NATCA Safety & Tech Update
Week of February 26, 2018

AIRPORT CAPACITY DECISION SUPPORT TOOL (ADEST): Kristen Laubach represents the membership as the Article 114 Representative for ADEST. Her report is below.

> Long term funding for Airport Capacity Decision Support Tool (ADEST) is currently not available so ADEST will remain status quo for now. The team continues to monitor the program and reports when something doesn't appear to be working correctly. The Spacing Efficiency (SE) aspect of ADEST was briefly discussed. There is talk of eliminating this section of ADEST all together but a final decision hasn't been made as of yet.

AIRSPACE: Jim Davis (PCT) is the National Airspace Representative for NATCA. Below are reports from the various airspace team leads and Mr. Davis.

Las Vegas Metroplex

The Las Vegas Metroplex has been "paused" since the end of October. We have not been allowed to meet with our Design Team since then. However, my FAA co lead and I have been trying to keep our project issues highlighted to the program office and FAA Vice President's in charge of our budgetary issues. We were given word yesterday that our project can now move forward with design meetings. When we left off in October we had completed design on 3 of the 4 corner posts. Our plan is to resume design work on the week of March 19th. We will be working on the Southeast corner into Las Vegas. We will be inviting ZDV and ZAB to join us with this design effort. We have also identified a potential issue in this corner with routes over the Grand Canyon. Brad and I have already reached out to Park Service and plan to brief them in the next few weeks. Once we get started in March we should be able to complete our Design work in about 5 or 6 weeks. I will continue to update on our progress as we get going.

Submitted by Chris Thomas Las Vegas Metroplex NATCA Co-Lead

Cleveland/Detroit Metroplex Design & Implementation
The core team along with ZOB POC's were in DTW last week to meet with the Delta Tech Pilot "Stewart Kenny". The objective of this meeting was to provide a project update to Delta, review the updated phased implementation plan, and do a final review of the DTW FIG's. Prior to the start of the meeting with Stewart, Ron and I had arranged a discussion/Telcon with the D21 ATM/Rep along with the DTW DM and the Program office.

The purpose was to ensure that everyone was in support of the newly proposed phased implementation plan, and that while we would continue to work on both TBFM/Trips, the status of these two issues would not change the 9/13 implementation date. D21 has still expressed concern over impact on airport efficiency levels if we implement without either TBFM or Trips, they now understand the reasons behind the 9/13 implementation date. The meeting with Delta took place as soon after our local meeting and Stuart turned the focus of the meeting to Trips and that he "did not support implantation unless Trips were up and running first" and quoted that he spoke for all of industry on that matter. Ron and I attempted to explain the issues driving the implementation date and that if we missed 9/13 the next available date would likely be mid 2019 and that would jeopardize the project. The discussion became non-productive and I as NATCA called the meeting and walked out for lunch. The afternoon meeting was able to stay focused on the specific agenda that was set prior, and we were able to accomplish what we were there to do.

The team coordinated the new implementation plan with NAV Canada this past week. They can support the plan but will need to change the previously coordinated production slots originally set in the event that problems with the procedures need to be corrected. The new chart date will likely be in August of 2019. Everything else involving NAV Canada appears to be on target.

We are still working with Gary Fisk and Ron Singletary on updates on the safety study that was conducted at DTW for the operation of trips. We were told on 2/7 that the document of the study was in the "review and signature stage", and that we should hear something soon. I have been in touch with the RVP/ARVP to see if they could put some pressure on their counterparts to get this thing moving so we can start to plan to go or no go with trips.

Report submitted by Michael Taylor CLE/DTW Article 114 D & I liaison

SoCal Metroplex

The SoCal Metroplex Team Provided the Western Pacific Regional Administrator and the OSG, analysis for Long Beach Airport reference noise concerns near Huntington Beach, regarding continuing legacy noise concerns. The team also provided additional information to the RA Staff and HQ on meetings with Congressman Rohrabacher.

Reviewed the draft response for the LA Roundtable; letter dated October 1, 2017. Reviewed and provided analysis for the Malibu Mayor letter reference noise concerns.

Reviewed and provided analysis and comments on Congressman Lieu letter.

Provided the Regional Administrator Staff and HQ a draft PowerPoint for Thousand Oaks and Newbury Park. Awaiting comments from RA Staff.

Coordinated with AIS on procedures that are scheduled to be published on March 29th and May 24th. Provided the Regional Administrator Staff and HQ the reasons for procedural slips on the March 29th publication date.

ZLA and SCT have been in the final preparation stages for the March 29th and May 24th implementation dates.

ZLA has begun the process to move forward with the implementation of the Sectors 54 and 55 redesigns. Planning, training, GSGT changes, ERAM automation and support for the implementation has begun. The redesign was required due to the complexities experienced during inclement weather.
SCT is preparing for the meeting with the ZLA SMEs to discuss solutions to alleviate conflictions in the SXC area.
Initial discussions were held with HQ and the OSG to plan the transfer of the SoCal project to the OSG and plan out the closeout of the SoCal Metroplex Project. Discussions were also held with AWP Counsel and the need to have the leads continued support during the scheduled legal briefs and oral arguments for the lawsuit and the outstanding Petitioners.
Submitted by Jose Gonzalez Article 48 Rep, SoCal Metroplex

Florida Metroplex February 2018 Report
Florida Metroplex team had the following activates during the past month:
Met in Jacksonville with ZJX, ZMA and ZSU on Q/Y routes planning
Met in ZMA with ZMA and ZSU to sign design packages for Q/Y routes
Briefed ZMA and ZMA facilities on Q and Y routes planning
Briefed Florida airports on Re-scoping of Florida Metroplex
Briefed Command Center on Q and Y
Participated in Florida Metroplex Telcons
Submitted by Greg Harris Florida Metroplex NATCA Co-Lead/Caribbean Study NATCA Co-Lead

NATCA PBN Co-Lead East
It has been a busy time in Eastern working on separating projects among the different sets of Co-Leads. Still going to be a couple weeks until everything is in place to work more as two teams.
During the week of February 5th there was a Capitol Project meeting in which I attended in order to learn the differences in Metroplex meetings and Single-Site Meetings. While at this meeting, we used the time to talk with ZDC about what they needed for the new Q and Y-Routes to be implemented. ZDC has some airspace changes that need to be evaluated and gave us the info they have on the desired airspace changes.
The week of February 12th, a ZNY Sector 85/86 meeting was held at ZNY. At this meeting, ZNY showed us a couple of Y-Routes they had designed to help the flows out of the NYC Area to the south. We have taken these design concepts and will discuss these with ZJX to see if these two Y-Routes will work for them or if more work needs to be done.
A lot of the remaining time has been spent evaluating the existing Q and Y-Route designs between ZDC, ZNY and ZBW. It has been determined that there will be two separate implementations of the Eastern Q and Y-Routes. FL Metroplex will do the first implementation for the routes south of the ZDC/ZJX boundary in the fall of 2018.

The second implementation will tentatively occur in the fall of 2019 for the routes north of the ZDC/ZJX boundary. We are tentatively scheduling a meeting with the northern Q and Y-Route facilities in early April 2018 to discuss everything.

Joey Tinsley NATCA PBN Co-Lead East

Eastern Service Area (ESA) PBN February 2018

Capital Area Project DCA/BWI/IAD

The designs are mostly complete; we are just cleaning up notes and minor design clarifications. The CWG will prepare briefings for Maryland Airport Administration (MAA), the BWI community noise roundtable, Metropolitan Washington Airport Authority and DCA community noise roundtable. The loss of 60% of our Tetra Tech support staff will make preparation for the April briefing difficult, a March briefing is not possible. Our projected publication for these procedures was February 2019 but DataComm, additional community request, and environmental process will probably push that date later in 2019.

CVG/TVT Project

We had FWG meetings on February 20th & 21st to remove TVT from the ROCKT SID. We came away with an agreement on design and plan to remove TVT but AIS needs to confirm that the procedure can be processed as an "abbreviated amendment".

The TVT VOR was to be removed during our CVG project to meet the VOR MON decommissioning in FY18. The Eastern Co-Leads will work to remove TVT from the ROCKT SID in FY18 via the abbreviated amendment process while the rest of the project waits.

NEC (North East Corridor)

The SID and STAR work for Sector 85/86 in ZNY FWG meeting was the week of February 12th. N90 was unavailable and the SID and STAR designs at EWR and JFK have been put on hold. We designed Y-routes to accommodate the traffic flows into the oceanic airspace.

ACRP has been re-scoped between Florida Metroplex and NEC. The Q and Y-routes that were developed under ACRP in ZDC, ZNY and ZBW will be pulled into the NEC PBN work. The Q-routes in NEC will be worked closely with the PXT STARs. The proposed new traffic flows on the Qs and the connectivity with the STARs is critical in ZDC airspace.

PXT VORMON Project

We are scheduled to begin working the PXT VOR decommissioning the week of February 26th. This project began in 2016 but do to funding concerns in 2017 it was on hold for most of 2017. The project includes 9 STARs and 13 T-routes. STARs are being developed or amended for LGA (2), EWR (2), TEB (2), PHL (2) and DOV (1). The 13 T-routes will provide PCT and ZDC route structure around the Washington/Baltimore area; other restricted airspace and congested airspace between BWI and PHL.

We hope to finalize the T-routes for PXT and tie them to the T-routes in the Capital project and RNL VOR MON projects.
Projects waiting to publish;

PLB is VORMON generated – T705 between ZBW and NavCanada 2018 publication

Bermuda – Amendment to one STAR with additional waypoints to aid in non-radar separation.

All other projects in Eastern have been put on hold until June 2018 when AJV-14 will reevaluate priorities and funding.

Projects on hold or waiting prioritization in eastern;

CVG – Atlas Air request, Amazon, Delta and SWA supported project
T-294 extension – ZTL request for TDG/EWA VOR MON project
ROA – RNPs, FEDEX request for safer operation through terrain.
TJSJ SIDs & STARs – Datacomm generated project
ZME Q-routes – 8 new routes and 10 amended
ZME/MEM – FEDEX request to update OPD STARs & RNPs
RDU – Funding issue no BFOT to support project
WRI – Multiple NAVAIDS VOR MON generated
BGR – RNAV STARs
BNA – facility request
NPA – RNAV SID & STAR for the military
ZBW – NavCanada T-route project

Submitted by Bill Wise ESA PBN/NEC Airspace & Procedures Article 114 Rep

PBN/Metroplex Design and Implementation Lead Monthly Report – 2/21/18

Metroplex: The four remaining Metroplex D&I projects (minus SoCal) are awaiting decisions from the Executive Committee (EC) reference budgetary and litigation concerns moving forward. The Florida Metroplex Co-Leads briefed the ATCSCC on February 21 about the planned November 2018 implementation of the Q/Y routes for ZJX and ZMA. Re-design work will then begin on the Florida Metroplex SIDs/STARs in the next few weeks. The re-scoping efforts will focus mostly on procedure design at 10,000ft and above to reduce environmental and community involvement costs. Post-implementation of SoCal Metroplex amendments is scheduled for February/March/May 2018. The SoCal project is currently looking at a closeout on May 31, 2018. Detroit/Cleveland Metroplex is now working towards a September 2018 implementation date. The Denver Metroplex team is awaiting the decision from the ESC regarding the future and possible cancellation of the project. The Las Vegas Metroplex had been on a "slow down" due to budgetary concerns but will begin developing a working schedule to move forward with the project as originally scoped. The next Metroplex Leads meeting is scheduled for March 2018 via VTC/GoToMeeting. Part of the current Florida re-scoping options is to incorporate a portion of the AC Q routes from ZJX and ZMA.

The Florida Metroplex team will work to connect the Q routes to the existing SIDs and STARs for a November 2018 implementation. The team will then reconnect the future Metroplex SIDs and STARs to the Q routes at a later date. The northern ACR Q routes (ZDC and north) have been incorporated into the NE Corridor initiative with a dedicated set of Co-Leads.
The PBN office is currently working with Flight Standards (AFS), Aeronautical Information Services (AIS), Service Center Operational Support Groups (OSGs), Flight Inspection, and PASS on a workgroup to look at ways to streamline the Instrument Flight Procedures (IFP) development processes to improve the way we validate incoming IFP requests. This workgroup will also look at ways to better prioritize valid requests that aligns better with safety needs and the PBN NAS Nav Strategy. This workgroup kicked off on March 28, 2017 with a weeklong meeting in Seattle and met again in Fort Worth the week of February 5, 2018. NATCA was briefed on the progress of the workgroup on February 20. The timeline for completion of the draft implementation plan is June 2018.
Submitted by PBN/Metroplex Design and Implementation Lead Art. 114 Ed Hulsey

NATCA National Airspace Rep
Much of the Metroplex and .41 PBN work has been reviewed recently so a process can be developed for prioritization of procedure design and implementation. There are currently more than 4000 procedures in the gateway and we hope this will be the beginning of a more fluid and timely procedure development process. We do not expect immediate changes but look forward to this positive move.
We were advised this week that the agency is still looking for ways to cut an estimated 30 million dollars from the mission support budget, this will continue to affect most of our projects negatively.
As the funding crisis continues, we are hoping for updated and positive news in June. If the funding does not improve it is unlikely the FAA will be able to financially support the current airspace and procedure design and implementation commitments.
Submitted by Jim Davis NATCA National Airspace Rep

AIRSPACE TECHNICAL DEMONSTRATION 2 (ATD-2): Pete Slattery (CLT) represents the membership as the Article 114 Representative for ATD-2. His report for is below.

The NASA Integrated Arrival, Departure, & Surface (IADS) ATD-2 system continues to be used daily at Charlotte (CLT) airport. Tower TMCs collaborate with the local ramp tower, operated by American Airlines, to accomplish Departure Metering just prior to bank two every morning. As of Feb 19th, after mutual agreement by all parties, we are now metering bank 3 also. We will monitor the effects of metering this additional bank before considering any of the afternoon or evening banks for metering. This decision will come once all parties have studied how the addition of Bank 3 has gone. So far, metering appears to be going very well, from the perspective of both CLT TMCs and local Ramp personnel.

A new version of the STBO software (3.1.0) was deployed on Feb 12th. This version addresses some changes and enhancements requested by CLT TMCs, as well as Ramp Managers and Ramp controllers. The most significant changes on the STBO client (the ATC TMC equipment) are:

- The ability to swap flights within the same TBFM SuperStream Class via the Timeline,
- A Departure Delay Table that replicates current ARMT function and design,
- A change to the way flights subject to APREQ are arranged on the timeline. They now appear in the order they taxi rather than being 'frozen' to their release time. This is a much more intuitive way to display flights and gives TMCs a better idea of whether a flight can/will meet its release time, or if you should/could request an updated time (earlier or later).
- Improved flight search functionality across all types of display windows,
- Single flight exclusions from Ground Stop or Departure FIX closures,
- The ability to select either inclusion or exclusion action types when applying constraints to a TMI,
- Better handling of closed Departure FIXes and CDRs,
- General GUI enhancements as well as bug and stability fixes.

NASA has given several briefings over the last month to various FAA and Industry groups about the progress being made with ATD-2 at CLT. These groups include the NextGen Advisory Committee (NAC SC), the Surface Collaborative Team (SCT), and the NextGen Integration Working Group (Surface) (NIWG). I have represented NATCA at many of these briefings. The most significant statistics NASA reveals during their presentations are:

- Surface metering during just one bank at CLT has saved approximately 51,868 lbs. of fuel and 72 tons of CO2, equivalent to planting 1,858 trees.
- Efficient use of overhead stream scheduling has saved over 20 hours of surface delay on CLT airport surface,
- Saving 42,824 lbs. of fuel by taking some overhead stream hold at the gate rather than in the AMA.

- Accentuating the difference between restrictions due to surface congestion versus those due to overhead stream constraints.
  Progress towards integrating ATD-2 with the Advanced Electronic Flight Strip system (AEFS) continues. NASA and the FAA are addressing security concerns and hope to have a solution that is acceptable to all parties in time for Phase 2 of ATD-2 which begins this coming September. Sharing data between these two systems is currently the only way that controllers will be able to become active participants in future departure metering programs. More on this as further info becomes available.

  Finally, NATCA's President, Paul Rinaldi as well as NATCA's Directory of Safety and Technology, Jim Ullmann, attended a full day briefing and demo of ATD-2 and AEFS at CLT on February 16th. The day began at NASA's ATD-2 Lab in the old CLT terminal on the South side of the airport. NASA spent nearly two hours going over every aspect of the program including the technical aspects of the system as well as its history and future plans. After that, the group transitioned to the CLT tower/TRACON facility where Paul and Jim saw the equipment in use with live traffic. Controllers and TMC were able to give first hand accounts and opinions of how the equipment actually works and what they like and don't like about the systems. Having this type of feedback directly from the users is invaluable input during the early stages of design and development for future systems such as TFDM that will become part of every terminal controllers work environment in the very near future. See Matt Baugh's TFDM updates for timelines on TFDM progress and deployment. Paul and Jim's visit concluded at the CLT airport Ramp tower where they were able to see the Industry side of NASA's ATD-2 project. The necessity of close collaboration between ramp and ATC personnel comes into sharp focus when you see the effects and benefits of data sharing in use with live traffic in real time. We thank Paul and Jim for their visit and hope it was helpful for their understanding of the new paradigm that this program and TFDM will bring to operations at many busy terminals in the very near future. We also thank NASA for taking the time to present a very in-depth and informative presentation and for being careful listeners to the needs and concerns of NATCA as we enter into a completely new way of managing traffic on the surface of the busiest airports in the world.

AIR TRAFFIC PROCEDURES (AJV-8): Andy Marosvari (BOI) is the Article 114 Representative in the AJV-8 Office. Mr. Marosvari forwarded the summary below for this update.

> February has been a busy month in the Procedures office at FAA Headquarters. NATCA participates in nearly every meeting regarding every change that the FAA is working on. Additionally, most clarifications and interpretations, previously done without collaboration, are now written with NATCA involvement.
>
> As the Procedures representative, I participated in two Safety Risk Management Panels (SRMP) during the month of February. In an effort to consolidate 4 different Wake Turbulence separation standards, Air Traffic Procedures (AJV-8) has written a Consolidated Wake Turbulence (CWT) order that combines Wake Recat 1.5, 2.0A and B and the 7110.65 standards. John Murdock, NATCA Wake Turbulence Representative, and myself participated in a follow up panel to complete the SRM process. The risks associated with a consolidated order have been identified and are at a level that can be mitigated provided the FAA signs off. This new order will allow facilities to use the lowest of the combined standards and each facility in the NAS will eventually be using the same standard. There is still work to be done before the CWT standard goes and is expected to take 12-18 months before implementation.
>
> Another SRMP was held to identify the hazards and risks of Visual Separation applied between facilities. Currently, there are several facilities that operate under a waiver that permits Tower Applied Visual Separation between facilities. The data presented indicated no issues with separation while operating under the waiver so guidance will be published allowing this type of Visual Separation NAS wide, where applicable. This will negate the necessity of a waiver.
>
> I am currently working with AJV-8 on Document Change Proposals (DCPs) that address separation from Special Use Airspace, Anticipating Separation and Approaches to Multiple Runways.
>
> I have also collaborated on responses to facility inquiries regarding separation responsibilities of Federal Contract Towers (FCTs) and TMU initiatives/Command Center notification.

RESILIENCY TEAM: Tim Travis (ZID) is the Resiliency Article 114 Representative for NATCA. His update for the membership is below.

> Two TELCONS , there is not any money for travel. I will not sign off on anything until I can see it in person and am presented with Controller questionnaires that I can send in to have NATCA validate. I have requested a better interface for user (AT Controllers for dry run) – NEED FOR TRAVEL
>
> (also related to mapping for ORI scores)
>
> (some assumptions –Based on 2013 data from SWING & LST data
>
> **Recommend** we validate assumptions through TIM)
>
> Tech Ops Questionnaire should be mostly completed. Ken is SME providing input. Data being pulled from standard outputs.
>
> Working on servers…many problems and is still troubleshooting issues. Security handshake gates and interface issues. Should be able to resolve, but FAA data server is resistant to accepting external data sources.
>
> AMI: Vulnerability Dashboard updates and priorities were established for release one. No show stoppers or significant issues.

> COI ON AI PRODUCTS: All TELCONS have been canceled. Asked for status, haven't got anything back.

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**.**

> **<u>Standard Terminal Arrival (STAR) Criteria WG</u>**
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> Participated via telcon with the STAR WG where John Lindsey (AFS-420) did a recap of the last meeting and status update of on-going issues. He also provided a recap of the discussions for Minimum Safe Altitudes (MSA's) being added to Standard Terminal Arrivals (STAR) charts from the US-IFPP (Jan 2018) meeting. He also introduced a new method of submitting and tracking criteria change requests as well as criteria intent verification requests using a system known as JIRA. By the end of the meeting, his plan was to have a shared understanding of the Aeronautical Charting Forum (ACF) MSA topic, issues recommended thus far and the status of each, followed by an introduction to new items of interest.
>
> **<u>Departure Criteria Working Group (DWG)</u>**
>
> We have been meeting via telcons over the last several weeks discussing the issue raised by AJT on their nonconcurrence with FAA 8260.3D, specially Chapter 14 regarding SID Criteria. The purpose of these meetings has been to determine if there is a need for SID specific criteria. Our last meeting occurred on February 22nd where we reviewed meeting notes and discussed basic criteria needs for ATO and AFS, especially as it relates to FAA 7110.65section 5-6-3 usage on SIDS.

We discussed the following:
1. TERPS would be used as the only evaluation for SID's that require vectors below or at/above the MVA/MIA. The group was concerned on ATC losing capabilities if not allowed to use 5-6-3 on SIDs. ATO agreed that 5-6-3 would not be used as part of the clearance with a SID as long as TERPS is flexible enough for ATC. 5-6-3 could still be used to vector below the MVA/MIA without a DVA and be used to take an aircraft off a SID.

2. AJV-5 needs an avenue to talk directly with facilities when designing SIDs and questions arise (similar to DVA coordination).
We currently plan on traveling to OKC during the week of March 19th to further discuss the issues and come up with a plan that is suitable for all parties without ATC losing any current capabilities and will include, but not limited to discuss basic criteria needs for ATO and AFS, process to request and work SIDs, basic criteria used to develop SIDs such as Diverse Vector Areas (DVA), Isolate Penetrating Obstacles, define a range of headings, climb to initial MVA/MIA, define an area, combination of above, as well as climb gradient, departure sectors, and route departures

Pilot Controller Procedures & Systems Integration (PCPSI)
Attended the PCPSI WG meeting in Melbourne, FL from February 6th-8th where the following information was discussed.
1. STAR Runway Transitions FAA 7110.65 4-7-1 DCP SRMP - The WG was reminded about the DCP SRMP being held at the FAA from December 5th-7th. The background on this change is for Standard Terminal Arrival Routes (STARS) that provide course guidance to multiple runway transitions, pilots must be provided with runway transition information along with the descend via clearance. This allows pilots to program the Flight Management System (FMS) and fly the proper decent profile associated with the runway transition that was issued. On March 1, 2013, a memorandum was issued clarifying FAA JO 7110.65, Paragraph 4-7-1. The memorandum stated that Air Route Traffic Control Centers (ARTCC) should issue a landing direction and Terminal facilities should issue the runway transition to be flown. In limited situations when the procedures are covered in a letter of agreement, ARTCCs may issue the runway transition in lieu of Terminal. Once the aircraft is established on the runway transition, due to the behavior of some FMSs, runway changes and certain route changes become problematic for pilots. Prior to this change, controllers were required to vector aircraft to the final approach course when any runway change was issued once the aircraft past the point ten miles prior to the runway transition waypoint. This change provides limited relief from that requirement.
The change requires controllers utilizing descend via clearances on STARs with multiple runway transitions to issue the runway transition or landing direction in conjunction with the descend via clearance.

After the aircraft has passed the point 10nm prior to the runway transition waypoint, an additional change relieves controllers from the requirement to vector aircraft to the final approach course if a change in runways is made, but does contain strict qualifiers.

2. PBN to ILS Update – In order to provide information, you first must understand what occurred. On March 27,2017 ALPA national voiced concern over the removal of VNAV as a minimum requirement for future RNAV approach procedures. Specific issues noted included Flight Crew workload increases during Closely Spaced Parallel Operations (CSPO), the risk of unstabilized approaches will increase, contradiction to the premise that all runways will have a vertical guidance to every runway end. (Recent reference to this paradigm is noted in the PARC produced PBN NAS Strategy 2016.), increased probability of Class B incursions due to lack of vertical guidance, previous studies that addressed operations using localizer only or LNAV only did not address the risk of Controlled Flight into Terrain (CFIT), and aforementioned studies were in a "simulator setting" and did not accurately reflect what a pilot would experience in actual, real world operations.

Mitigations were suggested (inferred) such as; consider further proliferation of ATC Minimum Safe Altitude Warning Systems (MSAW) to include altitudes normally inhibited today due to nuisance alerts, terrain avoidance warning systems are not available during non precision approaches (Specifically glideslope deviation alerts, ATC monitoring only provides lateral guidance for collision), flight crews operating non VNAV equipped aircraft prefer vertically guided procedures over non-vertically guided procedures, and majority of mainline airlines have VNAV capability (RJ aircraft are LNAV only).

So, what happens now? In response to the concerns, NextGen Integration Performance Based Navigation Working Group (NIWG PBN WG) is looking into the issues, developing a data driven dialogue to address concerns, which includes asking for objective basis for challenges noted. While this activity is going on, the desire is to keep moving forward and not bring the evolution of PBN to a halt. Are there other means to provide vertical guidance while flying RNAV EoR style procedures? Of course, RNP to ILS…

On 17 October AVS-1 requested PARC look into RNP to ILS procedures and operations in order to leverage RNAV procedures to an ILS approach. This was given to the PARC Navigation Working Group (PARC NAV WG) through a letter, which basically stated, "*based on recent concerns raised by industry regarding pilot workload and the availability of vertical guidance when conducting simultaneous approaches, we request that the PARC Navigation Working Group review operational considerations that mitigate operational risk to ensure aircraft can safely transition from RNP to xLS guidance. Factors that may be elevated include, but are not limited to, the availability and necessity of vertical guidance, pilot workload required to transfer between guidance modes, potential benefits of a longer straight final approach segment, and risks associated with dual/parallel operations.*"

Moving forward, the PARC NAV WG will review and provide a ToR for PARC SG which led to an Action Team and we just met for the first time on February 21st in Atlanta, GA.

3. Speed Cancellation Guidance - Recent concerns have been raised by controllers pertaining to current guidance in the 7110.65 regarding the issue of speed termination when a Descend Via (DV) clearance is issued and the STAR has no speed restrictions and pilots whose guidance is different within the Airmen's Information Manual (AIM). Based on the guidance contained within the FAA 7110.65, Paragraph 5-7-4 Speed Termination states: "Advise aircraft to "resume normal speed" when ATC-assigned speed adjustments are no longer required and no published speed restrictions apply." The AIM, Paragraph 5-5-9 Speed Adjustments, subparagraph 5(a) also has language that is similar to the language in the FAA 7110.65, which states how a controller will terminate ATC-assigned speed adjustments when no longer required; "Instructs pilots to "resume normal speed" when the aircraft is on a heading, random routing, charted procedure, or route without published speed restrictions." However, new language was recently added to the AIM under paragraph 4-4-12 f5, which states; "A climb via or descend via clearance cancels any previously issued speed restrictions and, once established on the depicted departure or arrival, to climb or descend, and to meet all published or assigned altitude and/or speed restrictions." This language is not found in the 7110.65 and is what has created some recent issues/concerns. The FAA 7110.65, Paragraph 4-5-7 h Note states: when cleared for STARs **that contain published speed restrictions**, the **pilot must comply with those speed restrictions independent of any descend via clearance**. Where STARS contain no published speed restrictions, the DV clearance doesn't cancel previously issued speed restrictions.

One solution mentioned by Industry was to treat DV and Climb Via (CV) the same as those requirements pertain to Instrument Approach Procedures, which is covered under FAA 7110.65, 5-7-1 c and d, which states; ***c.*** *At the time approach clearance is issued previously issued speed adjustments must be restated if required*, and ***d.*** *Approach clearances cancel any previously assigned speed adjustment. Pilots are expected to make their own speed adjustments to complete the approach unless the adjustments are restated.* Industry believes this will standardize the situation because it meets what all their pilots have been trained to performed, but would require all controllers to receive training because it completely different than how we have been trained. This issue was not resolved during our November 2017 or February 2018 meeting and we will continue to discuss it at our next meeting.

4. Approach Clearance Confusion – Received a briefing from Airline pilots Association (ALPA,), Allied Pilots Association (APA), National Business Aircraft Association (NBAA), and NATCA on recent events that have generated a great deal of interest and concern with certain approach clearances where altitudes below the procedure and Minimum Vectoring Altitude (MVA).

5. En Route Transition Assignments – Received a briefing from AJV-8 about developing guidance for assigning changes to En Route Transitions on STARS (Not to be confused with Runway Transitions).
6. KSNA SID and A-RNP Issues – Received a briefing from Gary McMullin (SWA) about the new procedures, which led to many pilots within the room being confused regarding the PBN requirements needed to fly the procedure. The big difference with A-RNP is the requirement to use RNP-1 instead of RNAV-1, however the requirements for both are the same, but many pilots have been led to believe RNP is only Authorization Required (AR) procedures, which is not true. I believe many more discussion will continue on this topic.
7. PARC Tasking- Visual Separation While Established on Published Procedures –
8. Phraseology Harmonization in North America – Received a briefing from Brian Townsend (AAL) along with an update on the implementation of Climb Via and descend VIA in Australia. This led to a discussion about coming up with a plan to harmonize the phraseology within North America and use that plan to reopen the issue with ICAO for global changes. Many more meetings and discussions will be required.
Our next face-to-face meeting will occur at Airlines Pilots Association located in Herndon, VA on April 30th and May 1st.

PARC NAV WG

The PARC NAV WG held its first quarterly meeting of the year on January 31sy and February 1st in Phoenix, AZ where we discussed the following:
1. RNP AR 50 second Rule Action Review - Mike Cramer (MITRE) reviewed the status of this action after the January virtual meeting, noting that there was concern about allowing reduction of the 50 seconds to zero as part of standard criteria and the concern as if the 500' above Landing Threshold Point (LTP) minimum Final Rollout Point (FROP) still is needed. There was extensive discussion about both topics, with a briefing from AFS showing comparison between the 15-second prior to Decision Altitude (DA) and the 500' above LTP requirements. Basically the 500' will come into play in low elevation airports and when the Height Above Touchdown (HAT) approaches 250', so it was decided to leave that requirement as is. Further discussion of possibly allowing times shorter than 15 seconds as standard was decided against primarily because in the limited times that might be advantageous the 15 seconds could be waived by AFS after review. In addition, Barry Miller (FAA AIR) pointed out that ICAO was moving toward the 15 second standard, and Jeff Kerr (FAA AFS) pointed out that in the draft Advisory Circular (AC) they had adopted the 15 in anticipation of the Nav WG recommendation. The final version of the recommendation was agreed upon, recommending simply that a standard minimum of 15 seconds prior to DA for the FROP be applied, and the 50-second time removed from criteria
2. RNP AR Departures - As a follow-on to the previous briefing, Barry Miller briefed the group on the work being done on RNP departures at ICAO. His briefing is posted to the Nav WG PARC site in the meeting folder.

3. FAA Briefing on AC90-101A Update Progress - Jeff Kerr (AFS-470) had previously asked for a time on the agenda to brief the group on what changes are upcoming in AC90-101A. Greg Spann gave the briefing which will be included on the website as part of the meeting records. The general reaction was positive from the group. They also shared a draft RNP AR compliance guide, which will be being replaced by online guidance soon (this will also be available on the PARC website for the Nav WG). Jeff asked for volunteers to join in a working review of the AC to help FAA refine the document and better coordinate it with industry prior to the public comment period. The group of volunteers were Mike Cramer (MITRE), Al Herndon (MITRE), Larry Hills (FDX), Brian Swain (DAL), Ron Renk (UAL), Andrew Benich (Envoy), Chris Shehi, Barry Miller (FAA AIR) and Gang Feng.

4. A-RNP Issues Work Session - Mike summarized the three A-RNP issues that had been agreed as high priority for 2018. Each was discussed individually.

a. OEA Harmonization: The harmonization of the OEAs was discussed first, and as review, Mike asked Barry to walk through his white paper on justification for moving to 2xRNP for the OEA in A-RNP to match RNP AR. The main basis for proposing the same OEA for A-RNP rests on the fact that both A-RNP and RNP AR have identical hazard classifications and required design assurance for RNP 0.3 or greater. The more stringent requirements for RNP AR come into play when the RNP value for the operations is less than 0.3. After this second review of the paper, the group agreed that they thought the paper provided sufficient justification for a recommendation that the A-RNP OEA be reduced to 2xRNP from 3xRNP. Mike was asked to draft the recommendation and forward it to the SG for review and approval.

b. Maximum Design Bank = 25 Degrees: Discussion of raising the minimum design bank angle for A-RNP to 25 degrees involved a review of the MITRE aircraft / avionics capability table. This table includes for each system the maximum available command bank angle, which can be used. Some systems have a maximum of 25 degrees, but many have 27 and up to 30. It was noted that if we allow design up to 25 to set the minimum RF radius in a procedure, there is no margin in some systems for remaining on the RF path except for the margin built in by designing to the maximum wind speed / direction expected. This is probably sufficient, however the group felt that we should perform analysis to support this assertion. Mike agreed to take the action to work with analysts at MITRE to do this analysis, Wes Combs volunteered to help. There will be no recommendation on this until after the analysis is complete and it supports the limit change. It should be noted that RNP AR already allows up to 25, and some systems that qualify for RNP AR are the same ones, which are limited to 25 degrees maximum control bank for path keeping.

c. Multiple Intermediate Segments: Multiple intermediate segments (and fixes) are a principle part of RNP AR designs in places with multiple runways and approaches (e.g., KDEN). Early in the implementation of RNP AR a PARC working group was assembled to look at the issue of chart clutter associated with multiple IFs and the profile view of the procedure. We reviewed that recommendations that were made there and at the ACF in this meeting to understand if there were any differences between RNP AR and A-RNP that would invalidate use of multiple IFs for A-RNP since it would be advantageous to replace RNP AR procedures with RFs and minima 0.3 or above with A-RNP procedures to improve participation. Review of the preceding work for AR and discussion found no reasons that the multiple IFs should not be allowed for A-RNP as well as for RNP AR. Mike has the action to draft a recommendation for review in our next telecon.

Recommendation - Problem Statement Current criteria does not allow the use of multiple intermediate fixes (segments) for procedures other than RNP AR, such as A-RNP instrument approach procedures see Order 8260.19H paragraph 8-2-2.c. Multiple fixes (segments) are allowed in RNP AR procedures per Order 8260-58A based in part on the PARC RNP Charting WG recommendation (12 March 2010) which was responding to ACF 09-02-220. The PARC work was taken to the Aeronautical Charting Forum at ACF 10-02. It specifically recommended limiting multiple IFs to RNP AR, but raised the question of allowing them for other procedure types, recommending that the issue should be revisited after more experience had been gained. While discussing the possibility of replacing some RNP AR procedures where A-RNP should suffice, the Navigation WG realized that this would be an issue. Using A-RNP instead of RNP AR for procedures only needing the RF and RNP values down to 0.3 NM to expand participation to more aircraft lead the WG to an examination of the Denver RNP AR procedures that meet these criteria. The Denver procedures, however, make extensive use of multiple intermediate fixes and segments for implementation, which is not allowed except for RNP AR. In 2017, the WG added this issue to the work plan for 2018. After review of the original ACF material and subsequent discussion the WG could find no differences between RNP AR and A-RNP operations that would drive a restriction on use of multiple IFs in A-RNP procedures. Given that current criteria doesn't mention use of multiple IFs outside of RNP AR, and that operations and equipment are very similar between AR and ARNP, the WG concluded that multiple IFs for A-RNP is both feasible and practical to gain the benefit of expanding fleet use through A-RNP in many cases.

The Navigation WG recommends that the FAA revise criteria to allow the use of multiple intermediate fixes (segments) in IAPs requiring the A-RNP NavSpec in the same manner as implemented for RNP AR (down to RNP 0.3).

5. Intermediate Segment Length Work Session - The WG had reached consensus in the last virtual meeting that the current requirement text does not really capture the necessary intent It limits the length of the intermediate segment to 15 NM, when in fact what is desired is that operation on the intermediate should remain within 15 NM of the altimetry source to avoid temperature driven altimeter errors that might come too close to the 500' ROC that is applied in the intermediate. The group all agreed that limiting the length of the segment would accomplish this for segments aligning with the final, however in many applications the intermediate needs to be much longer to avoid terrain or traffic, but it is all still close to the airport. The group drafted a recommendation during the meeting, which Mike will formalize and prepare for SG review.

6. New Business - There were two items brought to the meeting for discussion.

a. Gary McMullin (SWA) briefed the group on inconsistency issues between MVAs and procedure altitudes driven by obstacles and/or precipitous terrain. Gary Petty (AFS) was going to investigate further before the group takes any action.

b. Andrew Riedel briefed the group on the Jeppesen / Garmin partnership which has allowed Garmin to deliver navigation databases that are built to high enough integrity that the operators who use them do not have to do the RNP AR Appendix 3 process each cycle. Andrew recommended that operators approach GE and Honeywell to urge them to pursue a relationship and proper qualification of their tools to allow their customers to also not need to do the Appendix 3 checks every cycle.

TACTICAL ACTION NOTIFICATION RESPONSE (TANR): Shannon Jenkins (ZME) is the Article 114 Representative for Tactical Action Notification Response (TANR). Her report to the membership is below.

The Tactical Action Notification Response procedures are used to bridge the coordination gaps between air traffic facilities and North American Aerospace Defense Command (NORAD) during interceptor aircraft operations in the event of a national security response involving an active air defense mission, as well as during evaluations and exercise scrambles.

Feb 13-15 TDY to Eastern Air Defense Sector to participate in live fly exercise that involved TANR. Exercise went very well and it was great to see TANR in use for the first time, as I am relatively new to this position.

Participated in weekly telcons to prepare for Feb 13-15 TDY as well as upcoming TDYs. Telcons consist of planning exercises and briefings at different facilities in order to assist in successfully implementing LOAs that will allow the use of TANR.

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 LOST LINK WORKGROUP

The NATCA/FAA Lost Link Workgroup will be meeting again the week of February 26th. This joint workgroup is developing recommendations for standardized UAS lost link procedures in terminal, enroute and oceanic phases of flight. Currently, Lost Link procedures for most flights are specified in individual Certificates of Authorization (COA). In the event of a lost link, the controller has to look through the COA applicable to that flight to determine the UA's lost link procedure. Standardizing lost link procedures will be a large step toward full UAS integration into the NAS.

Mr. Richards and AJV-115 manager, Randy Willis are the co-leads of the workgroup. NATCA is also represented on the workgroup by five SME's from the field - two from terminal, two from enroute and one from oceanic. Those SME's are, Joe Klimes (TRI), Jamie Sanders (COS), Jeremy McGinty (ZAU), Danny Watson (ZAB), and Abigail Anderson (ZOA). Our thanks to each of them for their expertise and participation.

NO-CHASE COA SMS PANEL

Mr. Weidner recently participated in an SMS panel at NASA Armstrong on Edwards Air Force Base in California. The purpose of this panel was to identify hazards for a flight that the NASA Ikhana UAS aircraft (https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html) will be making next month. This flight will be conducted in California (JCF, ZLA and ZOA airspace), beyond visual line of sight, utilizing an on-board detect and avoid system that will allow the aircraft to "see and avoid" other aircraft.

All aircraft are required by FAR 91.113 to "see and avoid" other aircraft. On manned aircraft, this is accomplished by the pilot looking out the cockpit window. There isn't a pilot onboard an unmanned aircraft, so UAS operators are required to provide an alternate means of complying with FAR 91.113. This can be accomplished by using visual observers, chase planes, ground-based detect and avoid systems, or a combination of these alternatives. Each of these alternate means of compliance has complications and limitations.

Full UAS integration into the NAS will not be accomplished until on-board detect and avoid equipment has been perfected. NASA's testing of this equipment is an important step toward full integration. Mr. Weidner was assisted on this panel by NATCA SME's Jeff Plendl (ZLA), Don White (ZOA) and Jonathon Wigfall (JCF). Our thanks to each of these gentlemen for their expertise and participation.

LOW ALTITUDE AUTHORIZATION AND NOTIFICATION CAPABILITY (LAANC)

LAANC continues to take up the majority of time for Mr. Weidner and Mr. Richards. The agency is on a tight development and rollout schedule so engagement on the LAANC project occurs almost daily.

LAANC is expected to be deployed nationwide beginning in April and finishing up the rollout in August/September. As a reminder, the initial version of LAANC will simply replace the manual process in which authorizations are approved. The tool itself will be used solely by staff support/management during the initial phase and will automate the current UAS authorization process for Part 107 proponents.

The Agency is working with several industry partners who will provide this service to the various UAS proponents. The Agency will provide UAS facility map data to the industry partners. The partners will, in turn, develop tools that will provide authorization and notification services to the proponents, on a real-time basis, based on the UAS facility map data. The authorizations and notifications will be instantly transmitted back to the facility for which the authorization/notification was made.

Should you be asked for a list of the industry partners who are authorized UAS Service Suppliers for LAANC, refer those inquiries to:

https://www.faa.gov/uas/programs_partnerships/uas_data_exchange/

On that page, you will a section titled, Approved LAANC UAS Service Supplies. In that section there are hyperlinks to the approved UAS Service Suppliers. There are currently two approved suppliers, but more are expected to be added once they've completed the MOU process with the FAA and demonstrate that their system meets the LAANC requirements.

14 CFR 99.7 SPECIAL SECURITY INSTRUCTIONS

Using its existing authority under 14 CFR 99.7 - Special Security Instructions, the FAA has implemented airspace restrictions that apply specifically to UAS. The Agency continues published flight restrictions over several Department of Defense facilities, restricting UAS flights up to 400' AGL over these facilities. The restrictions apply to all types and purposes of UAS flight operations and remain in effect 24 hours a day, 7 days a week. These sites can be viewed on an interactive map by clicking here.

The agency has also used its 14 CFR 99.7 authority to create No Drone Operating Areas for seven Department of Energy (DOE) sites and ten Department of Interior (DOI) sites, including several large dams and iconic landmarks. The list of DOE sites can be found (https://www.faa.gov/news/updates/?newsId=89365). The list of DOI sites can be found here (https://www.faa.gov/news/updates/?newsId=88811).

FAA UAS SYMPOSIUM

The FAA will be hosting its third annual UAS Symposium March 6-8 in Baltimore. NATCA Executive Vice-President, Trish Gilbert, Mr. Weidner and Mr. Richards will be attending this event.

DRONE ADVISORY COMMITTEE (DAC)

The FAA's Drone Advisory Committee is a broad-based, long-term advisory committee that provides the FAA with advice on key UAS integration issues by helping to identify challenges and prioritize improvements. NATCA's Executive Vice-President, Trish Gilbert, is a member of the DAC. The full DAC will meet on Friday, March 9th at the MITRE Corporation.

NATCA is also represented on the DAC Sub-Committee by Mr. Richards, on Task Group 2, Access to Airspace by Mr. Richards, and on Task Group 3, UAS Funding by Mr. Weidner. NATCA's Deputy Director of Safety and Technology, Mark McKelligan, also assists with DAC work.

PRESIDENTIAL UAS INTEGRATION PILOT PROGRAM

Late last year the Trump administration announced a UAS Integration Pilot Program (https://www.faa.gov/uas/programs_partnerships/uas_integration_pilot_program/splash/).

From the program announcement, *"This program will seek partnerships between state, local, and tribal government entities and private industry to gather operational and other data from advanced operational concepts, such as flights over people and package delivery. It will also enable state, local, and tribal entities to determine what kind of pilot program activities, subject to FAA oversight, will occur in their respective jurisdictions."*

The DOT and FAA are expected to make their selections for this program in the next few weeks. The entities selected and the ideas proposed will dictate how these pilot programs may affect air traffic. Mr. Richards and Mr. Weidner will be working closely with the agency as these efforts progress.

UAS SAFETY TEAM (UAST)

NATCA is an active participant in the UAST. The UAST is modeled after the Commercial Aviation Safety Team (CAST) and the General Aviation Joint Steering Committee (GAJST). The UAST recently launched a website as a resource for UAS safety. The website can be found here (www.unmannedaircraftsafetyteam.org). Mr. Weidner represents NATCA on the UAST.

UAS QUESTIONS

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