

NATCA Safety & technology Department Update

Week Ending May 27, 2016

AIRSPACE: Jim Davis (PCT) is the National Airspace Lead for NATCA. Below are reports from various Airspace Team Leads.

Charlotte Metroplex – May 2016

Ron Myers from ZDC became the Charlotte Metroplex Article 48. Former Lead Bob Szymkiewicz now in a staff position at the Eastern Service Center OSG in support of Metroplex projects.

An industry outreach was conducted with approximately 30 personnel in attendance. Main concern was the split implementation and it was decided that subsequent Clt Metroplex implementations will be on a single date. American airlines relayed additional personnel are required on chart date to ensure all flight plans are correct for new procedures. Split implementations require them to do this twice. All those who were in attendance agreed due to the implementation being imminent to continue with the split for May's. The northwest corner at CLT is an area that we continue to monitor. AAL tech pilot visited ZTL and during outreach relayed some of the resolutions that were discussed with the controllers. A very good discussion was also held with facilities and tech pilot after industry outreach. Decision by all involved in meeting, was to monitor and then evaluate if Julys changes to the Northwest procedures alleviate issue.

A fairly last minute decision at headquarters level requiring a public outreach be conducted prior to May implementation caused many hours of preparation. The team normally uses this timeframe for upcoming implementation preparation.

A Public Outreach was held May 19th at the Mecklenburg Police and Fire Academy to inform the public of the upcoming May procedures. Approximately 130 community members attended. A high level presentation was conducted by the Southern Regional Administrator after which the Charlotte Metroplex Leads and Bob answered specific questions on the procedures at graphic boards located around the auditorium. The majority of attendees were from Southwest Charlotte neighborhoods, these areas are being affected by the October 2015 implementation and most questions were about their noise concerns over their neighborhoods post implementation. The attendees from southeast neighborhoods that could be affected by upcoming procedures expressed concerns over the possibility of noise increase, however most expressed agreement that distributing the noise was a more equitable approach.

CLT Metroplex team continues to work post-implementation and a myriad of issues for the May and July 2016 implementations. The team worked at Atlanta Center (ZTL), Eastern Service Center (ESC), and Charlotte TRACON, the leads also traveled to Chicago for a Metroplex leads meeting.

Several ZTL Area One controllers expressed concerns that the sector 47 redesign a shelf of airspace which increases a portion of the sector to FL270 not receiving the proposed benefits. The original area subject matter experts anticipated reducing departure level offs, and expected

several adjoining low sectors to raise their altitudes to align. The other sectors did not raise their altitudes to align. The ZTL POC's decided to implement as designed and evaluate if the additional airspace will help reduce departure level offs. The May 26th chart date which included airspace changes and an up number of the LILLS RNAV SID went without any issues. All facilities are on schedule for the May 31 implementation date and are working on the July 21 chart date.

Facilities expressed concern about staffing shortages during summer months so it was agreed upon to hold post implementation review of May and July changes in mid-September.

The FAST shop at ZTL continues to be under a heavy workload however with the new weekly telcons with Atlanta and Charlotte Metroplex teams as well as ZTL 530 shop appears to be more efficient in prioritizing the work requested of FAST.

May 31st implementation is for the CHSLY STAR, replacing the IVANE, for CLT arrivals from the Northeast, as well as the KILNS and BARMY SID's. KILNS and BARMY replace the MERRL for departures to the Northeast and are city paired. Dual departure routes versus a single will provide benefit by reduced track miles and reduced in trail.

Ron Myers CLT Metroplex Article 48 lead

Florida Metroplex June report

Florida Metroplex continued to work the southern part of the project. Miami Approach, Miami Center and Palm Beach Approach continued to work the challenges of the complex airspace of south Florida. The preliminary work is complete and now we are planning a HITL to evaluate the designs.

Met with Atlantic Coast Route Project (ACRP) Co-lead to discuss how to integrate Q-routes and Y-routes from the Florida Metroplex project to ACRP.

I attended a Metroplex Leads meeting in Chicago, IL and attended a Florida Metroplex core team-planning meeting.

Submitted by Greg Harris, Florida Metroplex NATCA Art 48 rep

ATL Metroplex

The Atlanta Metroplex project has completed our 5/26/16 airspace change and is working toward our next implementation of the ATL STARs on 11/15/16.

We participated in a meeting regarding EDO on 5/3 in which many people from A80, ZTL, ESC and Headquarters were present. It was stressed how safe EDO would be and the efficiencies that could be gained; not only in ATL, but in Dallas and other major metropolitan areas as well. Another EDO meeting was scheduled for the week of 6/13 in hopes of having EDO in place by the end of the year.

ZID came to ZTL at the beginning of May to discuss the new ATL STARs and the impacts that would have with TBFM. Our TBFM contractors and TMUs from ZTL and ZID participated. The meeting went well and the adaptations that ZID requested are being worked now. We are also meeting at ZME the week of June 13th to discuss any issues the new STARs may have for them also.

On 5/24 A80, ZTL, ZME and ZID participated in a Dual STAR discussion. There have been dual STARs into ATL from the Northeast and Northwest corners for a number of years, but they have only been treated as offloads. Our plan is to start using these as full time Dual arrivals starting 9/15/16. This will give the facilities 2 months to get used to feeding and accepting 6 arrival feeds into ATL before our STAR implementation on 11/15/16. Since our new STAR designs are similar to the old designs, with a few minor track changes and the addition of OPDs this will allow for a smoother turn on of the OPDs.

Since our Lead Operator (Delta) is concerned about loss of throughput with OPDs into ATL, we plan to begin using OPDs only part time after implementation. It has been discussed for months about using the OPD for only 3-5 hours for the first couple of days and build into a full time usage. This will allow us to maintain a 132 Arrival Rate into ATL while the controllers continue to master OPDs. This plan will be fully discussed and a plan will be created for this on 6/28 with ZTL and A80.

The Team feels that with the early turn on of TBFM (Aug 2015), using the Duals full time for a few months earlier and the slower use of OPDs after implementation will allow us to implement and maintain the current or greater throughput during implementation.

Joey Tinsley ATL Metroplex Article 48

Cleveland/Detroit Metroplex Design & Implementation

UAL airlines simulated the Cleveland side of the procedures and was happy except for a couple of things on the BRWNZ STAR, some fixes had to be changed to an @ altitude instead of a window to force the automation in the aircraft to meet other restriction ahead on the procedure. Over all United was satisfied with the Cleveland side of the procedures.

We conducted industry week and offered all of the users of the two major airports to simulate and evaluate our proposed design. The Carriers where given 5 and a half weeks to run there tests on our product. UAL couple of change requests but overall happy. Southwest wanted to design from the runway out and look/design the details of every procedures. Southwest only attended two days in the 9 months that we were designing. Delta had two representatives and they seemed to contradict each other on many issues that our Delta lead Carrier representative had worked with us. Delta lead still worried about heavies on the SID and not making the altitude restrictions. Data shared showed that 12 aircraft last year didn't make the restriction on climb out of which 5 were unusual midnight ops. The big kicker is that the other Delta representative stated that they would prefer vector to SIDs or open SIDs. There company have

been working with us since 2014 on RNAV off the ground SIDs and has not given us any indication of this request. This may have come from several side bars that he had with the Southwest representative.

Still working on the Selfridge airspace issue with the National Guard and service area. Large chunk of airspace to move from ZOB to MTC in April 2017.

TBFM testing in the TTL is still on hold waiting action from Atlantic City and Headquarters. May conduct TBFM HITLs in MITRE to reduce the delay time of implementation.

Report submitted by Don Ossinger CLE/DTW Article 48 D & I liaison

Southern California Metroplex

The SoCal Metroplex Core Team has completed air traffic responses to public comments to the Draft EA. The Legal Team is reviewing and responding to legal comments. The contractor expects to deliver the EA document to the team June 1, 2016.

The Core Team conducted a teleconference with Industry partners to discuss amendments to procedures due to various needs. Industry concurred with changes.

A Video Teleconference was held with Lynn Ray, VP Mission Support Services, to discuss status of SoCal Metroplex and to discuss SoCal procedures that received additional review based on compilation of feedback from airports, public workshops, Draft EA comments, and elected officials. Each procedure was analyzed by the team to determine whether concerns could be addressed through minor design modification. The review resulted in recommended changes to four proposed procedures and the development of one new proposed procedure.

A telecom was held with Industry partners to discuss amendments to procedures due to criteria requirements. Industry concurred with all of the amendments.

SRM panels were conducted at both ZLA and SCT the week of May 23rd. Happy to report the panels went very well and no hazards were reported.

The Team continues to work on an agenda and to finalize details for the meeting with our SENEAM (Mexico) counterparts. The meeting is scheduled at SCT the week of June 6, 2016.

The Core Team is in the process of updating a draft timeline for all of the deadlines post Record of Decision. The team expects to receive the EA document from ATAC June 1 minus Appendix F, which is the response to legal comments. The team expects to receive the completed Appendix F from legal mid June.

Submitted by Jose Gonzalez Article 48 Rep, SoCal Metroplex

National Route Structure Program; Atlantic Coast Route Plan(ACRP)

With exception of only minor tweaks; most of the notional design work has been completed for ZBW, ZNY, ZDC, and ZJX along the east coast. We are now in the final week of modeling the new designs with ISIM HITL simulated problems at the lab we have set up in ZNY.

- We have been running ISIM HITLs at ZNY lab every week and have completed all design and test in for routes for ZBW, ZNY, ZJX
- The Week of June 6 we will complete the ISIM lab work at ZNY with ZDC.
- WE spent a few days at the Easter Service Center, coordinating and starting our outreach phase. Much was learned and we have set up appointments for briefing the Directors, industry and outreach to all that have an interest or will be impacted by ACRP.
- ACRP and So FI Metroplex met last week and to schedule future meetings for the 2 programs.
- ACRP and So FI Metroplex will meet in July to work on the Southern routes through ZMA and the Carribean.
- The leads of both programs will coordinate the progress of the “Q” route development. The increase of over 110 flights daily in and out of Cuba will require ACRP to expedite work at the FIR boundaries to handle the increase in traffic. Without it expect delays throughout the NAS.
- **Upcoming Activities**
ACRP IPT internal meeting in ATL June 14, 15 and outreach briefing to
Industry at ESA on June 16.
- ESA Directors briefing on June 20th at ESA.
- The rest of the month will be spent preparing for the ZMA work

Submitted by Jorge Rivera Article 48 Rep National Route Structure Program/ ACRP Co-lead

CSA PBN 2016-05-21

For most of May we have heavily focused on preparations for the MSP Post Implementation project. Prep work was completed prior to submission of the project for HQ Environmental Review. Engagement with the Minneapolis Noise Oversight Committee (NOC) and Metropolitan Airports Commission (MAC) continues. Elaine Buckner, ATM at KMSP Briefed the NOC on Post-Implementation Designs on May 18th. As Agency guidance becomes more clear, further efforts and communication with the MAC and NOC will continue.

ZMP is also heavily impacted by the decommissioning of the Brainerd (BRD) VOR, scheduled for 2017. NAVAID decoms affect both navigational components as well as surveillance components. The navigational needs have been mitigated by meetings with ZMP to develop T-Route structure and updating all impacted procedures by the Central FPT and Airspace Specialists. The surveillance piece is another story. The area affected by BRD is also a large non-radar area. Without radials, non-radar applications are a challenge. We have asked the PBN Program Office to engage AJV-8 to help clarify for ZMP what rules and techniques will benefit the controllers as ZMP, as well as the users who will otherwise be adversely impacted. We are also exploring other systems of surveillance for the affected area. Eric Labardini, NATCA Art. 48 for Surveillance Broadcast Systems, is providing his expertise and help. In the end, aircraft that have no way of joining the RNAV system will be heavily impacted during adverse weather that requires an IFR clearance. During the meetings at ZMP to design the T-Routes, additional fixes were added to serve non-radar separation functions. We will also help the POCs for ZMP with non-radar training development as requested.

Our other high priorities are projects in San Antonio and Austin. Both workgroups have been working together very well (including ZHU and ZFW) and working the projects concurrently is proving beneficial for all involved. Design work for both project proposals is either complete or very close. We have met directly with the Austin Airports Department of Aviation and will meet with the San Antonio Airport Environmental Manager next week. Discussions with both are centered on discovering what community engagement activities already exist locally and working to join with each affected airport to deliver the coordination to each community. Agency guidance towards this goal is still non-existent, but we have a good idea of best practices and concepts to shoot for. Each project site is different and each site needs to be developed accordingly.

Agency guidance concerning Community Engagement is both vital and very late to the field. FAA HQ Environmental is briefing individual airports that such guidance already exists and is already active. There has been nothing formal offered to the PBN Co-Leads as of yet and we also haven't been allowed to collaborate on the development. Collaboration within our projects in Central continues to be very successful. We have work to do with the other lines of business in the Agency to ensure that projects have an appropriate structure that can be successfully accomplished.

One additional item for the DFW and DAL area: **Please Note: Continued review and support of ERAM ER136427 (Proper ERAM SID Functionality) is requested. Sabu Varghese, ZFW NATCA Automation Rep is working and keeping affected facilities updated. Currently, it has been placed in a "future" bucket by the NUT (National User Team) because of it's size (cost) and complexity...but we are hoping for attention to it soon.**

Submitted by CSA PBN NATCA Art. 48, Brent Luna

Metroplex Study Team Lead Monthly Report – 5/27//16

The Las Vegas Metroplex Study Team completed all of its' conceptual design work by November 6 and then began work on the Study Team Final Report. The Study Team Final Report has now been edited by the team and the Metroplex Program Office Leads and has also finished going through the tech writing process. Also, for the first time in the Metroplex study team process, we established direct communication with the local airport authority and the Airport District Office to discuss potential noise sensitive areas and environmental hot spots. The final report has been signed by the Director of Airspace Services with a likely D&I phase kickoff sometime in the Fall 2016 timeframe after a determination of what the airport and community outreach will look like and finalizing funding issues. Also, the tower/TRACON move into their new facility sometime in August. The study team analysis of the conceptual designs has determined roughly \$7.5M in potential benefits to the Las Vegas Valley with an \$11 cost to the agency.

We continue to work with the VOR MON program to determine the most efficient way to integrate the ongoing work being done by VOR MON with the need to replace procedures through the current PBN processes. There is ongoing talks with AJV-14 to add additional co-lead support in each of the Service Centers to do this extra procedure design and development. We also continue to work with AJV-14 to improve the PBN Dashboard by finding ways to validate the accuracy of the Dashboard data along with efforts to examine the consistency of the data. The PBN Dashboard is the main support tool used by the OSG PBN Co-Leads to produce the Baseline Analysis Reviews (BAR) for PBN project requests through the 7100.41A process.

We are also engaged in the rewrite of the 8260.43 order that governs the scheduling and prioritization of procedure development in AJV-5 (Aeronautical Information Services). After several meetings in Ft. Worth, the .43 is continues to be in draft status. We continue to try and insert ourselves into the process so our PBN teams can be involved in the discussion involving procedure development prioritization and scheduling on a consistent basis. No future meeting dates have been scheduled at this time.

Submitted by Metroplex Study Team Lead Art. 48 Ed Hulseley

National Design and implementation Rep (May)

Metroplex:

Funding has become an issue, we were briefed last week that there is a 2.2 million dollar shortfall of FE funding for this calendar year, due mostly to community outreach. There are several Metroplex teams that have not been able to move on to the evaluation phase because they have been waiting for a community outreach plan. After discussion with Josh Gustin (PBN Manager) the belief is NextGen will provide the additional funding for this year.

Community Outreach continues to be challenging in developing and implementing PBN in the NAS. Metroplex has developed Community Outreach plans for the sites, however funding for all the activities has become a road block. If the FAA wants Outreach to be part of all PBN projects, whether Metroplex or 7100.41 projects it is incumbent upon them to find the funding. Additionally issues have arised from the Office of Environmental and Energy (AEE) briefing "policy" guidelines to non FAA entities ie. Airports/Noise Committees and not briefing the OSG Co-leads nor have they been willing to send the guide handbook to them, because it has not been signed off by congress, you can't make this stuff up.

VORMON:

Natca has forwarded an addendum to the PBN MOU for additional OSG Co-leads in the service centers because of the 7100.41 workload and the VORMON workload. Without the additional resources the VORMON program will not come close to making their waterfall. Natca is awaiting a response from the agency.

Submitted by Mark McKelligan (ZBW) National D&I Rep

NATCA National Airspace Rep

We continue to work with the agency on community outreach for all the PBN projects, funding and a standardized process are the 2 major issues we are trying to address. Community outreach was not part of the original process so the funding needed to accomplish it was not addressed when the projects started, this may cause us to delay some projects. The RTCA NIWG should submit their recommendations to the FAA in June concerning community outreach, we hope to finalize the process after that.

Jeff Woods (NATCA PMO Rep) and I are still working on the SEA Integration project. The RTCA NAC will be briefed in June along with the Western Service Area. We are hoping to put a team

together this summer that will refine the details of our process and identify all the key areas to be addressed.

Submitted by Jim Davis NATCA National Airspace Rep

COLLABORATIVE DECISION MAKING (CDM): Ron Foley (ZOB) is the Article 48 Representative for CDM.

Flight Evaluation Team (FET)- waiting on deliverables from NASA research on RTA technology.

Future Concept Team (FCT)- they have competing vendors trying to pitch about the same thing. Nothing significant has been concluded since the Spring session back in April.

Weather Evaluation Team (WET) -still refining the CAWS collaborative aviation weather statement and trying to figure out how to have it distributed electronically throughout the TMUs.

The summer prime leave about to start therefore CDM will be more telcon than anything until September. These telcons are designed to prepare for the new CDM season and communicate to the CSG what our new vision should be.

Kyle Andrews, NATCA Representative to the Surface Concept Team (SCT) participated in a telcon on May 24th to discuss strategies for accomplishing CSG Tasking 66 - Early TBFM Scheduling for Close-in Departures to LGA and to MSP. The following is his report.

The SCT discussed specifying the details of accomplishing Tasking 66 "Early TBFM Tasking Demonstration". Two options for initiating the Early Call For Release were considered - pilot initiated and ARTCC initiated. The SCT decided the focus would be on pilot initiated, since the electronic data transfer for ARTCC initiated is not yet robust enough to support the program.

The SCT also discussed at length the parameters for modeling. For the MSP test, it was decided to focus on only airports that are within the ZMP boundary. A concern with this approach is that four airports just outside the boundary, ORD, MSN, MKE, and MDW, are not going to be included in the modeling because they do not fall under TBFM scheduling, but rather center in-trail scheduling. However, they are the highest volume feeders to MSP, and their traffic must somehow be considered for the modeling to be accurate.

DATA COMM: Chad Geyer (ZLA) is the Article 48 Representative for DataComm. Below is his update.

The Tower Data Link Services (TDLS) Version 12 has been deployed to 30 sites and only 42 remain. The tower services should be completed by November. Of the 72 sites that use TDLS, 56 of them will have the Controller Pilot Data Link Communication (CPDLC) functionality. Since the waterfall is close to completion, I thought I would cover a couple of the enhancements that are planned for next year.

The first is Multiple Clearance Delivery Applications. This feature will allow the tower to open multiple Departure Clearance (DCL) applications at one time. This would allow the DCL application to either be in two towers or have a second position at the Traffic Management Coordinators position. Some towers issue revisions from different areas in the tower and since CPDLC requires interaction with the application, the ability for more than one controller to use the system at a time.

The second is the ability for the controller in the tower cab to be able to enable and disable Auto Mode from the application in the tower. The system currently requires this to be enabled at the Maintenance TDLS Menu (MTM) on the lower floors where the operating system is. Many towers have expressed that during evening shifts when things combine up at approach and require different frequencies that Auto Mode is not an option. This would allow the CD controller the ability to shut off Auto Mode when these new procedures take place and the controller could manually process the flights.

The third enhancement is a Requested Altitude Logic Check. This would allow the TDLS Application Specialist (TAS) at your facility enable the system to check the requested altitude prior to sending out the clearance in Auto Mode. If the requested altitude was below a certain altitude, it would require the CD controller to manually process the flight. This would be helpful in certain cases where the requested altitude is actually lower than the assigned initial altitude.

The National Core Team will be meeting in Oklahoma City at the end of June to discuss these enhancements and others that have been suggested. The group will evaluate and schedule when these enhancement should be available.

Surveillance and Broadcast Services (SBS): NATCA SBS team includes: **Eric Labardini (ZHU)**, National SBS Article 48 Rep, **Craig Bielek (A90)**, **Dan Hamilton (SFO)**, National Airport Surface Surveillance Capability (ASSC) Rep, **Andrew Stachowiak (I90)**, and **Tom Zarick (ZDV)**, National Interval Management Rep

ADS-B:

- As of this update 23,403 aircraft are equipped to broadcast with ADS-B Rule compliant avionics in the NAS. The SBS PO rough estimate of avionics installation capacity nationwide is 50,000 aircraft per year. With the January 1, 2020 deadline to equip quickly approaching, concern is high that equipage levels will fall short of the estimated total NAS fleet (100,000-160,000). Users that wait too close to 2020 may find that the availability of installers falls short of demand.
- ADS-B IOCs have been completed at all EnRoute (ERAM and MEARTS) facilities.
- 75 of 155 Terminal sites have reached their ADS-B IOC and 72 are operating on Fusion. The remaining Terminal sites are ARTS 2E sites awaiting an upgrade to the ELITE (STARS) build. The Terminal ADS-B/Fusion transition proceeds in this order: Kickoff

meeting, ADS-B Flight Inspection, ADS-B IOC, Fusion Operational Suitability Demonstration (OSD) and Fusion Operations. The most recent and upcoming Terminal events:

- o ADS-B/Fusion kickoff meeting took place at Chattanooga (CHA) on May 17.
- o ADS-B flight inspection for Greensboro (GSO) took place on May 11.

ASDE-X Tech Refresh:

- System enhancements continue to be developed with NATCA input. Deployment of these enhancements continue to go smoothly.

ASSC:

- Site acceptance testing of the ASSC system in SFO's new tower completed on May 25th.
- SFO OT&E (operational testing and evaluation) starting the week of July 11th.
- ASSC continues on schedule with discussion of moving waterfall dates to the left on some production sites.

CLT WAM:

- Congratulations to Charlotte Approach (CLT) which transitioned to operational use of Fusion on May 24. CLT had to overcome significant obstacles preventing the use of Fusion and leveraged a unique solution to do so. As of this morning, CLT is the first Terminal site to use Wide Area Multilateration (WAM) as an airspace wide surveillance source. Partnering with the Surveillance Broadcast Service (SBS) Program Office and SBS Article 48 Work Group, CLT Management and CLT NATCA dedicated their resources and experience to make this a success. This achievement represents another tool available within the NAS allowing Terminal facilities nationwide to overcome Fusion challenges.
- One of the primary objectives of Fusion is to allow a Terminal facility to utilize ADS-B. However, some sites are prevented from reaching operationally suitable Fusion performance due to a lack of sufficient overlapping surveillance sources, or the surveillance sources present are challenged by less than optimal environmental variables. WAM has been introduced as a highly accurate, fast update source that lends itself well to the one second Terminal Fusion display rate. Per the direction of the SBS Article 48 Work Group, WAM also allows CLT to explore additional contingency modes and lessen the dependence on the existing radar infrastructure. WAM can be used as a sole source for Fusion or FMA (but not Fusion and FMA) at CLT without effect on traffic flow.
- This is truly an achievement to be proud of and is a great example of the strong, collaborative spirit present between the Agency and NATCA. The effort was spearheaded on the PO side by the SBS Article 48 Work Group and co-leads Bobby Nichols, Surveillance Group Manager, and Eric Labardini, NATCA SBS Article 48 Representative. NATCA SBS team members Andrew Stachowiak and Craig Bielek, NATCA CLT representatives William Agee and Kevin Walker, OSF Keith Duffy, FLM Adam White, and SBS Ops Support Jeff Weaver invested much time and effort in travel, operational evaluation, testing, and flight inspection to ensure this effort was a success. Many thanks to the countless others that invested their time and energy as well.

FMA in Fusion:

- Flight tests for data collection were conducted at ORD the week of May 17. This data is necessary in order to complete the Separation Standards analysis which feeds into the FMA/Fusion SRMD.
- Scenario building for the FMA in Fusion Dry Run testing was accomplished. An OPS Eval Form was created to help SME's document any anomalies observed during the

testing. The dry run testing is scheduled the week of June 6th at the William J. Hughes Technical Center.

GIM-S:

- ZSE GIM-S IOC took place on the 23rd of May. In the current iteration, few benefits may be had until further adaptation refinement is made. Discussion with the site is still ongoing.
- ZKC Kickoff meeting likely will be postponed until the end of June to allow for TBFM OP's Team participation.
- The SBS Program Office has decided to postpone adding any additional sites for deployment until FY17 (with the exception of ZKC). Rather than rolling out to new sites, the PO will focus on enhancing the tool at existing sites.

IM/TSAS

- Craig Bielek and Tom Zarick participated in support activity for the concept of merging the Next Gen technologies of Terminal Spacing and Sequencing and Interval Management. The group worked on flushing out the concept ahead of a HITL to be scheduled in late summer or fall.

MEARTS Fusion:

- The Separation Standards analysis continues development. This report will feed into the MEARTS 3nm Fusion SRMD, expected to be completed by September 2016. The latest hurdle were a few outliers identified by Sep Standards, but a review by NATCA HCF personnel revealed that they did not represent an operational concern. This should allow the effort to continue as it has been somewhat stalled on this point.

Space Based ADS-B:

- A third Safety Risk Management Panel was held May 10-11 to consider the Ingest & Process Space Based ADS-B change to ATOP. At this point, the effort is centered on building the case for a Final Investment Decision (FID). Beyond the FID and once system design is tangible, Ops Eval, HITL, and a future Operational SRMD will be conducted. The Panel worked through several risks noted and identified potential mitigations. Overall the discussion was fruitful. Many concerns centered on ensuring ADS-C driven conflict probing remained unaffected. The next steps will be for engineering to determine the specifics of the requirements developed at this SRMP. Costs and timelines are an unknown at this point.
- The first Reduced Oceanic Separation SRMP was held May 12. The discussion centered on identifying a Preliminary Hazard list and the ramifications. This is the first of many meetings to come, and the discussion identified numerous concerns, including the use of tactical separation standards in a limited comm procedural environment. More meetings to come.

Terminal Fusion:

- SoCal TRACON (SCT) continues to struggle with poor radar sensor performance. These are latent issues that have been well documented over the years, but the transition to STARS has reinvigorated the concerns in Fusion. CARTS Fusion hid these issues with a masking tool, but STARS Fusion deals with radar issues at the source. At this point, the issues with the SCT radar sensors lie with their location and line of sight. Software has been successful in dealing with identified issues as they occur, but they continue to reappear in new areas.
- A Surveillance Automation Analysis Team (SAAT) has been stood up within the Agency to bring in experts from all fields, including Joe Yanonne (NATCA Radar), Mitch Herrick (NATCA TAMR), Craig Bielek (NATCA SBS), and Eric Labardini (NATCA SBS). Their initial effort surrounds SCT and identifying long term surveillance solutions. The

dilemma for the Agency right now is the cost, timeline, and effectiveness of each solution. Indications are that a WAM solution might be the best solution, but the system design is incomplete and will likely only add to the Agency's concerns over cost.

- NATCA has raised a concern over the development of the Common Terminal Digitizer (CTD) necessary to incorporate numerous ASR-8 radars into STARS Elite and Fusion. This represents a serious threat to the scheduled waterfall for both the TAMR and SBS programs. CTD testing and development appears to be struggling, and joint conversations with all players are planned in the near future.

Vehicle ADS-B:

- 833 vehicles now equipped at 16 airports.