing and how many diversions could be accepted during a thunderstorm event. However, these numbers are not static, they are subject to variables such as precipitation rate, gate availability, runway closure for snow removal, etc.

These numbers will be very hard to quantify in real time because the airports themselves don't know how to calculate them at a moment's notice and won't necessarily have the personnel or algorithms in place for this type of data collection.
Reference that discussion, any MOA written to define how an airport becomes a CDM member might need to redefine/restrict the data elements to a subset of the eleven data elements that airlines have agreed to supply. Also, the reason that many airports would want to be a CDM member is to be able to access the CDM data about their own airport that is being collected and submitted by the airlines. Some entity may need to be tasked with determining if an airport authority was a worthwhile applicant for CDM membership if they were only receiving and not transmitting data. The suggestion was made that the initial standard for an airport to be a CDM participant is whether they can furnish Earliest Off Block Time for aircraft not participating in CDM (GA, International Flights). If an airport can provide this, then the airport can be a member, since EOBT is the cornerstone of the Surface Metering automation.
With airports as CDM members, there should be a greater ability to forecast certain airport conditions (construction, planned closures) that affect arrival and departure rates and to then adapt surface metering components in a strategic rather than tactical manner. This is an improvement in that the further into the future that the surface metering variables can be pinned down, the better predictability for the users to make schedule adjustments as they see fit.

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

NATCA TAMR leads met in Atlantic City, NJ over the weekend of November 17th. It was a team building and pass down meeting between incoming and outgoing training and implementation leads. Aaron Rose (Article 114), Joe Yannone (Region X), Jim VanZee (GRR), Chris Falcone (MDT), Scott Robillard (A90), and Bill Spence (BTV) discussed the state of CTD (Common Terminal Digitizer), SME participation/assignments, and facility issues. CTD issues still haunt the TAMR waterfall. NATCA is in the process of assisting the agency in mitigating weather and maintenance issues while still protecting the interests of controllers. NATCA has requested a SRMP (Safety Risk Management Panel) for future deployment of the CTD. With the issues plaguing the system we want to ensure the system is safe for facilities and mitigations are in place. There will be an operational test in January; VanZee, Yannone, Richard Thomas (GEG) and Hugh Wyckoff (TLH) will attend for the Union.

During this reporting period ABQ, RDG, RST, and GTF all transitioned from either legacy STARS or ARTS IIE. Thank you to each facility for their assistance to make for smooth transitions. The work that goes into each cutover is immense and takes 18 to 24 months to complete beginning to end. From the initial site survey to training and cutover. We should be proud of the NATCA members throughout the country who come together from the facility level to the national level.

We have now reached the 50 percent mark on Phase 1 (legacy STARS) transitions. 2018 will be a busy year for Phase 1 sites and NATCA TAMR is here to ensure the next 50 percent go as smooth as the first.

During the week of Nov 13th Mr. Rose was in Atlantic City for testing of R4c software, which pasted the Air Traffic portion but not the Tech Ops portion; talks are commencing about a Tech Ops software drop to mitigate issues. During testing the team broke away to look at the new TDM (Tower Display Monitor) and trackballs. The new TDM will support facilities toward the end of the waterfall and replacements in the field due to failures of the current model. This first look was well received but additional operational testing and evaluation needs to be completed. The new trackballs finally passed the last operational test; it is finally approved by NATCA, PASS, and the DOD. It does not use rollers like conventional trackballs but optics. They're not as susceptible to dirt, which clogs and makes current trackballs unusable. NATCA is looking to keysite a couple new ones at PCT.

Software wise, NATCA and AJV finally agreed on how to implement formation flight ATPA (automated terminal proximity alert) standards. This will be included within software sometime in late 2018 or early 2019.

TAMR Article 114 meeting was held Nov 7th. Topics for the telcon only meeting included ASR11 modifications for weather, CTD weather modifications, including new weather sources in STARS, and dates for future meetings. Testing has begun on a modification to ASR11 radars to improve and delete AP/False weather. NATCA TAMR is pushing with NATCA Region X to move this into the CTD. In today's terminal environment, the only weather source is from ASR 8/9/11 radars. NATCA TAMR is working closely with Matt Tucker (Article 114 WX) and the agency to acquire a new source of weather for terminal facilities.

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

Moving into the Holiday season, we have seen a busy push to achieve IOC's as well as software cutovers and other significant site activities before everything slows down until after the New Year. We continue to see the need for NATCA SME's during the R4 STARS Software cutovers. Air Traffic at the sites we've attended have been grateful to have us there to help, particularly since the process of preparing them for what to expect is not standardized or well communicated.

The CTD Program is anticipating positive results in the completion of the TechOps training and certification procedures, as well as software fixes to all identified issues except the false weather/AP problem. A software build is expected to resolve this problem, but it may not be completed in time to allow TAMR to attain its APB milestones at some of the ASR-8 sites. NATCA has requested that the CTD PMO initiate an SRMP to evaluate acceptable interim mitigations for the false weather/AP issue.

Site by site activity for November are as follows:

ABQ Achieved IOC on STARS G4 ELITE
RDG Achieved IOC on STARS G4 ELITE
RST Achieved IOC on STARS G4 ELITE
GTF Achieved IOC on STARS G4 ELITE
ALB Contractor Acceptance Inspection (CAI) – G4 ELITE equipment has been installed and accepted by the FAA
HUF Contractor Acceptance Inspection
MKE Equipment Delivery
ILM Equipment Delivery
ERI Equipment Delivery
FLO Equipment Delivery
P80 Equipment Delivery
GSP Equipment Delivery

TAMR Software/Hardware Report Submitted by Kyle Ness (M98)
System Technical Reports Working Group (STRWG)
A longstanding request from controllers using STARS has been to give them an easier way to control the length of predicted track lines (PTL) without using the Display Control Bar (DCB). Stakeholders are reviewing a new function that would give sites the option to use the two spare knobs on the STARS Display Control Panel (DCP) for a variety of adjustment functions including PTL length. This would give the controller the option of quickly rotating a knob on the panel to "roll out" PTLs.
Stakeholders are moving forward with a software change to allow in-trail ATPA to display separation information for standard formation flights and another to give sites more flexibility when adapting map categories.
MSAW/CA Board
The Board is reviewing new logic to process Conflict Alert - Suppression on Approach Path (SOAP). Several sites report nuisance CAs on aircraft when they enter extended approach paths to parallel finals that are in close proximity to one another. SOAP is designed to further examine these situations after existing alert logic detects that two aircraft are in conflict. The SOAP algorithm will either fully suppress the Conflict Alert or partially suppress the alert (new functionality). The Board has set a date to discuss this function in greater detail and how the parameters will be adapted.

Operating Testing and Evaluation (OT&E)

NATCA SMEs from NCT, MDT, BTV and SCT attended the S6.R4c testing event November 13-21. This build will allow R4 software to function with the R7 archive to support sites that will IOC using X3000 processor and Xtreme router hardware. During this event, SMEs were able to evaluate a new STARS trackball prototype and participate in a demonstration of SPOT - Scenario Processing and Organization Tool.

Mr. Ness attended testing for S6.R6 Drop 10 the week of November 13. The build was declared suitable for keysite activity.

Program Trouble Report Working Group (PTRWG)

The November meeting was cancelled.

STARS Software Planning Board

The K90/A90 merge planning process uncovered an issue related to ARSA VFR handoffs between A90 and Providence ATCT. NATCA requested a high priority software change to be delivered as soon as possible.

Field Support

Mr. Ness travelled to Detroit Michigan and Birmingham Alabama in November to support transition to R4 software at each site. During the switch to R4 at Detroit, air traffic encountered a coasting issue related to multi-lateration (MLAT) that forced the site to fall back to the previous build. Recent changes to the MLAT adaptation settings are being tested at the tech center and pending successful results, another R4 attempt will be made at Detroit.

Mr. Ness submitted a software change request on behalf of Houston TRACON (I90). This will change the default display of CRDA ghost targets when CRDA functions are enabled.

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

We are wrapping up our comments and suggestions that were compiled during the second of three Early User Involvement Events (EUIE's) in late October. These comments will not only help Leidos and Saab further their development but will also give us a head start on the list of what we want to see coming out of EUIE 3, which is now being moved from late January to late February. The final EUIE will be through release 6 of 7 and should have a majority of the system available for the team to do some pre-tech center testing.

With the latest contract modification, Initial Operating Capability (IOC) in PHX is scheduled for November 12, 2019, just around the corner. For EUIE 2, we had 2 PHX controllers out to DC and we will likely have the same group come in for EUIE 3. Once we finish Build 1 and start Build 2, we will look to get more CLT controllers involved, as they are the key site for Build 2 and the Surface Metering capabilities being developed in ATD-2.

Advanced Electronic Flight Strips (AEFS)

Pete Slattery, Art. 114 rep for ATD-2, and Marco Smith, CLT AEFS Rep, in collaboration with NASA and CLT Management, have provided AJV-7 (Requirements) a list of data elements they believe should be shown on the AEFS strips once we are able to merge the available information from ATD-2. This list includes TMI data such as APREQ's, MIT, STOP's, etc., that would automatically be pushed to the strip once ATD-2 received the information. Gate information regarding conflicts, as well as new times including P-times, pushback times, movement area times, etc. Each of these data points will eventually feed into TFDM's Surface Metering capabilities and improve surface movement at airports equipped with Build 2. Look for Pete's updates regarding ATD-2 for a more in-depth description of ATD-2's abilities and goals moving forward.

- CLT
  - Nothing new
- PHX
  - Live testing of 5.3.0.3 drop 7 was completed November 13th. The drop ran for 2 weeks without the need for a hard system restart and completed the test with only 33% of the allowable memory being utilized.
  - Tech Manual Handbooks have been revised and set at a "Weekly Restart" of the system. "Weekly" for Tech Ops means that if they are told Friday to reset it, they have until Thursday. So the circumstance exists that the system would not be reset until 13 days, which was one of the driving factors of this drop.
- CLE
  - Nothing new
- LAS
  - Nothing new
- SFO
  - Nothing new
- EWR
  - Nothing new

SWIM Visualization Tool (SVT)

The newest version of SVT is available and ready for any sites to upload. All they need to do is take the provided training, and restart their systems and they will have access to the new gate information, where provided.

We are still working with ZBW to get them started and will hopefully have everything ready for them by the end of the year.

TIME BASED FLOW MANAGEMENT (TBFM): Matt Gammon (ZID) is the Article 114 Representative for TBFM. His report to the membership is below.

Members of the TBFM National Ops Team travelled to New York the weeks of 10/30 and 11/6 to conduct IDAC training/support. Ops team members trained at ZNY for both weeks while training was also conducted at each of the Towers. The first week JFK, EWR, and HPN were trained on the IDST, which is the tool that is used to schedule aircraft into the IDAC TBFM system. The second week LGA, TEB, and PHL were trained on the system as well. Each facility was very accommodating and overall there was positive reaction to the training. The plan moving forward is to have a follow-up refresher at the Center and offer Towers the availability to schedule aircraft in test situations in lead up to the proposed Operation date of Dec.5. Ops Team members will travel again to ZNY to help support this effort at the end of November/early December.

The week of 11/13 Ops Team members travelled to New York TRACON to discuss TBFM usage and future support. Overall it was a very positive visit that covered a number of topics that N90 was interested in. First, an adaptation was delivered to N90 that would allow them to see the releases that EDC TBFM at ZNY is making as well as seeing these releases on a view only IDST. This was identified previously as something that the TRACON wanted so we were able to bring these displays up and explain further how to interpret the information that they were looking at on the EDC and IDST timelines. Secondly, Ops team members observed their arrival systems and recommendations were made for future 'TBFM Healthcheck' meetings to look at their adaptations.

The same week of 11/13 there was a TSAS meeting in Denver that TBFM Ops team members attended. The following information is from Tom Glaze (D21) who leads the TSAS work for the Ops Team:

'Day 1 consisted of 2 ½ hours of work with the D01 SME's on TRACON interior route adaptation. During this process it was identified that there will need to be further discussions between D01 and ZDV about what constitutes metering. Later, work was done with the P50 SME's on their remaining route adaptations and contract adaptors watched to learn how the process has been accomplished.

Day 2 was a continuation of both facilities, D01 and P50, working on route adaptation. The TBFM Ops Team was able to attend via telcon the TSAS SE work group meeting while the other teams were doing adaptation.

Day 3 a smaller group including myself and most of the adapters arrived at the TRACON early to watch the morning arrival bank. After watching the bank, several more hours were spent with the SME's finalizing the routes. The adapters finished with their work later in the day.

The next TSAS meeting is scheduled for the week of November 27th at D01. The agenda includes 1 day with Leidos going over the Training capability delivery as well as 2 days of continuing adaptation work.'
The week of 11/27 the TBFM Ops team will be visiting SCT along with representatives from ZLA to review and discuss the plan to implement IDAC at the TRACON. This purpose of this meeting will mainly be to plan out what will be the first IDAC installation/training activity at a TRACON. Up until this point IDAC tools have been utilized to replace phone calls to the ARTCC from Towers where IDST's have been installed. Moving forward, starting at SCT, IDST will be able to be utilized by the TRACON to schedule departures directly into TBFM from select Towers. Additionally, Ops team representatives will participate at the next TSAS meeting at D01 the same week.

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.

Field 11 Prototype for the RAD reached wrap-up position to provide an at-a-glance status that will not be confusing. Assumptions are still expected to detect the FRC whether the user types it or it pre-existed when they brought the flight in, no manual intervention by the user to indicate the presence of an FRC and finally a key feature of adding a mouse-over and right-click capability to the Remarks button. This is tentatively expected around an 18-month development cycle. Further tweaks are always expected.
RAD warning boxes after selecting SEND, needed some tweaking. When user sends amendments, all are held if any of them get warning boxes. The goal is to send what doesn't need a second look then address any remaining warning boxes. Some of the warning boxes could be from multiple flight plan issues or within 45 minutes of departure time. In addition to this issue, better indication will be necessary to suggest multiple flights plans exist rather then the current blue P-time, which could be overlooked. A hover-over the blue P-time to show the multiple flight plans may be one of many options to help this scenario.

Multiple flight plan amendment on a flight with multiple flight plans, TFMS will send amendments for all of the flight plans. The amendment status displayed to the TMC applies only to the TFMS current flight plan. TFMS does not display the amendment status of the other flight plans; therefore, if ERAM rejects any of the other amendments, the TMC may not have visibility of this error. Data showed this being a low risk occurrence. However, improvements can be expected to identify better multiple flight plans and their statuses in all situations.

R13 P9A TFMS software release was critical in passing to get Chevrons and ABRR/PDRR turned back on. The week of TFMS DT meeting involved pretesting assistance to the WJHTC center's test team. This corrected and created an understanding of some flaws still needing tweaking for official testing the following week with ERAM/TFMS joint testing of the P9A release.

Protected segments were turned on nationwide after the installation of R13 P9A release in TFMS that fixed necessary issues. P9A also fixed other issues for **ABRR and PDRR**, which will slowly be turned on at facilities into Jan-Feb 2018. The first 3 facilities for ABRR/PDRR were ZLC, ZDV and ZMP since they were the most experienced facilities with the product. For remaining facilities, A SME is being provided to help with turn on through Mark DiPalmo.

CTOP initiative discussion took place with its current affects with the release. Although the timer still set at 1410 minutes for automatic route amendments, anything that involved multiple flight plans would still follow the 120-minute timer for automatic insertion of chevrons on conformant routes. As the system, builds confidence and further tweaks of enhancements on ERAM and TFMS, it will look toward lower the 1410 after more discussion with the impacts.

AIMS tickets with engineering requests and fixes were reviewed.

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

The last month had quite a few program telcons and meetings. Early in the month I participated in a telcon regarding the future of HIWAS. As there will be a safety panel after the first of the year regarding that, the VOR MON program is holding off on relocating any transmitters until a final decision is reached on HIWAS. The program is also holding monthly telcons with the DOD as even though they were notified of the program at it's inception, it seems that some of the VORs on the list for decommissioning are needed for the DOD's missions.

We also had our semi-annual IFP and VOR MON National meeting in DC the week before Thanksgiving. Some minor tweaking of the waterfall was accomplished during the meeting.

Here are the current VORs that are in the process of NR studies:
GGT-Georgetown, NY
BFD-Bradford, PA
PPM-Phillips, MD