NATCA Safety & Tech Update
Week of March 27, 2017

AIR TRAFFIC REQUIREMENTS (AJV-7): James Keith (D10) is NATCA's Article 114 Representative to the AJV-7 Office. His update for this report is below.

- Terminal work package one is moving toward transfer from AJV-7 to the program office. MITRE will be holding 4 demos between April and August. The demos will be attended by the terminal chi team and TAMR SME's.
- AIMM sig 3- The concept of operations operational scenarios now include a pathway for controllers to access digital information from sources other than E-RIDS. The purpose was to provide access for facility training. For example studying LOA's/Sop's and maps.
- Advanced-IM- RTCA meets in Henderson, NV the week before CFS. I attended via online video access. One area of interest for NATCA is the path moving forward regarding a separation standard for paired approaches. I will keep the membership briefed has this concept matures.
- Remote Tower- The SRM process began this month with three days of data review from passive testing. The SRM panel starts April 4th and concludes on April 12th.
- Terminal Chi- I participated in a joint interviews with Toby Jones my counterpart on this team. The interview will be in an upcoming addition of FocusFAA. The terminal chi team will be at MITRE April 11-13th participating in a demo for Terminal work package 1.
- Long-Range Radar- the workgroup is scheduling meetings for April to validate a need for/or against the continued use of long-range radar post 2020.
- CAR for aircraft types was answered at the first of the year. The ERC accept the CAP.
- MITRE is scheduling a 3T demo for this summer. I am working with our reps from TBFM, TDFM and PMO rep to get a time all can attend.
- Offshore Precipitation Capability (OPC)- Funding source identified. We are waiting for funding to actually appear. Hope to have back into the facilities before hurricane season.

COLLABORATIVE DECISION MAKING (CDM): Kyle Andrews (ORD) is the NATCA Representative to the Surface Concept Team (SCT). Mr. Andrews forwarded the information below for the membership.

> Kyle Andrews, NATCA Representative to the Surface Concept Team, participated in a SCT telcon earlier this month. Representatives from SWA, DAL, AAL, Airports Surface Efficiency Office, NASA, and TFDM attended. Here is his report.

Continuing with CSG Tasking 75 “TFDM/Industry Engagement throughout TFDM Development and Deployment”, Michael Huffman, Project Manager for TFDM, gave a briefing detailing monetized benefits for the surface portion of TFDM. The focus near term was in airline savings through more efficient release programs, which should be easily implemented if electronic data transfer is in place.

Shawn Engelland of NASA briefed on the progress of ATD-2 at CLT and upcoming milestones. He expressed optimism in the work so far and anticipates that the system being created will be functional for the initial rollout in September 2017.

The technologies being applied to surface issues appear to be on schedule and very promising, which is an improvement over the atmosphere in fourth 2016, which was much less optimistic.

INTEGRATED DISPLAY SYSTEM REPLACEMENT (IDS-R): Richie Smith (N90) leads NATCA’s efforts on the IDS-R project as the Article 114 Representative. Below is Mr. Smith’s report.

The IDSR program reached a milestone when PHL declared IOC with NIDS during the last week of February. The system promptly failed but after a lot of trouble shooting is now functioning as designed. The milestone achieved was that PHL was the last facility on the waterfall to declare IOC. At the present time 35 of the 41 NIDS facilities have declared Operational Readiness, abandoning their old IDS systems.

The FAA is of course anxious to complete the waterfall while NATCA continues to be cautious about moving forward too quickly. The newest software release (3.6.1) has been nationally distributed and facilities are slowly installing the update. There is no time requirement for the installation of the upgrade but the program office pressures facilities that needed the packaged fixes to install in a timely manner as to verify the build.

A new operating system passed testing in January but its release has been postponed so as to bundle in some security patches. Neither a new test date nor a new operating system have been decided on at this time.

RNAV and PERFORMANCE BASED NAVIGATION (PBN): Bennie Hutto (PCT) is the Article 114 Representative for RNAV and PBN criteria work. Mr. Hutto's report for the membership is below**.**

PBN Criteria Update:

AFS Criteria Discussion

In late February, John Belk (FAA PBN Technical Lead) and I traveled to Oklahoma City and meet with Flight Standards Service (AFS) to discuss the current design criteria contained within several documents (FAA 8260.3C, FAA 8260.58A, FAA 8260.19G, and FAA 8260.46F). During our meeting, we discussed the Standard Terminal Arrival (STAR) criteria within the FAA 8260.3C pertaining to the Origination and Termination, Routes and Transitions, Altitudes (En Route Transitions, Common Routes, and Runway Transitions), STAR Termination Altitude, Speeds, Runway Transitions, and Bottom Altitudes as well as the FAA 8260.19G regarding Runway Transitions/Landing Directions and Bottom Altitudes. For FAA 8260.46F, we discussed Top Altitudes, Departure Route Descriptions, and Charting.

Overall, it was a good meeting and should see the information disseminated and discussed within various workgroups in the near future, which will lead to criteria changes making it easier for procedure design and ATC compliance. One thing to note, criteria changes are no different than any other changes within the FAA and will take time, but we are on the right track.

Pilot Controller Procedures & Systems Integration (PCPSI)

Our next meeting is scheduled for April 10, 2017.

PARC NAV WG

Vertical angle on the FAF

During RNP to ILS testing of the shallow segment designs it was found that the data suppliers were by default coding the final segment angle on the FAF, negating the shallow segment (which is around 2 degrees). Review of ARINC 424 standards and the processes with the suppliers revealed that the blanket extension of the final segment angle into the intermediate segment, while necessary in the rare instances where there was a step-down in the intermediate, was being applied to all precision approaches. The standard allows no angle on the FAF as an option,

which should really be applied in most cases. A white paper has been written and will be taken to the ARINC 424 meeting in March for review.
During the March ARINC 424 meeting, the presentation helped the group understand the issues created by the vertical angle being routinely coded on the xLS FAF (the glideslope angle which is also coded on the MAP). Since everyone in this group had accepted the existing text in ARINC 424 (21 is current), it fell upon the data providers (Jeppesen, LIDO, NAVDATA) to explain that they routinely code the vertical angle on the FAF (contrary to the 424 exception) to simplify their processes. Both Jeppesen and LIDO agreed to comply and LIDO has already taken action to make that happen since there was some work with them behind the scenes some weeks ago, on this issue. Jeppesen is looking into how they will change their processes and a notification to their customers will precede the actual change, in which ARINC 4224 will receive a copy of that notice. The overall process change should not be a big deal though from an operator's perspective, because all of the FMSs will do what they are told by the NDB anyway. It really is just a case of ensuring the NDB is correct. One thing to note is that some procedures will keep the vertical angle on the FAF for those procedures that require it (i.e., ALT1 and ALT2 are different because of some obstruction issues between the FACF and FAF). All other procedures should have the vertical angle on the FAF removed.
Additionally, a question was sent to the FAA and the explained they are providing the state data to the providers in accordance with ARINC 424-18, an older version that has slightly different (but an important difference) language. FAA personnel agreed that they should be providing state data to the data houses IAW the current ARINC version (21) and will change their processes internally to comply with ARINC 424-21 thus making the task somewhat easier on the data houses. ARINC 424 cannot speak to what the other states are doing, but their committee and specifically the major data houses will check with their sources. Regardless, it is a process, which can be controlled by the data folks anyway.
Our next meeting is scheduled for May 9th and 10th in Denver, CO.

Established on Departure Operations (EDO)

The last EDO HITLS were conducted during the week of January 30th and various scenarios have been run over the last month or so using Fast-Time Simulations. We will receive the draft report from the Tech Center on March 31, 2017 with comments due back by April 10, 2017 and the final report will be released on April 21, 2017. Once the information has been finalized a briefing will occur in order to make the decision to move forward with an SRMP, revise the information, or scrap the concept.

National Strategic Production Planning (NSPP)

We meet every Tuesday and discuss the procedures that are scheduled for implementation across the country and have no issues to report at this time.

ATL Metroplex

Participated in a teleconference call with the Atlanta Metroplex and Flight Standards (AFS) regarding current criteria and the waivers that would be required in order for the team to move forward with the procedural designs under Post Implementation. While meeting with AFS, the team was able to get forty waivers and four approval letters written, which would not have occurred without this meeting in order to meet their deadlines for procedural submission. It may seem like a lot of waivers, but really comes down to 7 types of waivers and 1 type of approval letter.

Terminal Route Generation Evaluation and Terminal Simulation (TARGETS)

Received a briefing on TARGETS 5.3.0, which covers RNAV Departure Obstacle Evaluation, Conventional STAR Reference Software, Conventional Route Reference Software, and Conventional Holding Reference Software. During the briefing, I had several questions regarding the RNAV Departure Obstacle data and we will be holding a follow-up meeting on March 20, 2017. TARGETS 5.3.0 is tentatively scheduled for release in July 2017 with User evaluation testing beginning in May 2017. The release of TARGETS 5.3.0 will not occur until we are satisfied the program performs as desired.

TERMINAL AUTOMATION MODERNIZATION REPLACEMENT (TAMR):

Aaron Rose (NCT) is the TAMR Article 114 Representative for NATCA. His report to the membership is below.

Terminal Automation transitioned two Phase 1 facilities to TAMR software and updated processors this month. P50 (Phoenix) and CMH (Columbus) both moved onto the new platform provided by TAMR. Of course no transition is a smooth operation but both facilities provided excellent training and support to their controllers and techs. Only minor adaptation issues reported which NATCA OSF is providing or have already provided solutions. The facilities were wonderful to work with throughout the transition process.

Mr. Rose assigned Robert Faulkner (D01) the duty of coordinating all activities with the TAMR PO involving ARTS 1E and STARS LITE transitions. There are a total of 9 stand-alone towers that will transition to remote towers slaved off TRACONs. Robert is no stranger to TAMR and will provide excellent leadership in his new role. He will be responsible to coordinate training, deployment, and install with the NATCA facilities. In addition, Robert will promote NATCA to the Federal Contract towers without representation.

TELCONS, TELCONS, TELCONS - Most of this reporting period was spent in Northern California, which means telcons all day everyday from 0600 to 1500. There really are too many to list but here are some of the more important ones: PHX/CMH Transition and IOC (Initial Operating Capacity) meeting, PHX/CMH Transition, OSWG (Operating System Working Group), Section 804 consolidations, TAMR Joint Read-out, Raytheon Risk Assessment, TAMR Software Planning Board,
Safety Risk Management Board, Offshore Article 114 Brief, CTD (Common Terminal Digitizer), PCT Surveillance, LEX IOC, SCT SRMP, and Terminal CHI Workgroup.
Terminal CHI was important this time around because Mr. Rose is working closely with James Keith (NATCA AJV-7) on TWP1 (Terminal Work Package). This work package includes many tools the terminal environment has been asking for over the years. Items such as interfacility coordination messages, point-outs, and flight plan updates from the terminal workstation. Eventually the software will be utilized in TAMR, as such the new Terminal CHI Workgroup and TAMR NATCA SMEs will be working closely over the next six months to test and evaluate for future software builds.
NATCA TAMR is still working closely with NATCA TSAS (Terminal Spacing and Sequencing) on training methods as it relates to key site activity at PHX and SEA. This tool will roll out to 9 initial sites. Eric Owens is the NATCA lead for TSAS.
The week of March 6 Mr. Rose attended a SRMP (Safety Risk Management Panel) at SCT for WAM (Wide Area Multilateration). This virtual radar, the same in use at Charlotte, will help coverage issues due to the new NFL stadium in the Los Angeles basin.
On March 14th an additional SRMP for SCT was conducted. AJW-145 (FAA Mode S Second Level Engineering Group) has requested to adjust radar parameters on both the North and South LAX ASR-9 radars to increase tracking reliability. A test will be conducted on the training and support string at SCT to ensure if something is wrong it will not impact the operational floor. In addition to the March 14th SRMP, Mr. Rose also led the TAMR ART 114 meeting. The meeting touched on ATPA (Automated Terminal Proximity Alert) and the training of new sites. CTD issues, Section 804, and STARS LITE/ARTS 1E transitions were topics of interest.

Basically all topics worked into the training aspect and who is responsible. This is still being worked out but TAMR will have a plan to reduce the risk of any last minute training issues. We will wait for the green light, which we know, will fall to the TAMR training team.
Over the past year the agency has seen an unusual amount of trackball failures. They are in the procurement process for new trackballs to be used throughout the NAS. Testing of demos is ongoing at the tech center.

Mr. Rose is still working hard to ensure our OSF (Operational Support Facilities) brothers and sisters are recognized by the membership. We added a new member at Gulf Coast OSF. Phil Nicholson came over from Tech Ops and was an integral part of the TAMR family as part of PASS. He is now a NATCA member. Please ensure if you do not know the OSF for your terminal facility, introduce yourself and ask how they impact your job. They are always looking for Air Traffic types to move over to automation. Randy Garcia from Denver OSF is the National rep for the OSF and a fine Brother. Randy will soon be writing a monthly report to be submitted to the Safety and Tech NATCA office. Please take time to read what is happening behind the scenes.

CTD is still a major concern within the program. The TAMR PO was advised today that NATCA would not accept a substandard product. Scott Robillard (K90), Ross Costa (RSW), Jim VanZee (GRR), and Joe Yannone (NATCA Engineer) are providing the agency with feedback and ideas on how to improve the product. We will see if they heed our advice, at the end of April another test is scheduled. More on CTD in the deployment report.

Mr. Rose spent many an hour prepping for CFS. Providing weather photos to NATCA National, creating a TAMR PowerPoint, and coordinating with Raytheon on what to display. Of course you are reading this after CFS, so I will take this time to thank all the TAMR SMEs who helped out at the Raytheon booth and Scott Robillard (K90), Scott Kendrick (North TX OSF), and Kyle Ness (K98) for presenting at the TAMR Breakout session.

STARS and Common Terminal Digitizer (CTD) Deployment Update
Submitted by Scott Robillard (K90)

The TAMR waterfall continues forward replacing all ARTS IIE systems and legacy STARS systems within the NAS. Part of the TAMR program, as funded by Congress, is to deploy the Common Terminal Digitizer (CTD). This piece of equipment will digitize 41 ASR8 radars in the NAS. The STARS platform requires a digital signal and unfortunately the ASR8 is analog. This part of the program has experienced issues, to say the least. However, we seem to have turned a corner. During the week of March 13-17, 2017 NATCA TAMR sent two SMEs to RFD to work with the PMO and vendor to optimize the CTD. A major software drop that corrected issues within the software was optimized and tested. This is the first time NATCA attended an on site optimization. The results were extremely encouraging.

With the help of the NATCA SMEs, the vendor and PMO where able to simulate how software changes would affect the deficiencies in the system. This will allow for reduced software build time, more predictable results and, hopefully, will return the CTD to a deployment schedule that meets the timeline of the TAMR waterfall. Jim VanZee (GRR) and Ross Costa (RSW) worked hand-in-hand with

RFD FacRep Tim Austin and the membership to facilitate activities. The dedication and innovation of Jim, Ross and Tim should be commended.
For each of the high level activities below, the TAMR SMEs have dedicated many hours of telcons, travel, and one-on-one site support. It should not go without mentioning that each of the SMEs on the NATCA TAMR Core team is supported by the membership in their own facility. Without the greater membership supporting the SMEs, this level of accomplishment would not be realized.
CMH Initial Operating Capacity (IOC) 2/25/2017
P50 Initial Operating Capacity (IOC) 3/12/2017
CPR Equipment Delivery (ED) CPR moved one step closer to NEXTGEN by becoming the next site on the ARTS IIE waterfall to have their STARS equipment delivered in preparation for install.
CMI Contractor Acceptance Inspection (CAI) The G4 STARS ELITE equipment has been installed and accepted by the FAA for CMI. Next it will be adapted for transition to replace the ARTS IIE.
SAT An Initial Operating Capacity (IOC) date of March 27, 2017 has been finalized. SAT will transition from G1 STARS to G4 STARS.
ICT Equipment Delivery (ED) ICT moved one step closer to upgrading their G1 STARS system with the delivery of G4 STARS ELITE.
CLT Contractor Acceptance Inspection (CAI) has been scheduled for March 31, 2017. CLT will have their G1 STARS system upgraded to STARS G4.
AVL Contractor Acceptance Inspection (CAI) The G4 STARS ELITE equipment has been installed and accepted by the FAA for AVL. Next it will be adapted for transition to replace the ARTS IIE.
ACT Contractor Acceptance Inspection (CAI) The G4 STARS ELITE equipment has been scheduled for April 6, 2017 at ACT.
LCH Contractor Acceptance Inspection (CAI) The G4 STARS ELITE equipment has been accepted by the FAA for LCH and will be adapted for transition to replace the ARTS IIE. CAI was accomplished in Kanas City, MO. LCH STARS system will be installed by Engineering Services. This provides the TAMR program a cost savings and waterfall flexibility.
YNG Equipment Delivery (ED) YNG moved one step closer to NEXTGEN by becoming the next site on the ARTS IIE waterfall to have their STARS equipment delivered in preparation for install.
R90 An Initial Operating Capacity (IOC) date of April 12, 2017 has been finalized. SAT will transition from G1 STARS to G4 STARS ELITE. R90 is the Key Site for this type of transition. NATCA will have an SME on site during the transition to ensure smooth and complete transition.
GCN (ARTS IE) Initial Site Survey (ISS). Grand Canyon is the first ARTS IE replacement.
Over the past three weeks, the NATCA team has assisted the TAMR PMO to adjust to the changing landscape of the NAS. Work has started on the elimination of STARS LITE and ARTS IE from the NAS. The LITE and IE systems are non-

certified, desktop systems that should not be confused with an automation system. They merely provide remote towers in ARTCC airspace a NAS designation and "extend the eyes". These systems are not NEXTGEN compliant and will be replaced by the TAMR PMO. The plan moving forward is for these LITE and IE systems will be hosted by TRACONs for automation. This will improve quality of service provided and allow for increased functionality; however this will not change which facility provides approach control service.
Work continues to reconfigure several facilities as Remote Towers based on S804 realignment decisions. Akron (CAK), Lansing (LAN), Grand Rapids (GRR), Saginaw (MBS), Mansfield (MFD), Erie (ERI), Flint (FNT), and Muskegon (MKG) will transition to remote towers as the agency prepares to move the approach control service. The NATCA TAMR team understands these activities are very sensitive and we continue to work to ensure the membership receives the systems they need to work traffic in their new configuration.
April 3, 2013. This is the day Dallas TRACON (D10) transitioned from ARTS IIIE to STARS, and they have not looked back. Since April 3rd, all 11 ARTS IIIE have transitioned and 40 of the 91 ARTS IIE facilities have followed. Thank you to the NATCA representatives that have facilitated this success; Bill Spence (BTV), Jim VanZee (GRR), Richard Thomas (GEG), Chris Falcone (MDT), Ross Costa (RSW), Hugh Wyckoff (TLH), Robert Faulkner (D01), Jimmie White (PHL), Jill Carr (TPA), Teah Lord (F11) and Chris Hilbert (PHL). The professionalism and dedication of this core team is greatly appreciated.

Software & Engineering Report Submitted by Kyle Ness (M98)

NATCA SMEs from SCT and D01 were at the tech center mid-March and successfully tested the STARS S6R3e software revision. R3e will be the last build specific to previous ARTS 3e sites and includes numerous fixes such as: improvements to AT coach, modifications to conflict alert, weather display, ADS-B tracking, internal RNAV routes for SCT and improving CRDA functions for D01. PCT and SCT are planning to key site the new software.
Mr. Ness attended a meeting with AJV-7 (FAA Terminal Requirements) and NATCA weather representative Matt Tucker. Discussions revolved around terminal weather improvements and how to move forward. Two options have been advanced - improve the existing STARS weather display or develop a new standardized terminal weather product.

Much of the discussion focused on Airport Surveillance Radars (ASR) and the failings of each ASR platform to accurately output precipitation information. ASRs are not fundamentally intended to provide weather data and many ASRs are plagued with false weather and inconsistent or unreliable presentations. Furthermore, ASRs do not completely cover all terminal airspace leaving some

controllers without any weather depiction on their display. The group agreed that a dedicated weather product that provides the same information to all terminal controllers is the preferred solution. Metrological technology has advanced greatly giving controllers a composite weather product that is not only uniform, but also easily interpreted would greatly enhance safety. Future meetings need to be held with a wider audience and a requirement to interface a NextGen Weather Product with terminal automation.

The STARS strategic software-planning group is finishing up the build content for S6R9 scheduled for release in 2019 and subsequent builds are beginning to take shape. Currently, there are over 50 fixes and improvements planned for R9.
Tech refresh and software upgrade activities at legacy STARS sites exposed an issue related to using MACRO keyboard entries to make data block changes. Working with NATCA multi-unit representatives, the problem was identified and mitigations have been established either by adaptation or training.
AT Coach improvements requested by N90 are still under development. TSLE (FAA Second Level Engineering) has continued to support N90 with answers to questions and mitigating concerns about AT Coach scenarios.
Upcoming system engineering events:

April 13	PTRWG
April 24 – May 12	S6R7 OT&E

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

We will be attending the initial Training Guidance Conference next week in Gaithersburg with Leidos. The intent of this meeting will be to determine how the Training Workgroup will be designed and operate, as well as broad details of how the training should be developed and implemented. Further work will be done by the workgroup to iron out all of the details, in time for deployment in 2019.

After completing the first of 3 Early User Involvement Events (EUIE's) in February, the team will be again traveling to Gaithersburg for the first of 5 Post Release Demonstrations (PRD's). These PRD's will be a 1-day event for Leidos to demo what they have built so far, as well as to go over the future planned capabilities.

Advanced Electronic Flight Strips (AEFS)

After the suitability call in mid February, we have continued to work with the Surface Office (AJR) and the Requirements office (AJV) to prioritize the AEFS DR list, to determine a fix list for the next build. Looking ahead, we will be in CLT for training in April an Initial Operational Capability (IOC) in late May.

- **PHX**

PHX was doing a test run of approximately 30 days of the 32" monitors. Among the issues was less clarity with the flight strips than the 24" monitors due to smaller print. Ideally, they would like to see the 32" monitor with a 4 bay configuration, but that process has yet to be tackled. They have since decided that they will no longer keep the 32" monitors and switch the back out with their original 24" monitors.

- **CLE**

Nothing new

- **EWR**

Nothing new

- **SFO**

Nothing new

- **LAS**

Nothing new

- **CLT**

Terminal Second Level Engineering (TSLE) discovered a temporary issue with the power in the cab, and has tasked the Eastern Service Area with upgrading their power supply in order to handle the number of thin clients and monitors AEFS will be bringing. Basically, not enough outlets in the right locations for where the equipment has to go. A short-term fix of buying a few extra power strips for the cab has been done.
Familiarization training was given to the local CLT cadres the week of March 6-10, in order for them to have a better understanding of the system and its capabilities. They will use the knowledge to better align the system with how they operate today with paper strips, for a smoother transition.
AEFS was successfully installed in CLT's TSS labs the week of March 14th, for the facility to use in conjunction with their primary training lab and shadow ops.
The initial CLT training plan has slipped one week to the right, now beginning April 18th with their cadres, and continuing on through 5/12. They will then utilize the remaining two weeks to perform TSS simulations with their adaptations, as well as shadow operations in the tower, in order to better familiarize themselves with the new equipment. They still plan on calling IOC 5/31.
Phase 1 of the NASA integration with Airspace Technology Demonstration (ATD)-2 is still on schedule for September 2017, but I'll leave that update in the extremely capable hands of ATD-2 rep, Mr. Pete Slattery.

SWIM Visualization Tool (SVT)

On February 28th, the TFDM team received a briefing from MITRE and FAA on the capabilities of their NAS Operational Dashboard (NOD), in order to determine if its capabilities would be better or worse than the Surface Situational Awareness (SSA) tool that TFDM will be deploying. That meeting led to another meeting the next week at the Command Center with myself, Elaine Bucker of the AJR, and Dave Foyle Director of AJR-1. There, we were able to see a live demo of NOD and discuss with the staff there its actual capabilities, benefits and limitations. We are now in the process of comparing that data to the SSA requirements to ensure that, not only the Command Center, but also the TRACONs and Centers that will be getting SSA capabilities for their TMU's, are going to be working with the equipment they need best do their jobs.

TIME BASED FLOW MANAGEMENT (TBFM): Eric Owens (I90) is the Article 114 Representative for TBFM. His report to the membership is below.

The National TBFM Ops Team has had numerous activities during the months of February and March 2017.

The week of February 6th, we had a team at ZMA to assist with an effort to design a TBFM configuration to meter Cuba traffic. We return to ZMA next week, April 3rd, to continue work on this effort. We also had a team at ZAB to assist in an effort to make GIM-s more reliable for the controllers. This effort is necessary to make the installation of Terminal Sequencing and Spacing (TSAS) in 2019 more successful. ZAB has reported that GIM-s becomes unreliable when the winds at altitude exceed 100 knots.

The week of February 13th, we sent a team to ZLC to assist with a PBN meeting. This meeting was very productive and helped the TBFM Ops Team to see the direction of ongoing PBN procedures. We also had a team in Atlantic City for our initial TSAS Demo with one of our primary contractors (Leidos). Leidos did a very good job with this demo and it was good to finally see some of the items we have requested for TSAS for the first time. We still have a lot of work ahead of us to meet the April 2019 TSAS IOC date.

The week of February 21, I attended collaboration training with my management counterpart at DCA. We also had teams at RDU and ZDC to complete training and implementation of Integrated Departure Arrival Capability (IDAC).

The final week of February, we were at ZDV to support the GIM-s efforts at Denver. Denver is requesting to establish a coupled scheduling (CS) arrangement

with ZLC, which will be further discussed in May. I was in Washington DC during this week to attend TBFM, TSAS and GIM-s meetings.

The first full week of March, March 6-10, I was at a meeting with a group from the Ops Team to work with ZSE, S46 and SEA for the same GIM-s efforts we are conducting at ZAB and ZDV. We made a lot of progress during this meeting and have a follow-up meeting the first week of May. To further assist with conditioning the flow for TSAS, we will be installing IDAC at ZSE and SEA. We will also install IDAC at ZDV, DIA, ZAB and PHX this fiscal year.

The week of March 13th, a team was deployed to ZMP to assist with shadowing a new TBFM adaptation. We also had a TSAS meeting at ZMA to work on training development and a use case to determine if a support string similar to the TBFM EnRoute support string would be needed. It appears that we will need a support string to allow the terminal facilities to checkout new adaptations prior to installation in the Ops String.

The week of March 20th, I attended Communicating for Safety and assisted with a TSAS and IDAC demo. We also had two teams attend an ATD-4 activity at MITRE.

This week, March 27-30, we will be in New York. On Tuesday, we will be at ZNY to assist with development of their EDC (EnRoute Departure Capability) adaptation. EDC is needed prior to the installation of IDAC. On Wednesday, I will be at the Regional Office to provide and IDAC briefing for the New York facilities since DSP is not currently being sustained. IDAC is the initial part of TFDM so if the New York towers are good with using IDAC, it will get them a head start on TFDM when that is fielded. IDAC allows the towers to get an IFR release without calling the center. On Thursday, we will be at N90 to assist with arrival metering in the New York area.

<u>Issues that we are tracking:</u>

ZTL had two TBFM crashes over the last two weeks. It appears that the issue has to do with one of the TBFM Virtual Machines (VM). However, the engineers are still trying to determine the actual cause. In addition, a patch will be installed at ZTL the first week of May to address additional issues identified by ZTL.

ZDV, ZHU and ZDC have advised me that they are observing some DCT jumps. If you are at one of these facilities please ensure a site report is filed. In addition, if you are at an en route facility other than one of the three listed and you have witnessed DCT jumps, please file a site report.

Future Scheduled Activities:
4/3-7, 2017
- ZMA Cuba Feed
4/10-14, 2017 - 4.7 TBFM/TSAS Ops Eval and ERAM GIM-s Briefing in Atlantic City
4/17-21, 2017
- TSAS Demo in Atlantic City
4/24-28, 2017
- Airspace Meeting in DC
5/1-5, 2017
- ZSE for TBFM/GIM-s/TSAS
5/8-12, 2017
- ZAB TBFM/GIM-s/TSAS Mtg
- CLT Safety panel for TBFM/ATD-2
5/15-19,2017
- ZDV TBFM/GIM-s/TSAS Mtg

UNMANNED AIRCRAFT SYSTEMS (UAS): Steve Weidner (ZMP) is the NATCA Article 114 Representative for UAS. Jeff Richards (ZAU) is assisting Mr. Weidner on this project due to the workload and activity associated with it. Below is the update for the membership.

NATCA/FAA WORKGROUPS

The NATCA/FAA Part 107 workgroup will be visiting the MIA and PHX areas during the month of April. The intent of this workgroup is to elicit best practices from field facilities that are dealing with high volumes of Part 107 requests. A small NATCA/FAA team from headquarters will visit both areas and interview controllers, staff and management regarding their efforts to integrate Part 107 authorizations into their operation.

UAS FACILITY MAPS

In an effort to improve the quality of Part 107 authorization requests coming into the FAA, the agency is preparing to make public the UAS Facility Maps that each terminal facility was asked to complete. The agency has found that absent any guidance on what altitudes may be authorized around airports, proponents are simply requesting 400' AGL for every flight - whether they need it or not. This is leading to a high rate of disapprovals and greatly increased coordination time with the affected facilities.

The strategy behind making the maps public is that proponents will be able to see altitudes that are available and will become more precise with their authorization

requests. The first batch of maps - which includes all Class E surface areas and a handful of Class B, C and D airspace - will be released toward to end of March. It is the intent that the agency will publish new maps, or any map updates on the normal 56-day chart update dates.

DRONE ADVISORY COMMITTEE (DAC)

Mr. Weidner and Mr. Richards are participating in two of the DAC's Tasking Groups (TG). Mr. Richards is representing NATCA on TG2 - Access to Airspace. This TG will come up with recommendations to the FAA on how the UAS industry can gain additional access to airspace, further enabling integration. Mr. Weidner is representing NATCA on TG3 - UAS Finance. The purpose of TG3 is to make recommendations on how the UAS industry can financially support integration.

UAS PATHFINDER EFFORTS

Mr. Weidner recently participated in a Pathfinder 3 program update from BNSF Railroad in Dallas, TX. Pathfinder 3 is a research project between the FAA and BNSF to explore technologies and procedures to enable Beyond Visual Line of Sight (BVLOS) UAS operations. The purpose of this meeting was to review progress made in Phases 1 & 2 of this research project and to discuss what future phases of BVLOS testing will entail.

COMMUNICATING FOR SAFETY

NATCA just wrapped up another very successful CFS. Mr. Weidner participated on a panel moderated by Executive Vice-President, Trish Gilbert. The panel was entitled, "The Effect of Government Regulations and Policies on Aviation Safety, Efficiency and Growth". Part of the discussion dealt with the Executive Order requiring the elimination of two regulations for every new regulation introduced. The panel discussed how, in the case of UAS integration, the introduction of new rules or regulations actually speeds up integration. Absent UAS rules and regulations, UAS operations are handled individually, by exception. That process is time consuming and requires unsustainable levels of FAA manpower to process proponent requests.

In addition to the panel, Mr. Weidner, Mr. Richards and FAA counterpart, John Page, gave a UAS presentation during breakout sessions. Good questions were asked and the information presented was well received. Mr. Weidner also briefed the NATCA ASI committee on the Thursday immediately following CFS.

UAS QUESTIONS

As a reminder, any UAS related questions could be addressed to Mr. Weidner and Mr. Richards at UAS@natca.net.