

Date of Update: 7-31-18**Program Name:** ERAM System Enhancements/Technical Refresh (SE/TR)**Program Contact/s:** James Benjamin (ERAM Program Manager), Peter Hawkins (ERAM Implementation Manager), Denise Delozier (ERAM Implementation Engineer)**Current Program Status:**

Tech Refresh 2 (TR2) originally planned to begin in late 2018 started mid-July 2017 (Accelerated Deployment) to address ERAM processor sysplanar board failures. The sysplanar boards are experiencing failures at a higher rate than can be repaired or replaced. TR2 consists of two elements, TR2 Early D and TR2 Full. TR2 Early D Deployment and TR2 Full Deployment implements in two phases. The two phases consist of the following:

TR2 Early D Deployment

- Replace D-Position Processors
- Upgrade Site Maintenance Area
- Install Linux Playback Workstation
- Install Linux Operating System

TR2 Full Deployment

- Replace R-position Display 43" & KVM
- Replace R-position processors
- Add 43" display to Playback Workstation
- Replace retained D/A position processors
- Install Supplemental Servers

As mentioned, TR2 started in mid-July 2017. The first stage was TR2 Early D Deployment. The deployment began with three key sites: ZFW (Fort Worth ARTCC), ZOB (Cleveland ARTCC), and ZAB (Albuquerque ARTCC). All three key sites experienced some software failures that resulted in immediate field fixes with no significant impact on Air Traffic Control Operations. As of July 31, 2018, 15 out of 20 ARTCC has completed its TR2 Early D Deployment. TR2 Full Deployment is scheduled for April 2018.

ERAM Refresher Training:

June 8, 2018, I had a Telcon with members of the TSAP team about ERAM refresher training. This meeting was focused on the status of refresher training, and I reiterated the importance and the priority of the need for recurrent ERAM training for SOC and automation personnel. Also, Mr. Stephen Michaleski, En Route Automation Requirements, Tech Ops Training Programs AJI 2320, provided the following update to the ERAM training progress:

1. The ERAM EAS Admin Course development team met in OKC, July 10 – July 12, 2018, to perform a 30% course material review. The ERAM Admin course to be developed to the EAD 700 Software release level. The estimated time of completion for the project is Jan 2019.
2. ERAM refresher training: Documents have been sent to AJI management for review. I am working with AJI PASS Training Representative William Butler on the current progress.
3. EAS Management: No classes the rest of this FY. The OKC EAS Management Course lacks some current information – ADSS, CPDLC. NOMs, NASS are getting this information through eLMS courses.

In addition, August 28 through 29th 2018, I will be attending a meeting at the FAA Academy in reference to ERAM Technology Refresh 2 Full Course.

ERAM Stability/Backup:

ERAM TR2 Full Deployment is scheduled to start April 2019 and will deploy new technology that does not support Enhance Backup Surveillance (EBUS). The EBUS Console Display Generator (CDG) will be removed from the bottom tray of the R-Position console during the console transition to TR2 Full. AJT/NATCA has a workgroup working on developing Air Traffic procedures in migrating risk during ERAM failures with a possible option of implementing new technology. More information is forthcoming.

Ongoing Program Status:

Article 13 Workgroup

The Article 13 Workgroup is working on the roadmap for TR2 full deployment waterfall, which includes the selection of three key site participants. TR2 full key site activities are scheduled for the month of April 2019. In addition, TR2 is scheduled to have two ERAM technical Evaluations on ERAM Software Release EAE200 with associated hardware

expected in late 2018 and early 2019, which Tech Ops PASS will be heavily involved. The workgroup is also planning to have ERAM User Team meetings scheduled quarterly. Moreover, ERAM Technical manuals validations were discussed with some issues that affect PASS members and the ERAM Program (See Risk to ERAM Program).

The Risk to ERAM Program:

One of the significant issues we are facing with ERAM deployment is not validating ERAM Technical Manuals before Key Site implementation. There is no FAA ERAM Technical Manuals validation process currently in place. Technical Operations have to be involved with the evaluation/validation of the technical content in all technical manuals used for the maintenance of ERAM. In TR2 Early D Deployment, Tech Ops TI validation of ERAM Technical Manuals was not performed.

During TR2 early D deployment at ZFW, the technical maintenance manuals were missing much-needed information. The missing information includes technical instructions on how to perform maintenance tasks and key performance parameters. AJW-134, key site, and other Tech Ops personnel provided vital information to the contractor that was needed in the manuals to get through key site activities. Needless to say, this additional workload to on-site staff was a distraction from the core activities done at key sites. The TI validation process and Tech Ops personnel involvement in TI validation are critically needed. The result of not having a TI validation process in place is poor training material, poor implementation progress, and ultimately the unsuccessful ability to employ and maintain the ERAM system.

This critical process of TI validation must be included in the ERAM system implementation process. We must add the TI validation process to an existing Memorandum of Agreement (MOA) or start a new MOA for this subject matter.

Ongoing Actions with updates:

PASS MOA with the FAA (PMO) for ERAM: Completed

Program Issues: (ongoing)

Identify Support Needs: (ongoing carryover from the previous report)

1. 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 regularly do, we need refresher training to stay competent. Air Traffic has long mandated

refresher/currency requirements we need the same. 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. These courses will also need to be updated periodically as the ERAM software matures and accommodates new program implementation.

3. Commitment to safety - 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 workforce be 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.