

PASS Liaison / Representative Update

Date of Update: 1-5-16

Program Name: **ERAM** (SE/TR phase)

Program Contact/s: Kevin Young (Program Manager), Jim Linney (Director, Air Traffic Systems), Peter Hawkins (ERAM Implementation Manager), Denise Delozier (ERAM Implementation Engineer), JD Hunt (Second Level Engineering Manager for ERAM)

Current Program Status:

The 2nd major software release for SE/TR (EAD400) was key site tested at Jacksonville ARTCC and Washington DC (Leesburg) ARTCC. The Tech Ops issues were focused on at ZJX. PASS member Ed Thomas and I were in Jacksonville for the pre-ops portion of the test activities. There were issues discovered in the EAD400 software during ops testing. The release was planned to be issued nationally in mid-December but the plan was altered. NATCA and the ABRR Capability Manager wanted to incorporate some additional software fixes for ABRR in preparation for the March/2016 Operational Availability milestone. The additional fixes pushed the release of EAD400 back to January 11th. The plan will be to re-deliver the release to the initial key site (and likely the ABRR test sites) for more Ops validation, prior to national deployment.

On December 10th, member Ben Rule and I visited the Lockheed Martin facility. We were presented with early plans for ERAM Technical Refresh. We reviewed the replacement hardware candidates and discussed maintenance and implementation approaches. The initial phase of Tech Refresh will kick off late 2018 and focus on the Radar/Data controller position. There is a plan to include PASS/Tech Ops in a February activity to further discuss plans for ERAM Tech Refresh. The planned FID for ERAM Tech Refresh (p2) has been moved from March to September 2016.

On 10/6 I submitted a TSAP on the need for ERAM refresher training. I am also working with AJW, AJI, AJM stakeholders to put together a workgroup to examine and make recommendations on what's needed for ERAM refresher training. On December 16th, there was a training request form submitted to AJI to assist in formalizing this process. The form was collaborated on by the participants of the Article 13 ERAM subgroup (PASS Article 13 Rep/AJW/Program Manager & Implementation Manager/Second Level Engineering Manager.) See attached. The workgroup will need to include the PASS Article 13 rep for AJI. I plan to brief him on this entire situation.

ERAM Stability/Backup

On New Year's Eve, ZDV ARTCC experienced issues with ERAM display processors in 2 different areas, and on both ERAM channels. Controllers were forced to utilize the legacy backup system EBUS for over 20 minutes. ZDV Tech Ops personnel remained calm, collaborated with Second Level Engineering, and restored ERAM Ops in less than 30 minutes. There was no ATC-0 declaration as the site personnel handled the situation very well. This incident did reiterate the need for increased stability/backup within ERAM.

Immediately after the August ZDC issue, the Article 48/13 team ramped up our dialogue about some semblance of backup functionality/system for ERAM's single point(s) of failure. The team preliminary agreed to move forward on a solution that should be able to be implemented during the SE/TR phase. I am pushing on a very consistent basis to ensure that Tech Ops (PASS specialists) have an opportunity to weigh on the

proposed plan before it gets finalized. There are maintenance/system management considerations to whatever gets implemented, and I seem to have gotten the team to acknowledge this.

This month, the Tech Ops National ERAM Workgroup will be discussing Simple Flight Data Management. This will serve as the backup/stability enhancement to ERAM that the field has been requesting (AT/Tech Ops). I have been discussing the best way to introduce this concept to the Tech Ops community with the Article 13 subgroup. There is support for getting early Tech Ops input into the Engineering process. This begins in January.

Ongoing Program Status:

Article 13 Breakout Session

Now that ORD is accomplished at all ARTCCs, PASS has been able to get more focus onto to Article 13 issues. The method that put was to have recurring Article 13 subgroup meetings. Stakeholders are a subset of the Article 48/13 ERAM workgroup. The mandatory attendees are the Program Manager, the Second Level Engineering Manager, me, and the Tech Ops HQ representative (AJW-134 Manager). We consistently meet monthly to focus on PASS/Tech Ops issues related to ERAM.

Risk to ERAM Program

One of the major issues we are facing with ERAM is the end-of-life situation with several LRU components. The LRUs of primary concern are the p52x system planar boards (motherboards) within the ERAM radar position processors. Each AT R-position has its own processors; one for channel A (p615) and one for channel B (p52x). It has been noted that ERAM's deployment phase experienced 4 years of delay before operation usage due to a number of factors including poor program management, lack of early union involvement, and sequestration. This cumulative delay led to the equipment going end of life early into the operational usage period we are now in. FAA Second Level Engineering is working to identify the cause of the system planar failures and whether there are any actions that can be taken to prolong the lifespan.

Ultimately, the solution is going to be an **ERAM Technical Refresh**. This has become the priority for the FAA's investment planning activities. Without Tech Refresh, ERAM will not be sustainable beyond 2018, even with all stopgap measures exhausted. There is a planned FID for Technical Refresh scheduled for 9/2016.

As a result of this need to deal with Tech Refresh, the planned Final Investment Decision (FID) for ERAM Sector Enhancements (SE) has been put on hold until 9/2016.

Ongoing Actions with updates:

PASS MOA with the FAA (PMO) for ERAM

Mike Riso facilitated the completion of discussion on the MOA for ERAM SE/TR and Sector Enhancements. This is the top priority item, and I was very thankful for Mike's support on getting this done. I'm eager for the MOA to be completed and to start working with an ERAM Article 13 rep for training.

PASS OT&E Inclusion for ERAM SE/TR and beyond

There is growing momentum for PASS to be fully included in OT&E for ERAM. This will be solidified by the completion of the PASS/FAA MOA for ERAM.

So far we have gotten buy-in and collaboration from the PMO and other stakeholders on all 3 OT&E activities:
Ops Eval
SSM Keysite
Release Site Test

Program Issues: (ongoing)

A number of programs that get implemented through ERAM, and the next phase of ERAM (Sector Enhancements) are up for Investment Decisions and are at various phases of implementation planning. See the attachment for more detail.

Identify Support Needs: (ongoing)

1. Completing the MOA.

2. **Refresher Training!!!** It has been 5-6 years since many of the certified specialists received ERAM training. ERAM has been steadily changing and everyone's detailed knowledge naturally degrades over time. Other than the tasks that we do regularly, we need refresher training to stay competent. Air Traffic has long mandated refresher/currency requirements, we need the same. I am pushing (at my level) for AJI (Steve Nauss), Tech Ops (Pat McQueen), ERAM Program (Program Manager, Implementation Manager, and Training Manager) to commit resources to formulate a workgroup. The workgroup will identify which skills need which level of refresh, and how often. We will eventually need to develop some onsite courses that can be delivered or taken locally to keep the workforce up to par on ERAM. This course will also need to be updated periodically as the ERAM software matures and accommodates new program implementation. PASS will need a firm commitment from the VP of Tech Ops and AJI that they:

- First – acknowledge value the importance of 1st level Tech Ops system ERAM Managers, Maintainers, and Administrators (NAS/NOMS, Techs, SS's). Without first responders, the patient won't make it!
- Second - are willing to commit resources (not much needed) to ensure that we have the refresher training we need to stay proficient enough to deal with unexpected partial or full ERAM failures, and do our jobs correctly. Air Traffic mandates this!!!
- Third – mandate that any briefing materials that are produced for the Tech Ops work force are assigned to the people who manage, maintain, and administer the subject matter. Air Traffic mandates this!!!

These discussions would need to happen at the highest level (by PASS President/VP), as there is already agreement at the working level. The issue is that the higher ups don't support what their people identify as needed.

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AJI-23-001a

ATO Technical Training Proposal Form

Purpose: This form is used to request the development of new training or revise existing training for the Air Traffic & Technical Operations workforce. It will also provide information to help determine the scope and prioritization of the training development effort.

Scope: This form was created for the use of those who need to create a training solution for the Air Traffic Technical and Technical Operations workforce.

Approval:

Technical Training Requirements Group Manager, AJI-2300



ATO
Technical Training Requirements
Group

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REVISION HISTORY

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ATO Training Proposal Form

Please complete the following information below and be as clear as possible in describing the training need.

1. Submission Date: 12/16/15

2. Requester:

Point of Contact (POC): Patrick McQueen Organization: Tech Ops HQ, AJW134
 Phone: 202 580 5373 email: Patrick.mcqueen@faa.gov

Point of Contact (POC): Javon Henry Organization: PASS
 Phone: 3175022648 email: javon.henry@faa.gov

3. Brief Description of the proposed training need:

Most of the TO Field personnel who support the En Route Automation Modernization (EAS) system need training on the current (2015) EAS system, particularly the SOC and System Administrator personnel need training. The EAS system has changed significantly, since 2011. Most of the TO field personnel completed EAS training in 2009 and 2010, prior to several major changes to the baseline EAS system.

ERAM (EAS/EADS) refresher training for PASS bargaining unit employees (Tech Ops NAS/NOMs, SS's, Hardware Techs) that ensures the workforce is provided adequate opportunity to maintain proficiency. Recommended criteria: locally performed (as determined by AJI), recurring (as determined by AJI), content-relevant (as determined by AJI)

4. Check one:

Course Revision Request ☐ Course Number/Title

New Training Request ☒ Course Title

1. EAS/EADS System Management Refresher
2. EAS/EADS System Administration Refresher
3. EAS/EADS System Maintenance Refresher

5. Funding Source: Future discussion regarding funding should occur.

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6. Subject Area of training requested: EAS/EADS System Management and System Administration

7. Are there any training prerequisites? Yes ☒ No ☐ If yes, explain below and list any applicable course number(s):

The training needed is about the current (2015) EAS system. The personnel who need this training should have completed EAS (baseline or Year 2009 EAS) training. This may serve as the prerequisite to the subject Training request.

(43074001) EN ROUTE AUTOMATION SYSTEM (EAS) MANAGEMENT, or (43080001) EN ROUTE AUTOMATION SYSTEM (EAS) ADMINISTRATION, (43073001) EN ROUTE AUTOMATION SYSTEM (EAS) MAINTENANCE

8. Key Project Stakeholders:

Last Name	First Name	Title	Routing Code	Email	Telephone
Taylor	Kim	Group Mgr	AJW13		
McQueen	Patrick	Program Mgr	AJW134		
Barnes	Marlowe	InService Mgr	AJW134		
Henry	Javon	PASS National Article 13 Representative for ERAM	WCP13-ZID	Javon.henry@faa.gov	317-247-2261

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Preliminary Training Needs Assessment

The following section will provide information to complete the preliminary training needs assessment.

9. Type of Training Requested (Check all that apply):

- | | |
|--|--|
| ☒ Equipment Theory | ☒ System Theory |
| ☒ On-The –Job Training | ☒ Job task/function |
| ☒ Maintenance Procedures | ☒ Troubleshooting Procedures |
| ☒ General Overview | |
| ☐ Other: | |

10. Is this training for a system that will be certified? Yes ☒ No ☐

11. When is this training needed? Year 2015 / ASAP

12. Identify the target audience(s) for the training

Job positions such as: EnRoute, Terminal, Tech Ops, developmentals, etc.) Tech Ops ARTCC SOC, En Route-Tech Ops-EAS/EADS System fully 2009 baseline trained/certified ATSS's: System Management (NOM/NAS), System Administration and Security (SS) (role) personnel.

13. Approximately how many people in the target audience need this training?

Recommend assessing attrition to determine actual count and inclusion of SS and ATSS. Estimate 250-300.

14. Is any non-FAA personnel part of the identified target audience? For example, contract towers, instructors, Non-Federal Sites? Yes ☐ No ☒ If yes, how many:

15. Will this training be for industry and/or international? Yes ☐ No ☒ If yes, explain:

16. Who are the potential stakeholders

Other organization(s) that may contribute to, benefit from or be interested in the training): Technical Operations, Air Traffic, ERAM Program Office, and Second Level Engineering

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17. Is this training needed to meet staffing requirements? Yes ☐ No ☒ If yes, explain:

18. Please provide a description of the training requested and expected Training Outcome.

Training on the current (2015) EAS system for ARTCC SOC and System Admin personnel. Expect the outcome to produce a trained work force for support of the EAS system.

After a Gap Analysis, outline training that will:

- a. Address gaps in knowledge/skill
- b. Refresh key aspects of training that currently exists (tasks/skills/knowledge that needs the most refresher)
- c. Incorporate lessons learned and updates from fielded changes (since the baseline)

Utilizing AJI processes identify:

- d. how training will be taught/retained/assessed
- e. How often specific tasks/skills/knowledge need to be refreshed

Utilizing AJI processes develop recommendations to potentially leverage this activity to incorporate new capabilities, upgrades, and changes to ERAM driven by other programs.

19. If the training need is for a course revision, what content information needs to be added and/or removed from the existing course?

The assumption is that the 2009 baseline EAS/EADS resident training will be updated through 2015 and moving forward will continue receiving timely updates to keep pace with the changes to EAS/EADS.

20. Training Assessment/Examination required? Yes ☒ No ☐

21. What brought about the need for this training request? (Check all that apply):

- | | |
|--|---|
| ☒ New tasking or job function | ☒ National Order Change |
| ☒ Modification to existing equipment | ☐ Local/Regional training requirement |
| ☒ Deployment of new equipment/system | ☐ Emergency training requirement |
| ☒ Outdated training (Revision) | ☐ New Hire training requirement(s) |
| ☐ No existing training (Duty Change) | ☐ Credentialing/Certification training |
| ☐ New training requirement(s) | ☐ Mandated outside of ATO by: |
| ☐ Change in level of training Requirement(s) | |
| ☒ Other: Time since initial training | |

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22. Please provide any additional information in support of the training need request:

The focus of this refresher training should be towards the people who manage, reconfigure, and/or troubleshoot the system from the M&C. For the hardware techs, this may be a lower priority as compared to NOM/NASSs and SSS.

Essentially, anything that has changed, that would've been taught in the original ERAM training for all specialists should require refresher training since all specialties have Monitor and Control segments in their training.

One challenge will be to address the gap between when updates are made and when training catches up. If the lag is more than six months some type of mandatory Delta Briefing may need to be provided to the field.

Training History Data, as of Nov 23, 2015:

(49286) EN ROUTE AUTOMATION MODERNIZATION (ERAM) SYSTEM MANAGEMENT

Year	Completions
2012	11
2011	14
2010	37
2009	55
2008	58

(40483001) EN ROUTE AUTOMATION SYSTEM (EAS) MANAGEMENT

Year	Completions
2013	12
2012	26
2011	12
2010	8

(43074001) EN ROUTE AUTOMATION SYSTEM (EAS) MANAGEMENT

Year	Completions
2015	19
2014	21

23. List all available source materials upon which the training is based.

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The existing resident training for EAS, EAS Electronic Briefing Packages (aka-Delta Briefings), EAS Technical Instruction manuals (current 2015), updated maintenance handbook (6100.1x), updated Technical Issuances, ERAM SSDs, Maintenance Alerts and Tech Ops Awareness Items (TAIs).

24. What is the performance expectation of this training?

- ☐ Knowledge or Awareness — no significant change in performance following training
- ☐ Novice — audience should be able to perform at a low level following training
- ☐ Intermediate — audience should be able to perform at a moderate level following training
- ☒ Expert — audience should be able to perform at an advanced level following training

25. Does the training include safety-critical tasks? Yes ☒ No ☐ If yes, describe:

Ability to respond to system issues (triage, troubleshooting) that could lead to ATC-0 events or have an impact on NAS safety.

26. How critical is the training to sustaining and/or improving operations? Please check one:

Low ☐ Medium ☐ High ☒

Briefly explain: Proficiency is required to effectively manage, maintain, and administer ERAM system (EAS/EADS).

27. Explain the impact to the organization if this training is developed.

Personnel will be provided the necessary training to maintain adequate proficiency/competency to safely manage, maintain, and administer ERAM systems (EAS/EADS). NextGen enhancements/capabilities can be safely implemented onto to ERAM without increased risk to NAS safety and NAS operations.

28. Explain the impact to the organization if this training is not developed.

Personnel will NOT be provided the necessary training to maintain adequate proficiency/competency to safely manage, maintain, and administer ERAM systems (EAS/EADS). NextGen enhancements/capabilities CANNOT be safely implemented onto to ERAM without increased risk to NAS safety and NAS operations.

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29. Submission of AJI-23-001a

Please submit the completed form by email to a representative from the Training Requirements Group (TRG) or the Curriculum & Technology Group (CTG) below:

AJI-2310, Terminal Team

TRG Representative: Bob Whitworth

Email: bob.whitworth@faa.gov

AJI-232, En Route Team

TRG Representative: Bob Whitworth

Email: bob.whitworth@faa.gov

AJI-234, Technical Operations Team

TRG Representative: Andy Nahle

Email: andy.nahle@faa.gov

AJI-212, Development Team

CTG Representative: Greg Sanders

Email: gregory.sanders@faa.gov

Signature of Requestor	Date
Signature of Training Requirements Group (TRG) Representative	Date
Signature of Curriculum & Technology Group (CTG) Representative	Date