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SAFETY AND TECHNOLOGY DEPARTMENT UPDATE

Week ending November 13, 2015

WEATHER: Matt Tucker (ZTL) is the Article 48 Representative for all things Weather. Mr. Tucker works with several lines of business at the FAA and he forwarded the information below for the past two weeks.

- **NEXTGEN Weather Processor (NWP)**
 - Had a number of long meetings going through the task analysis for human factors for the aviation weather display. The display will replace all WARP, ITWS and CIWS displays in the field and interface with CSS-WX to create a common situational awareness in the weather arena.
 - The meetings are in preparation for the full CHI team meetings that will happen early next year when Raytheon is ready to start providing demos and support rapid prototyping.
- **Weather and Radar Processor**
 - Attended multiple meetings with the program office and Harris Corp to discuss plans to finish testing and start deployment of the ECP-1 upgrade which will provide a high resolution and high update rate NEXRAD mosaic on the ERAM display.
 - Most of the outstanding issues have to deal with failover testing and having all cables run prior to deployment. The schedule now starts deployment with ZTL in June as the key site.
 - Weather maybe an issue during deployment due to WARP being turned off as the upgrade is installed. The program and Harris are aware of possible delays during weather events that extend into the early morning hours.
- **NEXTGEN Surveillance Weather Radar Capability**
 - The NSWRC program is on track to go before the JRC for a December IARD (Investment Analysis Readiness Decision). This is a very large program and the cost will be multi billions of dollars as it will replace all ASR 8,9, and 11 radars and the TWDR's that are in service.
 - The program is looking at a number of solutions ranging from the current spinner type RADARs to MPAR (multi phased array RADAR). The deployment schedule is IOC in the 2025-26 timeframe.

UNMANNED AIRCRAFT SYSTEMS (UAS): Steve Weidner (ZMP) is the UAS Article 48 Representative for NATCA. Mr. Weidner is being assisted by Jeff Richards (ZAU) on this project due to the huge workload. Below is the report for UAS activities for the week.

- Participated in two panels at the AAAE UAS conference this week in Las Vegas.
 - The first panel was entitled, "*Education and Workforce Development for the UAS Industry*". Mr. Weidner was joined on that panel by Dr. Tiffany Morse, Director, Career Education for the Ventura County Office of Education and Dr. John

Bridewell, Professor of Aviation at the University of North Dakota and the moderator was Todd McNamee, Director of Airports for the Ventura County Department of Airports.

- The second panel was entitled, “*Managing the Challenges of UAS Integration, Part I: From the Eyes of the Pilot, Controller, Airport Operator and States*”. Mr. Weidner was joined on that panel by Mark Kimberling, National Association of State Aviation Officials, Captain Steve Jangelis, ALPA, Mike Cirillo, A4A, Adam Williams, AOPA, Roy Fuhrmann, Metropolitan Airports Commission (Minneapolis/St. Paul), and the panel moderator was Mike Hainsey, Executive Director, Golden Triangle Regional Airport.
- Participated in a meeting with the FAA regarding the UAS Scoping Document
- Met with Earl Lawrence (Director of the FAA UAS Integration Office). This was Mr. Weidner’s initial meeting with Mr. Lawrence.
- Researched information for the VA Unmanned Systems Commission
- Met with Randy Willis (FAA AJV115 Manager) for their weekly meeting
- Met with Jim Ullmann (NATCA Deputy Director of Safety and Technology) to discuss several aspects of UAS integration

TERMINAL FLIGHT DATA MANAGER (TFDM): Matt Baugh (IAH) is the Article 48 for TFDM. His report for this week is below:

- Monday - Worked in facility for currency, called into Early Implementation AEFS brief and weekly ops meeting.
 - Still on schedule to have AEFS in 4 additional towers in 2016; SFO, EWR, LAS, and CLT
 - Mr. Baugh and the EWR AEFS team will be at the Tech Center later this month to demo the EWR adaptations.
 - ATC baseline training will begin in early 2016 at SFO, while AJI has certified the training for Tech Ops.
 - With the troubles in regression testing in CLE, the 5.3.0.2 build is back at the tech center for additional testing. The build will be retested in early December with the fixes.
 - 2 additional IP addresses have been approved for N90 SVT use. The filtering capabilities are to begin testing at SCT and SDF 11/16.
- Tuesday - Called into the TFDM tactical, AEFS status, and N90/DSP meetings.
 - The arrival strip posting issue with EWR is still being worked, but they are close to finding a viable solution.
 - The agency will be ordering the EFSTS replacement keypads for the towers this week or early next week. The team is still on schedule to have them in PHL and BNA before April.
- Wednesday - Worked in facility for currency, no other meetings due to Veteran's Day.
- Thursday - Participated in the TFDM VisSpec, Program Schedule Review, RIO Board, and weekly ops meetings.
 - Additional work was done on the TFDM GUI to make it more accessible to the user. The group also discussed additional display options for delays, runways, ARR/DEPT, Dest., etc.

- Everything is still on schedule for an April contract award for TFD, however, if the programs budget is reduced much further, it could delay IOC to all facilities.
- Friday - Worked on the AEFS DR list, no other meetings.

TERMINAL AUTOMATION MODERNIZATION REPLACEMENT (TAMR): Mitch Herrick (MIA) is the NATCA Article 48 Representative on the TAMR program. Below are updates from Mr. Herrick and other TAMR Team Leads.

- **Mitch Herrick, TAMR Article 48 Representative and Section 804 Lead:**
 - Last week was shortened by the Veteran's day holiday so not much activity coming out of DC in the two days leading up to and following the Federal Holiday.
 - Mr. Herrick traveled to Corpus Christi, TX to meet with local FacRep Evan White and the Navy to examine a potential automation fix that would allow the FAA and Navy facilities there to talk with one another. They have identified a very real safety concern because of the lack of automation between the two facilities and the enormous amount of coordination that is required between them. Mr. Herrick is working with multiple parties within the Agency in an attempt to configure the two STARS systems as one. Thereby making the Navy system a subsystem of the FAA's and allowing them to share data and improve the operations. The Navy folks as well as FAA management are all in agreement that this initiative should move forward. Mr. Herrick must now get all parties on the same page and get the Agency to work the problem from an engineering and requirements perspective.
- **STARS/TAMR Phase 1 update submitted by Jimmie White-PHL**
 - Monday 11/9: TAMR Staff Meeting. No report from NATCA Phase 1.
 - Tuesday 11/20: NATCA meeting with auxiliary SMEs for Phase 1. The objective for this meeting was to introduce additional SMEs to the TAMR program, specifically to help the NATCA Phase 1 rep and program as a whole, to maintain 100% presence at every facility meeting during tech refresh. The program has reached what we call the "Shark Fin" (spike in closely spaced tech refreshes) and as a result, extra SMEs are needed to maintain consistency with NATCA presence in all matters of a facility upgrade. These duties include, but are not limited to, Initial Site Surveys (ISS), Joint Site Surveys (JSS), Site Implementation Reviews (SIR), Contract Acceptance Inspection (CAI), Equipment Delivery (ED), Initial Operating Capacity (IOC) and Commissioning (end of tech refresh). NATCA's presence at these meetings is essential to team TAMR success. The program office has come to realize, without NATCA, their efforts will fail. Our relationship across the NAS is unparalleled and has proved to be a key winning recipe. With so many upgrades in close proximity, a lot of meetings stated earlier will overlap. Extra NATCA help is needed to sustain our level of involvement.
 - The Phase 1 team members are Jill Carr (TPA), Teah Lord (F11), Aaron Mackesey (S46) and Chris Hilbert (PHL). Each of these members are very knowledgeable about STARS and have participated in tests in Atlantic City, as well as helping out as a Floor Walker (STARS SME) for Arts IIE sites upgrading

- to a STARS platform. These women and men have proved themselves within the TAMR program, and will be a valuable addition to Team TAMR.
- The meeting also included training material for when they will have to give briefings to the sites they are selected for. In addition, they will help facilitate each sites transition from the Sony 2K monitor to the current MDM. Being that this is new technology to the NAS, each site will need to be prepped and briefed on the changes necessary to take advantage of what the new technology brings to the NAS. FSL to EFSL training along with MDM upgrades are the meat of change during a tech refresh to Air Traffic. Each site is different and requires a relationship that must be forged to lessen confusion and exclusion.
 - Wednesday 11/21: National TAMR Telcon
 - Friday 11/23: RDO. Tag Up with NATCA TAMR Reps and Program Office Leads. It was learned, NATCAs POC in F11 (Teah Lord) was told by local management to stand down with regard to ANY decisions made throughout the F11 tech refresh. This is a first under Phase 1. Fortunately the Program office has been groomed over the past few years with including NATCA at every turn and know better than to proceed without having a NATCA presence in the locker room. This matter has been elevated to the regional level for resolution.
 - **STARS/TAMR Phase 3 Segment 1 update submitted by Doug Peterson-D10**
 - No change in status of the program. Only four sites left in Segment 1, St Louis, Potomac, Chicago and New York. Next week: Chicago Lessons Learned, PTR Prioritization, and R3aD3 software testing.
 - **STARS/TAMR Phase 3 Segment 2 update submitted by Scott Robillard-K90**
 - The TAMR3SEG2 team is comprised of the Scott Robillard (K90) Lead, Bill Spence (BTV) Training Lead, Jim VanZee (GRR), Richard Thomas (GEG), Tim Poer (ABI), Kyle Ness (M98), Ross Costa (RSW) and Chris Falcone (MDT) from Air Traffic and Engineers Joe Yannone, Dan Stefko, Colin Ngai and Frank Stahler from Region X.
 - The TAMR3SEG2 NATCA team works with the agency to deploy STARS G4 ELITE systems to replace all ARTS IIE systems, certain STARS G1/2 Legacy systems via tech refresh and Common Terminal Digitizer (CTD) development and deployment. Highlights of weekly activity are:
 - A follow-up telcon with CMI occurred to finalize training location and radar selection;
 - The Phase I and SEG2 portions of the TAMR Program Office conducted a telcon on the K90 S804 realignment to A90 to set an initial plan for air traffic training;
 - GRB conducted the Site Implementation Review (SIR);
 - ROA conducted a STAMP review;
 - GSO continues IOC transition planning telcons (IOC scheduled for December 10th);
 - EUG conducted their adaptation kickoff meeting;
 - TYS continues IOC transition planning telcons;
 - TAMR PO conducted an Internal RIO Risk Board;
 - CAE conducted a STAMP review;
 - K90 Joint Site Survey Kick Off telcon occurred.

TEMPORARY OPERATIONAL CONTINGENCY OFFICE (TOCO): Tammy Norman (ZTL) is the TOCO Article 48 Representative. This is a one year detail at the Eastern Service Center to work on this project. Ms. Norman's report for this week is below.

- **One-Year Anniversary of the ATO's Report on 30-Day Assessment of Operational Contingency Plans:** On November 17, 2015, the TOCO will report to Deputy COO, Randy Parks, the accomplished tasks and ongoing activities to meet the requirements of the Administrator:
- **TOCO Risks & Issues:**
 - 1900.47E publication was not in advance of September 2015: 9/1/2015 - The National SRM panel was completed in early August; comments on the draft document were due 9/3/2015. The SRM Document was then routed for signature; all signatures will be at headquarters level. Separately, AJI will issue a policy statement regarding a SRM requirement-if any- at the facility level. 11/12/2015: SRMD document signed by AJT as last safety hurdle before being processes for final review and signature. Risk probability is being mitigated down to medium and schedule is being adjusted to reflect new deliverable date of Jan 15, 2016.
 - The inability to utilize and trust the Air Traffic Contingency (ACT)-2 database for the development of new facility OCPs. Triggers: Tasks/activities on the critical path. Strategy/Contingency: Develop requirement to retain paper. Discuss with sponsors relocating tool to IT organization capable of maintaining and managing contract.
- **Discussion:**
 - **Outcome of Tech Center Meetings:** Enroute Divestment Agreements Completed – CONUS ARTCCs and ZSU.
 - **Unique 4 Activity (non-CONUS):** Guam (ZUA), Hawaii (ZHN), Anchorage (ZAN) and San Juan CERAP (ZSU)
 - **1900.47E**
 - **Technical Requirements Status**
 - **DOT OIG Audit**
- **Technical Requirements Spreadsheet:** Each facility's tech ops had a deadline to complete the spreadsheet weeks ago. The TOCO's Tech Ops Specialist, Jimmy Black, and Asst. Program Manager, Deb Brady continue to press for the completion of this information in order to create a requirements package for the TOCO manager to deliver to Randy Parks on the 17th. Even with direction from Jeff McCoy, DVP of Tech Ops, facility tech ops have been less than compliant.
- **AUS ATC Zero Event:** On October 30, 2015, flooding damaged the Austin radar room, and tech ops reports they will have to rebuild everything. The projected completion date is 11/20/15. The tower cab was operational, and initially, ZHU acquired the airspace. The airspace was transitioned to San Antonio approach control. Margaret Sanchez, Tactical Operations, ATO CSA Service Center
 - Operations Support, monitored the transition of airspace and tech ops work and evaluation. She shared this information with the TOCO, but a formal report will follow.

SURVEILLANCE and BROADCAST SERVICES (SBS) OFFICE: Eric Labardini (ZHU) is the Article 48 Representative to the SBS Office. Below are reports from Mr. Labardini and other members of the SBS Article 48 Team.

- **Eric Labardini (ZHU), National SBS Article 48 Rep**
 - Shortened holiday week. Happy Veteran's Day to all who serve or have served!
 - Participated in multiple telcons this week.
 - SBS Implementation telcon: Multiple Elite sites are progressing towards their ADS-B IOC and Fusion start dates. An additional ADS-B Radio Station in Bishop, CA has finally received funding to move forward with construction. SBS is raising the concern over the ADS-B equipage trend; current projections show that many seem to be procrastinating and the number of certified installers may not meet the demand if all wait close to 2020.
 - SBS Weekly: Current equipage levels have reached 17,207 with ADS-B Out. This breaks down to 12,329 with 1090ES avionics, 4,319 with UAT avionics, and a few hundred with both. UAT is only allowed per FAR to be used below Class A airspace, and 1090ES can be used in all airspace.
 - SBS RIO Board: Reviewed multiple risks being tracked by SBS on a variety of programs. NATCA offered input on the risks surrounding the lack of consistent filing of ADS-B information via the ICAO flight plan and the associated risk due to a lack of adequate display of the info to the controller. ADS-B information display on flight progress strips is needed for multiple facilities.
 - CLT WAM Engineering telcon: Feeds from the CLT ASR, ARSR, and WAM are now available at the Tech Center for evaluation. Configuration of the two Virtual Radars is operating as desired. ISAT (Initial Site Acceptance Testing) flight tests are planned for next week but contingent upon the ability to record data at the Tech Center. Despite technical successes, schedule risks for the SRMD and associated Order remain high.
 - CLT WAM SRMP: This second meeting of the panel was to discuss the likelihood of already identified risks. The Panel's previous meeting identified the potential severity. SBS believes that SMS 4.0 calls for analytical data to determine likelihood, not necessarily the Panel. NATCA objected to this approach and further discussion during the meeting resulted in clear cases where the likelihood ranked by the analysts was much too optimistic. In addition, the Panel identified a need for further discussion on monitoring of the WAM service at CLT.
 - ROS ConOps telcon: Discussed minutes from last week's Space Based ADS-B (SBA) SRMP. AJV-8 representative expressed the position that controllers will be expected to use SBA for conformance monitoring. NATCA believes that system modification is needed or the high update interval will only cause the ATOP controller to disable the optional SBA feeds during close to minimum separation operations. Discussed the potential hazard of overloading sector que messages. Discussed ADS-B intent data available but not required in the US. This includes: autopilot selected altitude, autopilot selected heading, and altimeter pressure setting.
 - SBS Article 48 Work Group meeting: This month's dial in meeting touched on a number of topics:

- Space Based ADS-B: Discussed the already mentioned challenges identified in last week's SRMP.
- In Trail Procedures: SBS would like to conduct another survey of ZOA controllers prior to ATOP automation changes. The intent is to characterize the application before and after the change. A formal request is being generated.
- CLT WAM: A regular topic for the SBS Article 48. Discussion centered on the risks in the schedule. All are working diligently to reach an IOC by the end of March 2016.
- ASSC: As mentioned in Dan Hamilton's update, the Agency has finally given direction to include the Surface Movement Radar (SMR) in ASSC. The Agency hopes to remain close to their spending baseline by reducing the number of MLAT Radios and/or identifying a lower cost ground surveillance system. Regardless, the Agency does seem to realize they have to do something about SMRs which have exceeded their lifespan.
- ADS-B Intent Data: A potential capability for the future. Current ADS-B 1090ES avionics meet an international standard, and in Europe this means that intent data (autopilot selected altitude, autopilot selected heading, TCAS message, and altimeter pressure setting) are required broadcast elements. In the US they are not required to be broadcast, but may be anyway as part of the international spec. SBS needs to scope the issue to see how many US users are indeed broadcasting this information, and with automation changes it could lead to a future capability to alert a controller when there is a mismatch in controller assigned versus pilot entered information.
- ZNY Offshore ADS-B Operations: Discussed challenges to continued use of offshore routes at ZNY during radar outages. The facility has experienced a number of problems with these tests due to controller and pilot lack of familiarity with ADS-B, a lack of consistent filing of ADS-B information via the ICAO format, and a lack of indicators on flight progress strips.
- **Craig Bielek (A90)**
 - Monday participated in the weekly Implementation Team telcon, weekly SBS telcon, and TSLE workgroup telcon.
 - Tuesday participated in the Fusion Pre-Op telcon and the SCT TAMR Post Con-Ops telcon.
 - Thursday participated in the weekly NATCA SBS Telcon and the monthly SBS Article 48 Workgroup telcon.
 - Friday participated in the Charlotte WAM SRMP telcon.
- **Dan Hamilton (SFO), National Airport Surface Surveillance Capability (ASSC) Rep**
 - **ASSC:** Now that the team has received official direction to integrate ASDE3 into the system, the team is revising the schedule for SFO which is the key site. Once this timeline firms up, the waterfall can be reworked for all subsequent sites. Initial integration work continues at SFO in addition to installation of ASSC in the new tower. The SRMP is scheduled to reconvene on December 7th to address the high risk that was decided one year ago. In the next couple weeks, Dan Hamilton will start reaching out to all facilities on the waterfall in efforts to start communication and address any concerns that facilities have.
 - **Vehicle ADS-B:** 652 vehicles equipped at 12 Airports. In mid-December, the team will visit FLL to conduct an outreach briefing.

- **ASDE-X refresh:** Continues forward with no issues.
- **Andrew Stachowiak (I90)**
 - This week worked for currency at I90. Captured ZP's for false target anomalies while we were landing all 3 runways. I90 is still in key site for R27D8.
 - Participated in our monthly SBS Article 48 Workgroup teleconference.
- **Tom Zarick (ZDV), National Interval Management Rep**
 - Telcon was held this week with American Airlines, ZBW, and ZNY in an effort to restart Merging and Spacing activities while at the same time shifting some of the responsibilities from American Airlines Operations Center to ZBW TMU. Restart date now tentatively scheduled for the week of Dec 6th.
 - GIM-S activity included a follow up telcon with ZDV to discuss last week's Tech Center visit and next steps to move forward. Also had several discussions regarding the prioritization of several GIM-S enhancement requests.

RNAV and PERFORMANCE BASED NAVIGATION (PBN): Dennis Kelly (PHL) leads NATCA's efforts with the criteria work on RNAV and PBN as the Article 48 Representative for this. Below is Mr. Kelly's report for this week.

- **Data Comm** – The below 10 min video link provides an understanding of how controllers and pilots use DataCom to communicate without radio.
 - <https://www.youtube.com/watch?v=xUSFgkEyVAU>
- **NPA** – The precursor to this groups effort is the removal of conventional procedures as noted below. The FAA is issuing a final rule that removes certain redundant or underutilized ground-based nondirectional radio beacon (NDB) and VHF omnidirectional range (VOR) Standard Instrument Approach Procedures (SIAPs). On April 13, 2015, the FAA published a notice of proposed rulemaking to remove 736 procedures. After consideration of public comments and conducting an internal review, the FAA has decided to move forward with removing 334 procedures that did not receive public comment. The 198 procedures for which comments were received will be addressed in the future. The FAA also identified 191 procedures that were proposed for removal but that do not meet the criteria at this time. Those 191 procedures may be reevaluated at a later date; however, their removal is withdrawn from consideration in this rule. There are 13 procedures erroneously identified in the NPRM that were already in the process for removal and should not have been included in this proceeding. The FAA concluded that these procedures should continue in the separate proceeding and are not addressed in this final rule. Mr. Kelly has a copy of the list of procedures if anyone wants a copy.
- **NSPP** - Metroplex Procedures: CLE/DET project adds for 4/27/2017 publication cycle DTW 11 RNAV SIDs, 20 RNAV STARs, 1 Conv STAR and 1 T-route. CAK 2 RNAV STARs. BKL 1 RNAV SID. CLE 6 RNAV SIDs and 4 RNAV STARs.
 - SIDs/STARs/RNP: Changes for 11/10/2016 publication cycle LAS 3 RNAV STARs and 10 RNAV SIDs. 12/8/2016 MIA 3 RNAV SIDs, BDL 1 RNAV STAR, PWM 4 RNP. 1/5/2017 MHT 2 RNP, EWR 1 RNAV SID, ISP 1 RNAV SID, PIT 4 RNAV SIDs, MSP 4 RNP and 6 RNAV STARs. OKC 1 RNAV STAR.
 - RNAV production Figures – 2016
 - LP/LPV – 222 Scheduled, 96 in FPT, 38 in DEV/QC, 9 in FC not scheduled, 12 in FC scheduled, 0 in AFS, 13 in TS, 52 in charting, 29 published.
 - SIDs/STARs – 107 Scheduled, 8 published, 99 remaining.

- RNP's – 8 scheduled, 2 published, 6 remaining.
- Cancelled procedures 2016 – 11 SID/STARs, 5 RNAV (GPS).
- **PARC GBAS** - Wake mitigation benefit – Volpe analysis
 - WTMA-P uses three factors, time for wake to decay (in trail distance), lateral offset from path of leading aircraft and vertical offset from path of leading aircraft to accommodate this but with staggered runways. This GBAS approach uses this concept on a single runway and removes the lateral component but uses a displaced threshold. It does need a crosswind component. Pilots in a German experiment rejected this concept on parallel operations when being the trailing aircraft on a parallel runway because the threshold was displaced to stay above the wake turbulence and they didn't like the shortened runway. Analysis was performed for displaced thresholds of 3500, 4500 and 5500 ft. Analysis uses current implemented GBAS performance (mimicking ILS CAT I)
 - For the 5500 ft displaced threshold scenario (most significant wake mitigation but sacrifices > 1/2 of runway length)
 - H-H separation could be reduced from 4NM to 3.5 NM
 - H-L separation could be reduced from 5 to 4 NM
 - Only 3300 ft of landing runway would remain for the aircraft landing the displaced threshold (1200 ft displaced ILS)
 - The final separation reduction may be less depending on NGE analysis results
 - ANG may have sufficient data to proceed based on the OGE analysis results alone
- Comments (combination of FAA and Volpe input)
 - As the Threshold Stagger increases the likelihoods decrease
 - However, the decrease is not enough to compensate the severity to consider it no worse than today
 - If 3 NM type of separation is desired for L behind H, then the analysis does not support that amount of reduction.
 - L behind L shows possible reduction to 1.5NM (same as 7110.308)
 - If half runway can be "given up", would it be advantageous to incorporate that into WTMA-P/.308 (i.e., essentially HALS/DTOP)
- Boeing/Honeywell assumed separation reductions are far greater than wake encounter risk analysis shows
- PARC Report
 - Assumptions on fleet mix equipage assume most optimistic scenario, and projections have gone down since that report
 - Airport equipage is also an issue (i.e., beyond EWR)
 - Assumptions on separation reduction are not known by the Wake Office
- Existing operational risks are still open – no documentation received by FAA to date
 - Pilot acceptance of displaced threshold approaches
 - Can lead aircraft safely and repeatedly turn off the runway prior to the trailing aircraft touching down on the same runway
- **PBN STATs** - Since 2009, an additional 208 RNAV Standard Terminal Arrival (STAR) procedures were implemented, resulting in a total of 308 RNAV STARs throughout the NAS. Also since 2009, 240 RNAV Standard Instrument Departure (SID) procedures were implemented, bringing the total in the NAS to 415. For the 77 Aviation System Performance Metrics (ASPM77) airports, 80% now have RNAV SIDs or STARs. Recent

procedure implementations for large airport Metroplexes (e.g., Houston, North Texas, Washington DC, and Northern California) benefitted from using the collaborative Metroplex process, working across stakeholders to ensure that effective and efficient procedures are developed on an expedited timeline. The conventional Jet route and Victor airway structure has been augmented with their PBN equivalents, Q-routes and T-routes, respectively. As of January 2015, there are a total of 122 Q-routes and 61 T-routes in the NAS. These routes, when combined with other existing RNAV SIDs, STARs, and PBN approaches, give properly equipped aircraft the ability to fly a PBN-based route end-to-end between many airports.

- **TARGETS** – From the PBN office:
 - PBN Project Planning Team, AJV-144
 - The Terminal Area Route Generation and Traffic Simulation (TARGETS) software version 5.0.5 was released on November 2, 2015 to all users. Highlights of the new capabilities and improvements include:
 - User Defined Airports and Runways - Allows for changes in airport locations and runway lengths, or new runways that are not in the FAA database yet;
- New Area Navigation (RNAV) Departure Reference Software:
 - Aligned with FAA Orders 8260.58 and 8260.53;
 - Able to handle airports with no runway transitions on vectors to RNAV Standard Instrument Departure (SID);
- Includes criteria clarification for:
 - Minimum airspeed limit at/above 10,000 ft. (i.e. 250 Knots Indicated Airspeed (KIAS) limit);
 - Turn angle at/above Flight Level (FL) 195 (i.e. 70 degree limit);
 - Heading to Intercept (VI) length check (minimum type) is the greater of 1 Nautical Mile (NM) or distance to achieve 500 ft. above the airport;
 - VI to Course to Fix (CF) Leg course change; failure occurs for turns less than 10 degrees;
 - Initial Departure Fix (IDF) logic updated to ensure IDF is on the SID common route.
 - Departure Route Dialog Enhancements:
 - New climb gradient fields in Runway Transition dialog;
 - New VI leg type (minimum or standard) field;
 - New Bank Angle Exception field;
 - New airway point field.
 - Resolution of over 200 problem reports.
- **VORs approved for discontinuance**
 - Alabama- TDG, TGE, DCU and EUF.
 - California – ECA.
 - Connecticut – ORW.
 - Florida – GNV, TAY.
 - Georgia – HRS.
 - Indiana – ABB.
 - Kentucky – ECB, BWG and EYS.
 - Maryland – GRV, PXT and OTT.
 - Maine – PNN.
 - Missouri – RIS.

- Mississippi – GCV.
- New York – DKK, ELZ and PLB.
- Ohio – OAH.
- Pennsylvania – HZL and IHD.
- Tennessee – JKS and DYR.
- Virginia – FKN, LVL and ROA.
- West Virginia – CKB and HNN
- Attended meetings/telcons for PARC GBAS, PHL/AAL PBN, PBN on ATIS, PBN Strategy, 1 day LSC, 2 days floor.
- Provided presentations on GBAS Single Runway Displaced Threshold separation, Removal of SIAPs, VOR discontinuance VORs removal list, DataComm user guide.

PROJECT MANAGEMENT OFFICE (PMO): Jeff Woods (I90) is the PMO Article 48 Representative for NATCA. His list of activities for the week is below.

- Attended weekly meeting with Jim Ullmann, James Keith, Andy Marosvari, Jim Davis, Julio Henriques, and Mel Davis
- Attended a meeting with Lisa Bercher (AJM) about NAS CPI
- Attended an introduction meeting with Jim Ullmann and Trish Gilbert at RTCA
- Attended a bi-weekly meeting with Kris Burnham (AJM)
 - Funding for D10 voice switch
 - NAS Capital Integration Plan
 - ATSAP
 - DataComm
- Attended a meeting about Off Shore Automation
 - Next site visit (Hawaii)
 - Structure of the site visit notes
 - Structure of the final report
- Attended a meeting with Vaughn Yates (ANG)
 - Path stretch
 - TBFM Work Package 3 & 4
 - Terminal Sequencing and Spacing (TSAS)
- Attended a meeting with Mark McKelligan, Steve Hansen and Bruce DeCleene (AFS)
 - 7100.43 re-write
 - 7100.41
 - Speeds on STARS
- Attended a meeting with the PMO about Interval Management (IM)
 - Status check
 - Future meetings
- Attended a meeting with Chris Baur (Hughes Aerospace) and Mark McKelligan about third party PBN development
- Participated on a telcon about the NAS NAV Strategy
- Attended a meeting about SWIM Visualization Tool (SVT)
 - Filtering capabilities
 - Deploy initially to two of the eleven sites for trial
 - Chose one wake recat facility and one that does not have wake recat
 - Additional IP addresses for ZNY to add two positions

- Site visit to N90 to better understand utilization for that area

NAS VOICE SYSTEM (NVS): Jon Shedden (ZFW) is the Article 48 Representative for the NVS. Mr. Shedden forwarded the information below on his activities for the last week.

- **Meetings this week:**
 - Review of Air Traffic Early User Involvement Event observations
 - NVS Quarterly Program Management Review (PMR)
 - Potomac TRACON tunable radios work group
 - NVS Human Factors Working Group
 - NVS Local and Remote OVR Tone control
 - Radio Media Gateway (RMG) fail-over requirements
- **Other issues worked:**
 - NVS dual touch screen call queue functionality
 - NVS physical sidetone controls
 - NVS Call Transfer
 - NVS Dual-jack modules drawings

INTEGRATED DISPLAY SYSTEM REPLACEMENT (IDS-R): Richie Smith (N90) is the Article 48 Representative for IDS-R. Mr. Smith's report for this week is below.

- While the IDSR program office is still working with an unknown FY16 budget and has a frozen waterfall plans are being made to visit facilities throughout the NAS that have had NIDS work suspended. These facilities range from IOC to "installation in progress" to "waiting to complete the local database". Five facilities are projected to be visited through the end of January: CID, MKE, MIA, SGF and P80/PDX. Article 48 lead Richie Smith will be attending most of the facility meetings but the program office needed to prioritize two trips during the same week in December, to CID and MKE. A member of the national IDSR SME team will be attending each of these visits to talk with local representation and make sure that their voices are heard.
- During the first week in December meetings will take place at the Technical Center in Atlantic City to discuss the next maintenance build for NIDS and the next operating system. It has been too many months since these meetings were held and the present task is daunting. There are approximately 200 "fixes" that need to be addressed. Major fixes have been addressed in the Emergency Releases but the rest of these need to be bundled into a priority order, with the FAA looking at the cost.
- Some facilities have been or will be contacted about continuing their database compiling. This will be done by both the Program Office and NATCA. A few months ago the PO sent out an email stating that the waterfall was frozen pending future financial decisions. What they didn't say in that email was that database development was not frozen. So now they, of course, are behind in data collection and are pointing fingers at the sites, blaming them for not sending information.

DATAComm: Chad Geyer (ZLA) leads NATCA's efforts on DataComm as the Article 48 Representative. Mr. Geyer's report for this week is below.

- This week the SME's were at the Tech Center to test the UBER CHI build that will be going to the Key Sites on December 7th. This is the same build that will be used at the beginning of the waterfall. As with any new system, there will be Problem Trouble Reports (PTR's).
 - The question the team must decide is if there are acceptable mitigations and how often to the problems occur. The system does have PTR's, but the frequency and seriousness of the issues relatively low.
 - The current system the key sites are using is performing well for PDC and CPDLC. Most of PTR's are associated with CPDLC and since the initial numbers are small considering how many aircraft will still receive PDC, the build is acceptable to field. Local 48 teams will be briefed on the PTR's and Mitigations and also made aware of when fixes and enhancements will be deployed.
 - The operators have also asked for a few enhancements to the way the system works and those enhancements will be included in the next build.
- The SME's also helped build a delta briefing for the Key Sites and will be training them over the next couple of weeks. The training helps explain the enhancements that are coming in the next build and also explains the major mitigations and PTR's.
- The SME's have also developed a "Cheat Sheet" that will be at the TDLS system for users to refer to when seeing certain indicators. This "Cheat Sheet" will be used at all of the TDLS sites.

AIRSPACE: Jim Davis (PCT) is the NATCA National Airspace Lead. His duties included overseeing the various airspace projects and teams staffed by NATCA Representatives. Below are reports from Mr. Davis and various airspace team leads.

- **Phoenix OAPM Design and Implementation**
 - No Meetings
 - Telcon with Core Team to discuss goals and deliverables for coming weeks
 - Reviewed completed Executive Summary
 - Assisted Bill Holtzman, NATCA IFATCA Rep, with explanation on issues with current PBN design for Phoenix
 - Mark Ostronic Phoenix Metroplex NATCA D&I Lead
- **Atlanta Metroplex**
 - Updated Microsoft Project
 - Telcon with A80 regarding PLMMR SID
 - Reviewing PLMMR SID for possible A80 airspace issue
 - Telcon with BHM Specialist about 12/10 airspace
 - Discussion with ZTL about scheduling for Delta meeting (12/2)
 - Sat in with FL Metroplex Team during their briefing with ESC ADOs
 - **Milestone/Activity—Completions:**
 - 06252015 Implementation
 - 10152105 Implementation
 - ZTL began full time ATL metering August 2, 2015
 - **Projected Milestone/Activity Completions and Risks**
 - SIDs are scheduled for flight check between 11/16-20
 - Submitted by Joey Tinsley Atlanta Metroplex Co-Lead
- **CLE/DTW Metroplex**

- This was an administrative week for the core team due to the midweek holiday. Numerous telcons with our PBN POC's from the service center to discuss remaining fly-ability issues with the procedures.
- A detailed analysis of potential fly-ability issues with the RNP procedures identified by the SIM testing recently completed by AFS-460 was discussed with our CSA PBN POC via Webinar. Descent gradient issues were optimized to the extent that Class B airspace will allow.
- CSA POC's received the updated version of TARGETs and at our request, they analyzed the procedures that currently have been identified to have potential issues first and have provided the results to us.
- TARGETs file shared with Delta on for future sim testing
- Coordination with CSA on some additional simulations in OKC.
- SMS Completed on airspace and awaiting signatures from CSA. There is also a staff study being conducted on the airspace changes that will accompany the package.
- Week's ahead: 11/16-19 DTW air5 work, 11/30-12-3 Lessons learned / Planning, 12/8-10 Delta.
- Submitted by Don Ossinger Article 48 Rep, CLE/DTW Metroplex
- **DC Metroplex**
 - DC Metroplex reviewed the Industry routes prepared by DC Metroplex team members, which required some minor changes.
 - DC Metroplex Co-Leads provided information to the ESC FPT for a response to a noise complaint concerning the KBWI.
 - DC Metroplex reviewed the ZDC FAST automation work regarding the changes associated with the FAV for affecting three areas at PCT.
 - DC Metroplex reviewed the PCT SOP language regarding the new Holding Pattern Airspace at RAVNN for aircraft utilizing the RAVNN and RIPKN STARS.
 - DC Metroplex Co-Leads reviewed and provided information to MITRE regarding their request concerning issues and/or impacts during the implementation of the DC Metroplex procedures and airspace changes.
 - Participated on a teleconference call with Director of Airspace and PBN Office for the second MWAA Roundtable meeting for KDCA.
 - Coordinated with the PBN office regarding information for the PPT briefing regarding the MWAA Roundtable meeting for KDCA.
 - DC Metroplex coordinated with ESC FPT, AeroInfo, and Tetra Tech regarding the March 31st Post Implementation RNAV SIDS for KDCA, which required Tetra Tech to rerun the RNAV Pro to establish new MEAs as well as updating the documents to include the departure control frequencies.
 - DC Metroplex received a request to add language to the ZDC/PCT LOA, but it was determined to fall outside of the scope of Metroplex.
 - Replied to emails from Industry concerning a NOTAM on the DYAMD TWO RNAV STAR.
 - DC Metroplex reviewed and provided recommendation for changes concerning a briefing being prepared regarding RNAV SIDS.
 - Participated in the weekly NATCA Airspace teleconference.
 - Coordinated with FAA Focus concerning an Article regarding a resolution to an ATSAP issues several years ago.

- DC Metroplex coordinated with and provided amended routes to AWI Dispatchers for aircraft departing KDCA, in which they advised, have been updated.
- DC Metroplex requested with MITRE for information regarding closing out a Metroplex project.
- Participated in the weekly PCT 530 meeting concerning the upcoming STARS implementation.
- Participated in the MWA Roundtable meeting.
- DC Metroplex team members participated in an SRM concerning airspace changes impacted three areas within PCT.
- DC Metroplex began training for the December 10, 2015 procedural changes.
- DC Metroplex POC's sent AIMS trouble reports to PCT Automation Specialist for an adaptation that partially applied, but created an offending scratchpad that did not make sense.
- DC Metroplex responded to several emails from ZDC FAST concerning the December 10, 2015 adaptations.
- DC Metroplex reviewed the December 10, 2015 LOA changes between ZDC and PCT.
- DC Metroplex still waiting to receive final noise screening results from our ESC environmental specialist regarding procedural changes affecting KIAD.
- DC Metroplex coordinated with ESC FPT regarding setting up a meeting with the Maryland Airport Authority to brief them on upcoming procedural amendments.
- Submitted by Bennie Hutto Article 48 Rep, DC Metroplex
- **Las Vegas Metroplex Study Team (LASST)**
 - Met at Clark County Department of Aviation (CCDOA), Las Vegas, Nevada.
 - Worked on Final Report. Report will be approximately 100 pages when completed.
 - Team meeting at MITRE, McLean Va. next week for completion of documentation.
 - **Upcoming Activities**
 - Las Vegas Study Team Documentation Development – November 16-19, 2015
 - Las Vegas Study Team Report Due – November 20, 2015
 - Submitted by Las Vegas Metroplex Study Team Lead Art. 48 Ron Myers
- **Florida Metroplex**
 - Facilities did not meet as a complete team due to the holiday week. Some facilities met internally to finish up fix names.
 - Other actions:
 - Mr. Harris attended an IATA meeting in Miami
 - Telcon with SWA airlines representative
 - Telcon with ESA on TOC report
 - Attended Florida Leads meeting in Atlanta
 - Briefed Directors and ADO managers at ESA on Florida Metroplex in Atlanta
 - Met with Metroplex program Manager
 - Submitted by Greg Harris Article 48 Rep, Florida Metroplex
- **Charlotte Metroplex**

- Leads at Home facilities
- Prepared for re-design meetings
- Answered Implementation questions for ZDC
- Briefed CLT facility manager on project
- Worked with PSA on issue on the FILPZ STAR. Certain aircraft boxes are making a connection between the STAR and the ILS on a north operation and this causes possible altitude issue. PSA has sent a memo to the flight crews to solve the issue
- Contractors updated MS Project file
- TBFM batch has been installed and is stable. CLT is back to a 92 rate
- CLT, ZTL and ZID have worked to move certain flights originating from DTW and west to the FILPZ arrival. This creates a more favorable flow for the TRACON with minimal impact on track miles
- Participated in various telcons and completed requisite administrative activities
- Worked with CLT POCs on CLT specific issues
- Worked on proficiency and received required briefings
- **Issues:**
 - Another issue with the CHSLY was raised and we are looking at solutions. The PBN office is looking at this as well. This will not delay the May publication and implementation
 - SWA has raised concerns about the PARQR and FILPZ STARs. SWA will fly conventional procedures on 10/15/15
- **Upcoming:**
 - 11/16/15 – At ZTL and Esc for re-design and post implementation issues
 - 11/23/15 – At home facilities
- Submitted by Bob Szymkiewicz, Charlotte Metroplex Team Lead
- **SoCal Metroplex**
 - Rob Henry (FAA Co-Lead) and Mr. Gonzalez attended a meeting at the request of The National Parks to discuss their concerns with the EA Metroplex process, along with Ryan Weller, FAA Lead Environmentalist and Joseph Manalilli, FAA Counsel. They have 5 areas of concern over Joshua Tree National Park and Wilderness Area. They request further analysis be done beyond the D&L and they would like routes moved to follow major highways. The information and request will be sent to HQ.
 - 20:1 penetration issues affect night operations at SMO. Further review of procedure to mitigate issue will be addressed.
 - ZLA participated in a training meeting to establish a plan for the implementation phase.
 - ZLA along with SCT provided the Flight Procedures Team with fix names for the SMO RNAV APCH.
 - ZLA coordinated with the PHX ZAB POC to resolve an issue with similar sounding fix name that is being used on different notional STARs for each project. ZLA will disconnect the ZLA procedure from the ZAB procedure to ensure no issues arise.
 - ZLA updated the available fix name list for the teams.
 - SCT began building PowerPoints to be used for the training phase.

- SCT continued work on feedback on 7 procedures that have become a concern during the public comment period.
- SCT SMEs worked on their perspective video maps.
- The SMO CHANGE.ORG petition has 1,017 signatures
- The Culver City CHANGE.ORG petition has 1,691 signatures.
- The San Diego/Point Loma CHANGE.ORG has 3,699 signatures.
- The No Fly Rally CHANGE.ORG has 1,691 signatures.
- The Point Loma Facebook page has 1,112 members.
- Newport Beach CHANGE.ORG has 51 signatures
- Submitted by Jose Gonzalez Article 48 Rep, SoCal Metroplex
- **CSA PBN**
 - Coordination with Mark McKelligan, NATCA National D&I Lead and Ed Hulseley, NATCA National Study Team Lead
 - Weekly NATCA PBN Telcon
 - Weekly CSA .41 Team Meeting
 - Agenda development/Project review for next CSA .41 Team Meeting
 - Environmental reference documentation prep for NorTex March 2016 and May 2016 submissions
 - Discussions with John Belk and the AJV-14 Service Center Liaisons concerning Meeting Notes/Minutes formatting, content, and the TetraTech Task Order/Statement of Work.
 - TetraTech Task Order proposal developed and coordinated
 - KMSF Meeting Notes and Tracking Documents finalized for dissemination to KMSF PBN Work Group
 - Discussions with Chip Beall (Delta Airlines) concerning continuity of clearances from STAR to SIAP to Tower Operations and Controller use of “Expect” vs. Pilot preference for clarity
 - **Upcoming Activities:**
 - Meetings with TetraTech Lead, Jeff Richards---CSA, November 19th
 - 7100.43 Meetings---December 8-10 @ Central Service Area, TriStar Conference Room
 - Chart Date---December 10, 2015 Central facilities publishing include KSAT, KHOU, KIAH, ZHU, KABQ, ZAB, I90, ZFW
 - PBN Co-Lead Meetings---Washington DC, January 26-28, 2016
 - Submitted by CSA PBN NATCA Art. 48, Brent Luna
- **Metroplex Study Team**
 - Multiple telcons with NATCA airspace representatives to discuss issues concerning Metroplex community outreach efforts and other outstanding airspace issues
 - Met with the Las Vegas Metroplex Study Team at the McCarran Aviation building on November 9 - 12 in Las Vegas to begin the initial documentation work for the Las Vegas Study Team Final Report
 - Participated in meeting with VP FAA Mission Support (AJV-0), FAA Director of Airspace Services (AJV-1), and others reference NATCA participation and community outreach and the status of several Metroplex sites
 - Participated in the weekly Metroplex Staff telcon
 - Participated in the weekly NATCA OSG telcon

- **Upcoming Activities:**
 - Las Vegas Study Team Documentation Development – November 3-20, 2015
 - NATCA Art. 48 Tech Rep Meeting – New Orleans – November 17-19, 2015
 - Las Vegas Study Team Report Due – November 20, 2015
 - Metroplex Leads Meeting – San Diego - January 26-28, 2016
 - Metroplex Summit Meeting – March 1-3 2016
 - Metroplex Leads Meeting – Boston – May 17-19, 2016
- Submitted by Metroplex Study Team Art. 48 Ed Hulsey
- **National Design and Implementation Rep**
 - Participated on a post implementation environmental telcon with AGC, AJV14, and Metroplex program office.
 - Participated on several telcons with the National Airspace Rep and The National Study Team rep.
 - Met with the Manager of flight standards to discuss putting speeds on procedures above fl200 and what FSS recommendation would be. We also talked about the wrapt order meetings.
 - Met with Robert Novia (PBN Coordinator) to discuss several issues.
 - Attended a meeting with VP mission support, to discuss collaboration and process issues we having.
 - Participated on the Metroplex weekly staff telcon.
 - Participated on the weekly OSG telcon.
 - Submitted by Mark McKelligan (ZBW) National D&I Rep
- **NATCA National Airspace Rep**
 - Participated on the weekly Telcon with Frank Black, Deputy Director of Airspace Services
 - Participated on several Telcons with the NATCA National D&I rep and Study Team rep
 - Met with Elizabeth Ray, VP of Mission Support, and various others to begin discussions on community outreach
 - Worked on logistics for the upcoming Airspace and Procedures Committee meeting
 - Submitted by Jim Davis (PCT) NATCA National Airspace Rep



Dale Wright
Director, Safety and Technology