NATCA Safety & Tech Update
Week of October 16, 2017

ATO Operational Contingency Group (ATOC): Jason Grider (ZFW) is the Article 114 Representative for NATCA. Also, included in Mr. Grider's duties is Article 114 representation for the Business Continuity Plan (BCP). Mr. Grider's report for this month is below.

During the week of September 12th the ATOC group held a continuity of service demo (CSD) in the TTL at ZME. Four SME's from ZFW and ZME along with two SME's from D10 traveled to ZME to evaluate the feasibility of working ZFW airspace from ZME. The test put ZME controllers in the TTL to work airspace from ZFW. The test was designed to see how much traffic a controller, who is not familiar with a particular piece of airspace, could work without any training. Each controller was given a packet just minutes before the test that explained the airspace boundaries and the procedures that would be used for both arrivals and departures at DFW airport. The procedures were reduced to a level that had one arrival and one departure stream with 20 miles in trail on each. The ZFW controllers were in the TTL to answer any questions the ZME controllers had about the operations during the test. The initial results were positive and the controllers from both centers agreed that with certain restrictions in place they would be comfortable with this scenario. Additional TTL problems were run with increases in routes and traffic. It was determined that without specific training on the airspace, the traffic volume would not be able to reach normal capacity. However, once the ZFW controllers were put on the R side to work the traffic, the only major factors that would reduce volume is the limited access to flight data. During a center outage, the neighboring center is unable to share data with the TRACON fully contained within the center that is offline. This means that all handoffs between the TRACON and center must be made manually. ATOC is continuing to work with engineers, ERAW and TAMR to find a solution to this problem. Mr. Grider has reached out to NATCA safety and training to begin discussions on what type of training and regulation changes will need to be made to protect controllers and the safety of the NAS during a contingency event.

Mr. Grider after returning from ZME has been actively engaged with the ATOC office to summarize the findings from the CSD and begin the work of drafting a document that outlines the lessons learned from the demo. This document will be the basis for an instructional guide assisting facilities that are actively developing their contingency plans. It will be a road map to help facilities address issues that they identify while designing new contingency procedures.

Mr. Grider along with several members of the ATOC group have also been very busy assisting the facilities that have been affected by the resent hurricanes in the US, Puerto Rico and Virgin Islands. The group is working hard to capture as much information as they can to make sure any future outages like these can be handled more effectively.

Mr. Grider traveled to the Tech Center in New Jersey to participate in the BCP 23 sector demo. The demo was designed to show the ability to combine multiple test beds at the Tech Center and have live RADAR feeds on 23 sectors. The BCP plan is to utilize 3 test beds during an activation to allow up to 40 sectors to be worked simultaneously. Several items were discovered during the demo that will need to be addressed before the BCP could be activated. Mr. Grider is continuing to work with the BCP office to find solutions to all of the issues that were identified.

AUTOMATED TERMINAL PROXIMITY ALERT (ATPA): Mike Sanders (SCT) represents the membership as the Article 114 Representative for ATPA. Mr. Sander's report is below.

We are in current development for controller training in an ELMS course that was projected to be completed in December, but will likely slide to January/February due to Serco's programmer involved in a serious car accident. More to come as it becomes available until then our prayers go out to the programmer for speedy and healthy recovery.

At this point if any facility has a desire to adapt ATPA, we need to wait until the ELMS training is complete. Please contact me so we can go over the process and add you to the list.

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DATACOMM: Chad Geyer (ZLA) is the Article 114 Representative for DataComm. Below is his update.

Last week Controller Pilot Data Link Communication (CPDLC) sites sent over 5300 clearances a day.

This update will give you an idea of what it takes to deploy CPDLC to the En Route environment. The Program Office is responsible for ensuring all work is completed and aligned to meet an Initial Operating Capability (IOC) milestone. There are several areas that must be worked in parallel to include Software, Training, DataComm Network Service (DCNS), Certifications, Site Communication, and Airline Operators. These are just a few of the hundreds of things that must be completed.

Software

This is probably the most complex and time consuming. This begins when the Program Office develops a set of requirements that must be turned into software code. The requirements are worked on the Use Case team made up of engineers, coders, controllers, Facility Tech Reps (FTR's) and others. This software also has to work with other systems that deliver the CPDLC service, ranging from ATOP, NavCanada, Flight Management systems of multiple aircraft and manufactures, and network service. The software must also be developed to ensure that controllers can use it safely and efficiently, Technical Operations can manage and maintain it and that it does not interfere with other legacy systems in the field. Also once the software is developed, it must be tested to ensure that it works correctly. When issues are found, they must go back to the coders to fix the system and as enhancements are introduced, the testing process must be enhanced to verify the system works correctly

Training

Training development is worked in conjunction with software development. Not only does functionality have to be trained to the controller workforce, but also enhancements to SGET and ghost pilot workstations need new software and functionality to train CPDLC. Tech Ops also needs to be trained on how to monitor the new software and diagnose issues in the system. The most difficult part of the training is figuring out how to have all of the controllers trained to turn the system on for use in a facility.

Procedures

Along with the new functionality, come additional rules and procedures for using CPDLC. Controllers work with the procedure office to develop procedures and new rules that will be incorporated into the 7110.65 and other orders in the FAA. Once the procedures are developed they must be incorporated into the training of the controller workforce.

DCNS (DataComm Network Service)

CPDLC is delivered through a network of VHF antennas by Rockwell Collins (Formally ARINC) and Society International of Telecommunication Aeronautics (SITA) and managed by Harris Corporation. The network of antennas makes up different service volumes for each En Route Center. The service volume must ensure coverage for equipped aircraft flying through every sector. If additional antennas are needed, they must be ordered almost 18 months before they are needed so that the Communication Service Providers (CSP) can acquire the real estate to place the antenna.

Certification

Technical Operations will need to certify the equipment and software to ensure it works correctly. They must also be trained to debug issues and understand how to fix them.

Airline Operators

The airlines are involved in much of what the program office does. Pilots have worked with controllers on the software requirements to ensure that what they receive is also functionally acceptable and understandable to the pilots. The pilots must also be trained to use the system by the time it is turned on in a facility so both sides can use it. The Operations center must ensure their filling and computer systems are able to accept the new messages and that the airplanes have been certified by flight standards to use CPDLC. Coordination must also take place with international carriers to make sure their countries certify their aircraft and pilots to use CPDLC domestically in the United States.

Implementation

While all of these other activities are taking place, the Program office is working with all of the sites to ensure that their training, testing and planning are going to meet the dates of the deployment schedule without overburdening a facility. The Program office is also working with the Airlines, CSP's, headquarters, and other users to make sure that everything comes together to turn on the CPDLC service.

ENROUTE AUTOMATION MODERNIZATION (ERAM): Julio Henriques (ZNY) leads the ERAM efforts for NATCA. Dan Mullen (ZID) provides this update.

Tech Refresh 2 (TR2) is scheduled to start mid-2018 and involves replacement of the ERAM processors and monitors. The Computer-Human Interface (CHI) team and Facility Tech Reps (FTRs) have been evaluating monitor choices for over a year, and are expected to make the final choice by November. The replacement monitors will either be a high-def version the same size as the current scopes, or a 43" diagonal high-def model. The large version is a very tight fit in the current sector consoles, but provides extra viewing area, which would be helpful when Datacomm and other Nextgen programs are implemented.

The new ERAM processors do not support EBUS, so that backup system is slated for removal. We have strenuously opposed this removal and have worked with the agency to develop the requirements for a replacement backup system. A Safety Risk Management Panel was held last month on this issue and the results are pending.

Airborne Reroute (ABRR) conformant route notification is scheduled to be reactivated October 30th, pending successful testing at the Tech Center. After that, ARTCCs will be able to re-enable ABRR full functionality which will simplify the processing of Traffic Management Initiatives by allowing the TMIs to be sent directly to the controlling sector. All controllers and TMCs should complete the eLMS course before their facility enables ABRR.

The National User Team (NUT) held its quarterly meeting the week of October 18th in Washington, DC. Some of the issues worked on during that meeting include:

ER 178785 CID Letter Allocation
The team discussed and reached consensus on the problem statement, its desired behavior is to reduce the incidence of letters in CIDs and when letters are in use better controlling the frequency of their use.

ER 179559 for UU command
The team discussed and reached consensus on the problem statement, its desired behavior is to create a keyboard command that will toggle the display of the Message Out View.

ER 177574 Keyboard Macro Command
The team discussed the ER and decided to create a simplified problem statement with a desired behavior that creates a keyboard command for execution of Macros. The command should be eligible from the R and RA positions.

ER 175522 Dwell Lock Keyboard Command
The team discussed and reached consensus on the problem statement, its desired behavior is to create a new command line entry for Dwell lock available from both the R & D positions.

ER 173645 Improper Flight Plan to ZYZ
The team decided to update the problem statement to reflect more specific language, the new desired behavior is to modify processing to ensure that flight data passed to Canada reflects all needed fixes and routing and is consistent with the sending ERAM flight plan and any data passed ERAM to ERAM as part of the AOI flight plan.

Handoff to Non-US
The task team provided a briefing on the status of the hand-off to NavCanada project.

ICAO Full Template
The draft use case was discussed and the team feels that it can be simplified. The task team will review the current template to determine if its functionality is sufficient.

ER 169885 Printing EDCT Strips
The team discussed this ER and determined that a functional change is not needed. A local method has been developed by some sites to stop the printing of these strips.

ER 160556 Improving Fault Tolerance
The team discussed the draft problem statement, it's desired behavior is upon detection and isolation of an error, provide notification of that error to the R-Position.

The status of the ERs identified by the FDB task team were discussed
ER 172801 Auto Point Out CHI – Solution delivered in EAD700
ER 175474 VCI Brightness – Solution will be demonstrated via an informal in October
ER 176639 Green Indicators in the Data block - Solution will be demonstrated via an informal in October
ER 177524 VCI Pick Area – Solution still being worked, possible informal by the end of the year
ER 177139 Uplink Indicator - Solution will be demonstrated via an informal in October
172788 & 178141 Data Block Attachment Points - Solution still being worked, possible informal by the end of the year
ER 172434 ACL Highlighting - Solution will be demonstrated via an informal in October
PDRR/ABRR

The task team briefed on the status of the program. The current plan is to turn on conformant route processing for all sites at the end of October; identified sites will enable PDRR/ABRR processing soon after. TMU site support and testing were also discussed.

STARS Enhancement 2 Overview
The task team briefed on the new concepts proposed by the STARS Enhancement 2 program, they include Scratch Pad to 4th Line coordination, Automated Point Outs, Electronic Messaging and a Shared Airspace tool. The task team will create draft use cases for all desired functions and once completed will be discussed by the full team.

Tech Refresh 2 Early-D and Early R
The task team provided a briefing on the current status of the program; the briefing was provided to the team as a reference.

Referred Message Guide and Controller Card
The current versions of the Referred Message Guide and the Controller Card were reviewed. The new versions of both guides will be delivered to coincide with the EAE100 system release.

ZMA Saturation Warnings
A briefing was given on the issue recently seen at ZMA involving flight plan saturation warnings for MIA approach. SLE determined that the adapted values could be safely increased which solved the issue. The briefing material was provided to the team as a reference.

ER 180234 CFR Route Display
A draft problem statement was created, its desired behavior is to ensure that the CFR should reflect the routing provided in the Aircraft List (ACL).

PR 175494 Forcing FDB for LOF Flights
The ticket is already packaged in EAE200 however since packaging, more incidents of the issue have been reported. The ticket will be sent to NPT to determine if packaging can be moved to an earlier release.

The Data Com team gave briefings on Full Services use cases, summary of demo activities, Procedures, Adaptation and Route Load ability (Compliant Routes), HF Frequency Support (ER168247) and the upcoming NSDA Transition.
Additionally, changes and discrepancies for the following issues were discussed, the updated use cases will be provided to the team for review and consensus:

Emergency PID Alert View logic at ATWS, Route Functionality Switch (ER 174400), DAT Code Required for EnRoute Session, Session Termination Changes when LDA is National, Automatic Altimeter Delay (ER 176091), Data Com Radar Service Terminated (ER 174189) and UCMV Message Out Menu sort order (ER 177868).

ENTERPRISE-INFORMATION DISPLAY SYSTEM (E-IDS): Amanda Hodge (ZOA) is the Article 114 Representative for Enterprise-Information Display System (E-IDS) work. Ms. Hodge's report for the membership is below**.**

Background: The Enterprise Information Display System (E-IDS) project aims to replace all existing IDSs in the NAS, providing the Agency with one enterprise solution across facility types. While some customization is necessary and should be available, one system will reduce overall costs for upkeep and training, and resolve the upcoming end-of-life issues we have with our current IDSs in the field (IDS-4, ERIDS, etc.). The project is still in the early stages of development.

The E-IDS En-Route Questionnaire is now closed. Thank you to every En-Route facility and Member that participated. The information gathered is extremely helpful during this initial process to help make sure that the needs of every facility type are met. I will be meeting via telcon with MITRE and the FAA next week to further define our plan and processes moving forward. We are exploring multiple options and will be choosing the one that best fits our needs, while keeping in mind staffing and budgetary constraints. The Oceanic Questionnaire is still going through the approval process, and will be disseminated to the field when feasible.

Upcoming activities:
• Initial Oceanic Questionnaire (pending approval)
• Subsequent En-Route work with SMEs (the process is still being defined)

FLIGHT DATA INPUT OUTPUT (FDIO): Corey Soignet (LFT) is the FDIO Article 114 Representative. Also included in Mr. Soignet's duties is Article 114 representation for the Electronic Flight Strip Transfer System (EFSTS). Mr. Soignet forwarded the information below for the membership.

FDIO

The first article testing is still on going. The FDIO Team is dealing with numerous quality assurance issues. To date all issues are being corrected by BOCA and then the FDIO Team re-tests the corrected printer. The printer is also in its final stages of its FCC Class B certification and should be certified by end of September. The key site install was slipped back to January 2018. The plan is to have 5 key sites consisting of a Tower and TRACON and due to their unique printer demands we are also using Honolulu, Alaska and Puerto Rico.

EFSTS

There is nothing to update at this time.

FIDI

There is nothing to update at this time.

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

During the week of September 11th the newest software build passed testing. During the following week the software was deployed at CMH-one of the agreed upon key site networks. The agreed upon post installation time frame for support for that network ended during the week of October 9 with the system stable. The second key site installation at I90 will take place on October 16 and support will be on hand for three weeks afterward. This installation was delayed due to the impact of hurricane Harvey on the Houston area.

The national release of the software is October 24 and the FAA plans to have on site support at the largest network (SCT) to assist and look for issues.

The FAA and vendor are negotiating packaging and a time frame for the next software build and operating system. There are no firm estimates to report at this time.

NAS VOICE SWITCH (NVS): Jon Shedden (ZFW) represents the NATCA membership as their Article 114 Representative to the NVS project. His report is below.

NAS Voice System (NVS) Factory Acceptance Testing (FAT) Dry Run ended June 23rd. The system still has stability problems so Harris will continue working on defect resolution prior to starting formal FAT. Formal FAT was scheduled to start July 18th, but has been officially delayed. The FAA is working with Harris to address the impacts to the deployment schedule because of this delay.

Harris has kicked off Release Stability Assessment Testing (RSAT) along with rapid development to improve stability in the next several months. Mr. Shedden was in Melbourne, FL October 2nd-6th participating in the RSAT kickoff.

Next Generation Air-Ground Communication (NEXCOM) continues deployment of new CM300/350 V2 radios to terminal facilities across the country. Some terminal facilities in the NAS using very old radios hear a pop back or "squelch tail" when they release their transmitters. The new radios being deployed under NEXCOM Segment 2 do not have this "feature" as the squelch tail is generally regarded as undesirable in radio communications. This issue has cropped up twice now during deployment and the program office should brief future affected facilities prior to install.

NAS Voice Recorder Program (NVRP) is the replacement for existing NAS voice recorders (DALR, DALR2, DVRS, DVR2). The Program Office presented to the JRC and received approval to proceed to Final Investment Analysis, leading up to the Final Investment Decision. Key site for NVRP will be Seattle Center in the 2018 time frame.

NVRP is currently in the source evaluation phase.

Grand Rapids Tower/TRACON (GRR) is reporting multiple issues with their aging voice switch. There's one outstanding issue where a RADAR site is causing interference in the Tower Cab. That issue continues to be worked.

A **Tone Mitigation National Workgroup** has been formed. This was a result of a large number of tone incidences being reported at Potomac TRACON (PCT), as well as other places. National selected the following members to represent NATCA on the workgroup:

- Brandon Miller
- Don Smith
- CJ Jacques
- Jon Shedden

The first meeting was in Washington, D.C. on September 19th and 20th. The group discussed existing equipment in the NAS, as well as possible future changes. We are currently reviewing minutes from the meeting as well as completing action items as assigned. Not date has been set for subsequent meetings.

SURVEILLANCE BROADCAST SERVICES (SBS) OFFICE: Eric Labardini (ZHU) is the Article 114 Representative to the SBS Office. Below is the update for SBS.

ADS-B:
- As of October 1, 2017, the number of Rule Compliant ADS-B Out aircraft in the US reached 37,147. ADS-B In equipped aircraft reached 32,635.
- Current equipage levels are falling short of the projected numbers needed to reach the Jan 1, 2020 deadline to equip with ADS-B. Avionics Installation capacity NAS wide could also be exceeded the longer users wait to equip. So far, the Agency has been clear that the deadline is firm. The stage is set for a potential showdown, as the date looms closer.
- Most, if not all, Air Carriers have provided the Agency with a plan to meet the deadline. However, the means to achieve those plans in the short amount of time remaining is becoming a larger question. One example that stands out is Honeywell avionics, which has yet to offer an ADS-B solution for B737 aircraft; Southwest Airlines and others, are heavily dependent on Honeywell avionics. United Airlines has made significant progress in upgrading their B737 Rockwell avionics fleet with 106 of 110 planned ADS-B installations complete. Several other airlines are also showing increased fleet equipage.
- The military, as previously released in the press, expects to be unable to meet this deadline for several versions of their fighter and older aircraft. They are working with the Agency on a compromise that requires DOD radar availability at key sites to be identified. Many DOD Air Traffic facilities do not even plan to track aircraft via ADS-B.

- GA equipage is a harder question and being carried as a High risk by the SBS Program Office. Increased avionics availability and competition among manufacturers continues to bring the overall cost for GA users down. In addition, the Agency has initiated another rebate program and it is showing some interest, but not as high as expected. The rebate program expired on September 19, but users have approximately five months to complete their installations afterward. Facilities may see these GA ADS-B operators flying more check flights as they attempt to validate their installations and claim the rebate.
- The SBS PO very rough estimate of avionics installation capacity nationwide is 50,000 aircraft per year. The rough estimate of all NAS aircraft that need to equip is 160,000. The actual number that needs to equip could be much lower depending on the number of users that remain outside of ADS-B Rule airspace (transponder required). Users that wait too close to 2020 may find that the capacity for installation falls short of demand.
- ADS-B IOCs have been completed at all EnRoute (ERAM and MEARTS) facilities. All ERAM sites have promoted ADS-B to the top of their sort cells.
- 106 of 155 Terminal sites have reached their ADS-B IOC and 101 are operating on Fusion. The majority of 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:
- Lexington (LEX) Fusion OSD 9/12
- Montgomery (MGM) Fusion OSD 9/14 (rescheduled)
- Lexington (LEX) Fusion Operational 9/20
- Montgomery (MGM) Fusion Operational 9/20
- Baton Rouge (BTR) ADS-B IOC 9/21
- Charleston (CHS) Fusion OSD 9/27
- Charleston (CHS) ADS-B IOC 10/3
- Augusta (AGS) ADS-B Fusion Kickoff 10/3
- Moline (MLI) ADS-B Flight Inspection 10/3 (rescheduled)
- Champaign (CMI) ADS-B Fusion Kickoff 10/5
- Baton Rouge (BTR) Fusion OSD 10/5 (rescheduled)
- Bangor (BGR) Flight Inspection 10/11
- Mobile (MOB) ADS-B Flight Inspection 10/17
- Duluth (DLH) ADS-B Flight Inspection 10/17
- Sioux City (SUX) ADS-B Flight Inspection 10/31
- Madison (MSN) ADS-B Kickoff 10/31
- Toledo (TOL) ADS-B Kickoff 11/2
- Bangor (BGR) ADS-B IOC 11/6
- Moline (MOL) Fusion OSD 11/7 (rescheduled)
- Fayetteville (FAY) ADS-B Flight Inspection 11/7
- Moline (MLI) ADS-B IOC 11/8 (rescheduled)
- Waco (ACT) ADS-B Fusion Kickoff 11/14
- Mobile (MOB) ADS-B IOC 11/15

ADS-B Avionics Issues:

- An issue not screened by automation systems but an important assumption for future ADS-B dependent applications is the broadcast call sign of the user. ADS-B aircraft reports include this information, and automation systems compare to the filed call sign. When a mismatch occurs a Call Sign Mismatch (CSMM) alert can be generated. *The SBS Article 114 work group has recommended disabling CSMM alerts across all automation platforms.* The issue has been highlighted in Equip 2020 meetings since ADS-B dependent applications (CAVS, Advanced Interval Management, etc.) are dependent on this functionality. Monthly tracking continues to trend upward.
- NATCA SBS continues to work with the Agency toward a more proactive approach to ADS-B avionics issues that result in position error. Though these are infrequent occurrences, the Agency's ability to respond has been hampered by a lack of resources, bureaucracy, and legal constraints. These issues occur when standards for installation or configuration within aircraft or ground systems are not met. ADS-B is a cooperative surveillance source relying on the position information determined onboard the aircraft. Multiple ATSAP reports have been filed on the known issues to date. Controllers and facilities are encouraged to report any identified events through ATSAP and any other mechanism.
- In order to reduce the number of safety compromising events in the NAS an effective, efficient response mechanism is needed. The Agency has deployed additional mitigations including enhanced validation and a No Services Aircraft List (NSAL). Enhanced validation has a limited effect (15nm around a Terminal Radar) on these issues. Other validation techniques are also being investigated.
- Governance of the NSAL has been a big concern. There is no formal governance at the moment and issues are being dealt with on a case-by-case basis. NATCA is working with the Agency to streamline this process, potentially via an automated mechanism. The end result needs to be an effective means of identifying bad actors and reacting as close to real time as possible.
- SBS Article 114 work group discussions resulted in all B787 aircraft being placed on the NSAL. These aircraft have a latent avionics issue that causes false position information to be displayed to the controller. This has alarmed several facilities and caused both SCT and NCT to demote ADS-B in their sort cell priorities. United and a few other foreign carriers have implemented a Boeing Service Bulletin that remedies the issue. Flight Standards verified the implementation, and all parties have now agreed to remove United B787 aircraft from the NSAL. All other B787 aircraft will remain on the NSAL until verification of the Service Bulletin is received.

- Two events in August 2017 highlighted the inability to react effectively or efficiently to identify avionics problems. On August 9, an ADS-B equipped Embraer 170 demonstrated extremely erratic tracking within Houston Approach. The track was showing a zigzag or starburst behavior and actually split into four separate tracks at one point; three of which had identical full data blocks. The SBS Performance Monitor did flag the aircraft as non-compliant, but this data is currently only used post event. Flight Standards indicated they would quickly reach out to the operator. On August 16, the same aircraft repeated it's bad tracking behavior at Potomac Approach while on Final to Dulles. The tracking left the facility so uncertain of the aircraft's true position that they stopped all departures. This event was also found to be highlighted by the Performance Monitor post event. This particular aircraft's avionics issue appears to be resolved, but, again, response time to these events needs to be addressed in order to limit facility exposure to safety compromising events.

  Advanced IM
- AIRS meeting scheduled for early November postponed. Still awaiting American Airline funding decision.

  ASDE-X Tech Refresh:
- Dan Hamilton is working with Bridget Gee (runway safety Rep) In the development of Taxiway alerts.
- Tech refresh training continues to move forward as we roll it out to facilities.

  ASSC:
- MCI facility meeting taking place on Oct 17th.
- CVG SAT (site acceptance testing) taking place the week of Oct 16th followed by initial optimization starting the week of Oct 23rd.

  FMA in Fusion:
- Operational evaluation and SRMP have concluded. Sep Standards and Collision Risk analysis of IBI mode has delayed the completion of the SRMD. Operational start of FMA use of Fusion is now planned for November 2017. The change in procedure is not anticipated to require additional controller training as these facilities are already trained on both FMA and Fusion.

  GIM-S:
- ZDV submitted an adaptation change to remove speed advisories for descent until further refinements can be made to the system.
- The GIM-S Demo scheduled for November with the NUT Team has been cancelled due to budget reductions. ZSE adaptation activities at the Tech Center are also likely to be postponed or cancelled for the same reason.

  MEARTS Fusion:
- 3nm Fusion in MEARTS is a complex undertaking requiring multiple Tower, Approach, and Enroute sectors to come online with Fusion at the same time. The lessons learned in this undertaking will help the effort with future MEARTS and ERAM sites.
- ZAN has been on Fusion since August 2015. HCF has been on Fusion since August 1, 2017.

- Plans are being made for the continued deploying 3NM Fusion in MEARTS at ZSU and ZUA. Due to the significant impact of Hurricane Irma on Puerto Rico (ZSU), the focus for the time being will be on ZUA (Guam).
  Surveillance Portfolio Analysis Work Group
- Eric Labardini and James Keith (NATCA AJV-7) have been working closely with the Agency's multifaceted analysis of post 2020 radar infrastructure needs. The ADS-B business case was built on an assumption that today's robust radar infrastructure could be reduced once ADS-B becomes the predominant surveillance source.
- The Agency built their business case on an assumption that 100+ secondary radar sources could be removed throughout the NAS. This causes concern in airspace that does not require ADS-B (many Class D or other Approach Controls). NATCA has been pointing toward another option, removing overlapping radar sources completely rather than harming operational capabilities nationwide. There seems to be an awakening to this idea and analysis of the benefits is underway.
- An SRM Panel was held August 1-3 to analyze the risks associated with partial or complete removal of radar systems in a post 2020 environment. The conclusions of the Panel were that partial removal actually resulted in higher risks than complete removal. This assumes that complete removal would only occur where the effects were minimized by other overlapping radar sources nearby.
  Terminal Fusion:
- The Fusion Focus Group continues to track and resolve facility reported issues with Fusion. These are largely issues with the underlying surveillance infrastructure, and experts from all fields are available to assist. Please report any issues to your OSF and our NATCA SBS group for assistance. It is critical that actual data is recorded for evaluation and resolution.
- NATCA remains very focused on the Common Terminal Digitizer (CTD) effort necessary to incorporate numerous ASR-8 sites into STARS Elite as well as Fusion. The CTD schedule is the driver for TAMR Elite rollout and therefore the drive for the follow up ADS-B/Fusion rollout.
- SCT issues continue to be a large focus. NATCA SBS is heavily involved in the Surveillance Automation Analysis Team (SAAT), which is examining long-term alternatives to help improve overall surveillance in the SCT airspace. Their efforts are aimed at mitigating tracking issues in the LA Basin, including the effect of the new Stadium near LAX.
    - NATCA and the Agency have agreed to move forward with raising the LGB radar site. This was thought to be one of the easier solutions to put in place, but the Agency cannot seem to get out of their own way to do so. Current target date for completion according to Western Service Area is October to November 2017.
    - SCT is also awaiting agreements with the military to ensure availability and performance of the North Island radar. Adding this additional surveillance source shows promise for tracking issues around SAN airport.

- The first phase of WAM achieved an IOC on August 10. Feedback from SCT personnel has been very positive. WAM has been promoted to the highest priority in sort cells. Analysis of formerly identified tracking issues with radar showed much improvement with WAM implemented. Feedback from NATCA SCT has been very positive. Former issues seen frequently in the LA Basin area have been greatly reduced by WAM.
  - This first Phase of WAM at SCT is a limited configuration of Radio Stations; this makes it vulnerable to outages due to limited overlapping Radio coverage. The system has shown also some vulnerability to reflection on the surface of LAX. The second Phase of WAM will add more Radios with greater overlapping coverage and less vulnerability to outages or reflection issues.
- SAAT has been analyzing Potomac (PCT) Fusion issues for potential solutions. The facility has been struggling with a number of issues related to problem radar sites or a lack of coverage. Radar analysis is confirming the benefit of adding Quantico (NYG) radar to PCT as well as reducing obstructions near Dulles. Funding for the additional NYG feed is being sought.
- SBS Article 114 agreed to a path forward to add multiple radars to CLE in support of Fusion. The radar sensors should be incorporated at CLE by June 2018.
- Recent N90 discussions on a transition to Fusion pointed to three areas of concern. FTI lines for Albany radar are expected to be in place by November 3. Final Fusion recommendations from TSLE have been delivered. The remaining issue is AT Coach issues identified during the STARS transition. A timeline for the Fusion transition will be developed once all issues are resolved. The site could potentially be on Fusion by March 2018.
  Vehicle ADS-B:
- 1279 vehicles equipped at 20 airports.
- PDX will be the next ASSC facility to equip.