

A large, semi-circular graphic on the left side of the slide. It depicts a globe with a grid of latitude and longitude lines. Overlaid on the globe are several faint, semi-transparent images of people, including a woman in a white lab coat and a man in a blue shirt, suggesting a global network of professionals.

ArgonST
Operations Support
Manufacturing
Logistics
Customer Training
Field Support

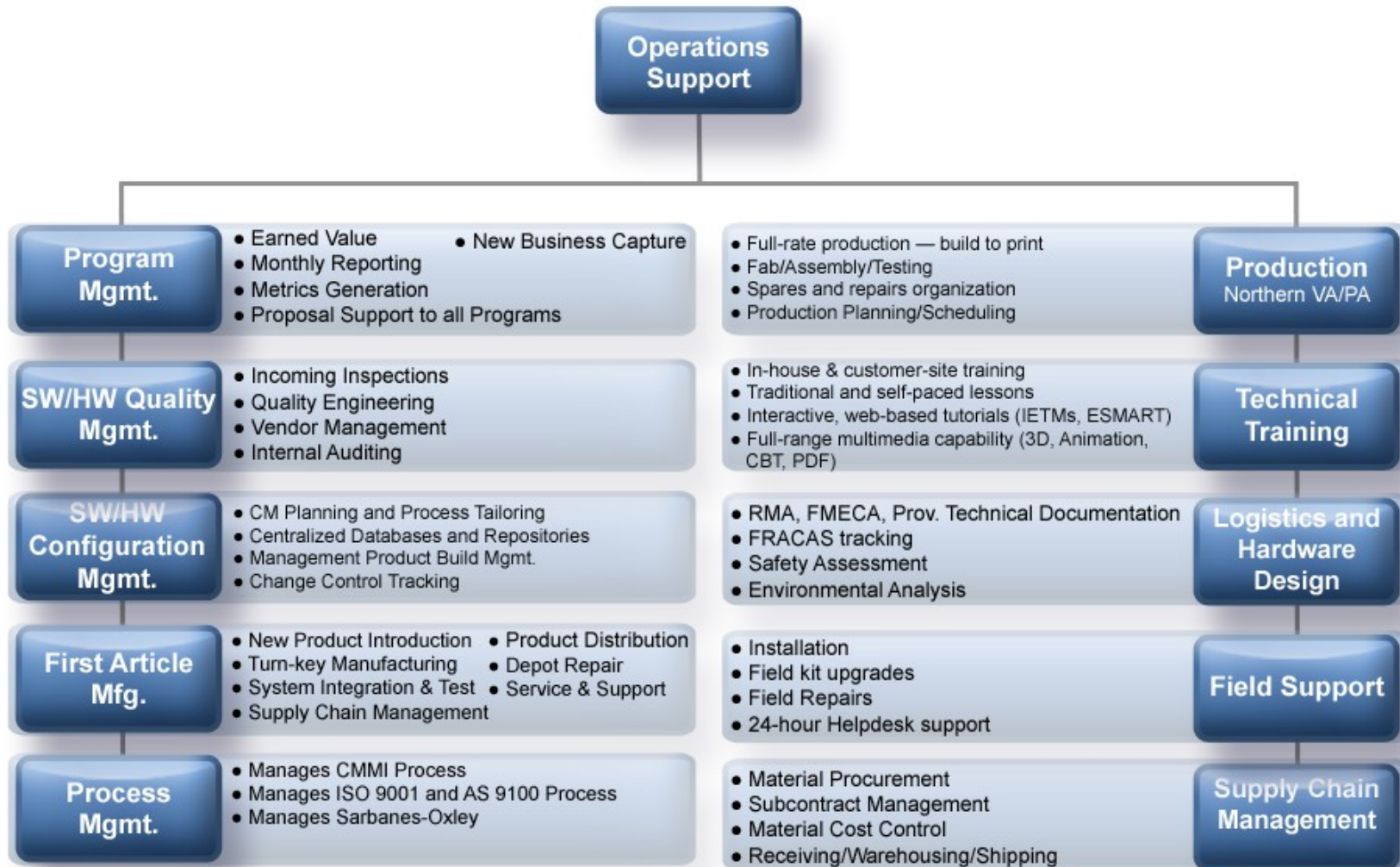


Argon ST Operations Support Capabilities Briefing

Operations Support Organization



Total Integrated Operations Support





Production Operations

Operations Support Team assembled, tested and supporting over 300 Argon ST fielded systems:

Program Planning and Management

- Certified Project Management Professionals (PMP)
- Versed in Earn Value Management
 - All Programs on Earn Value Management
- CMMI Maturity Level 3 Policies and Procedures
 - All major programs have a Management approved
 - Program Management Plan
 - Requirements Plan
 - Software Management Plan
 - Test Plan
 - Subcontract Management Plan
 - Risk Plan
- Management culture includes:
 - Integrated Planning and Scheduling
 - Resource management planning
 - Risk management
 - Subcontractor management
 - Measurements and Analysis
- All Programs are reviewed monthly by Management



Manufacturing Operations

First Article Manufacturing (Fairfax Va.)

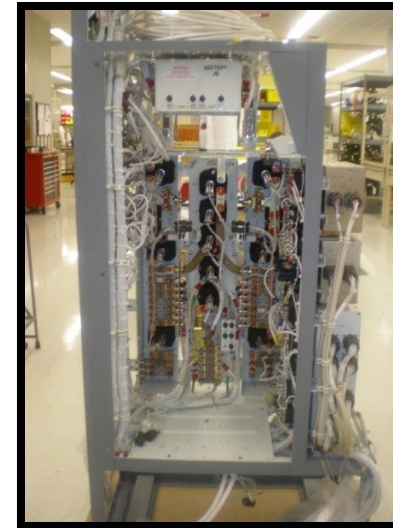
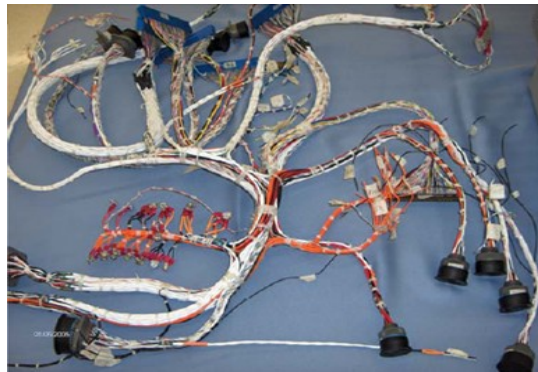
- *First time Prototype Builds*
 - *Program Production Leads assigned to all major programs*
- *Manufacturing Engineering staff*
 - *Works closely with Design Engineers*
 - *Design for Manufacturing concepts (DFM)*
 - *Development of detailed, visual Work Instructions with the initial build*
- *State of the art tooling and equipment*
 - *Company funded Capital Test Equipment*
 - *Test Chambers*
 - *Shake Tables*
- *Dedicated experienced staff*
 - *Technicians*
 - *Assemblers*
 - *Inspectors*



Manufacturing Operations (Cont)

Manufacturing — Full Rate Production: (Newington VA/Smithfield PA)

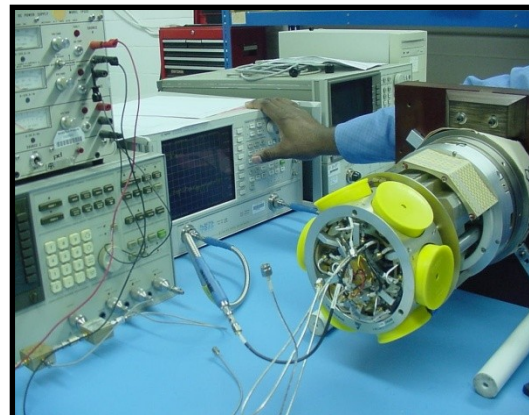
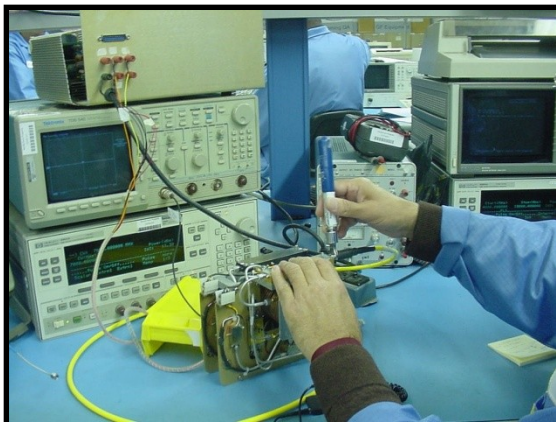
- *Full Build-to-Print capabilities:*
- *Spares and Repairs organization: Catalog Pricing*
- *Experienced work force with Certified instructors/technicians*
 - *IPC / WHMA-A-620 Requirements & Acceptance for Cable & Wire Harness Assemblies*
 - *IPC-A-610 Acceptability of Electronic Assemblies*
 - *J-STD-001 Requirements for Soldered Electrical & Electronic Assemblies*
- *Government/CMMI/ISO9001/AS9100 Certified Documented Policies and Procedures*
- *Wiring Harness Manufacturing Association (WHMA) members*
- *Fully equipped certified Shipping and Receiving organization*
- *Bombardier Aerospace approved vendor*
- *Learning Curves/Six Sigma processes implemented*
- *Resource sharing – Production/Training/Field Service*



Manufacturing Operations (Cont)

Manufacturing— Full Rate production: (Newington VA/Smithfield PA)

- *Full cadre of government certified/calibrated test equipment and chambers*
- *Full support team*
 - *Quality Management*
 - *Configuration Management*
 - *Production Program Managers and Test Team*
- *Learning Curves/Six Sigma processes implemented*
- *Resource sharing – Production/Training/Field Service*



Manufacturing Operations (Cont)

Ongoing Projects: (Newington VA/Smithfield PA)

• Programs

- **Quick Strike Refurbishment (NSWC)**
- **CEDS (General Dynamics)**
- **SSEE/ICADF/ISCRS Spares (NAVICP/SPAWAR/NIOC)**
- **Support to all Argon ST Programs**
 - **OT-TES SSEE Inc-E SSEE Inc-F Banshee 25A Gen 5 RWB Enhanced Track-Wolf**



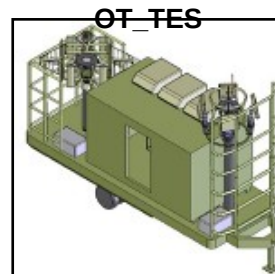
• Products & Services

- **Hardware Integration**
- **Hardware Configuration Management**
- **Supply Chain Management**
- **Logistics, Training, & Field Support**



• Processes in place

- **Lean/Six Sigma**
- **Statistical Analysis**
- **Learning Curve Analysis**



Manufacturing Operations (Cont)

Manufacturing — Full Rate production:
(Integration Facility: Windber, PA)

- **Engineering**

- *Hardware (design/development)*
 - *RF Systems*
 - *C4ISR Systems*
 - *Prime Movers*
 - *Command Centers*
- *Software (design/development)*
 - *Urban Simulators*
 - *System Control*
 - *System Drivers*

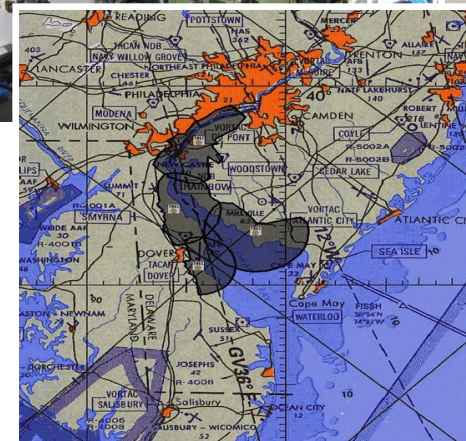
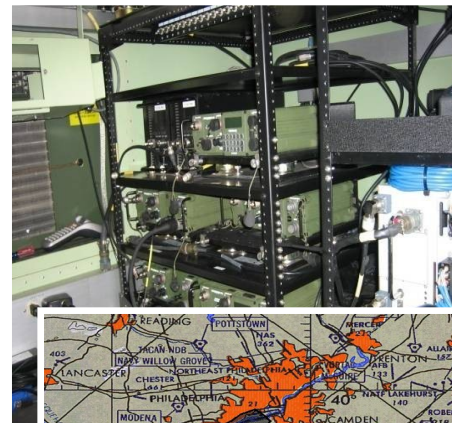
- **Technicians**

- *Manufacturing*
- *System Integration*
- *Factory/Customer Acceptance Testing*



Windber PA Integration Facility: Ongoing Projects

- Command Operations Center (COC)**
Objective: To develop a mobile command and control center for rapid deployment during tactical situations.
- Ground Mobile Gateway (GMG)**
Objective: To develop a mobile system that can provide a communications link between forward deployed observers and the tactical aircraft delivering precision weapons.
- Mission Planning Toolset (MPTS)**
Objective: To develop a modeling and simulation tool that could be to create operational rules of engagement (by using accurate scenario generators that include operational area details and operational architecture of a battle plan).



Hardware Operations Support

Hardware Quality Management

- *Avg. 20+ years experienced Incoming Hardware/Material Inspection*
- *Avg. 20+ years experienced Product Inspection team*
- *Supports both Production and Factory Testing process*
- *Documented ISO9001, AS9100, and CMMI Maturity Level 3 Procedures (Certs.)*
- *Documented Quality Plan at front end of every program*
- *Part of Program Planning Team and involved in all Testing*

Hardware Configuration Management

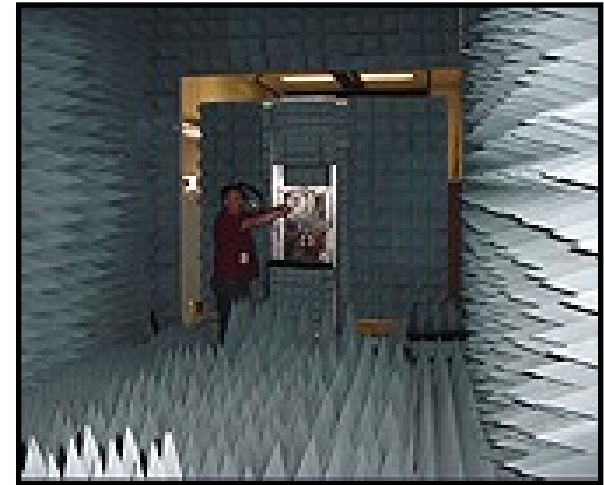
- *CM Planning and Process plan developed for all Programs*
- *Centralized Part, BOM, and Documentation Databases and Repositories*
 - *Integrated and works closely with Design Engineering and Procurement*
- *Qualified CM personnel and resources dedicated to each Program*
- *Comprehensive CM Release and Change Management methodologies and tools*
- *Internal and Program-specific Status Reporting, Product Verification, and Configuration Records maintained by program*



Test Capabilities

Testing Capabilities

- *RF Testing (Frequency Capability up to 60 GHz)*
- *Digital Testing*
- *In Circuit Testing*
- *Environmental Stress Screening*
 - *Thermal Cycle, Vibration/Shake, Noise*
- *Acoustic Testing*
 - *Alternating Wedge Pattern Anechoic Chambers*
- *Full System Integration Testing*
- *Mercury Analysis*



Manufacturing Team

People

- *10+ average years experience with government-type systems and processes*
- *All manufacturing employees certified yearly on all manufacturing standards*
- *TS / SCI Cleared personnel in all organizations*
- *Experienced in Electrical, Mechanical, and Software products and processes*
- *150+ Manufacturing Personnel*

Infrastructure

- *Very competitive rates*
- *All programs on Learning curve after build one: Lean Mfg.*



Manufacturing Operations

Quality/Process Certifications

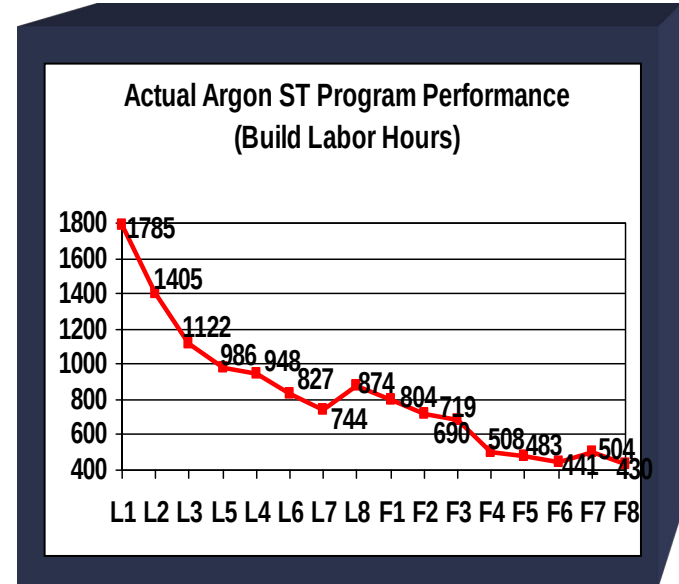
- CMMI Maturity Level 3 (Systems / Software Engineering and Program Management)
- ISO9001(Production Processes)
- AS9100 (Aircraft Quality Certification)
- UID Identification compliant process/certified

Processes deployed

- Lean Manufacturing
- Six Sigma
- Earned Value Management

Facilities - 187,600 square ft. of Production

- First Article: Fairfax Virginia: 13,200 sq. ft.
- Production: Newington Virginia: 25,400 sq. ft.
- Production: Smithfield Pennsylvania: 61,000 sq. ft.
- Production: Windber Pennsylvania: 88,000 sq. ft.





Product Support Services

Services Offered – Logistics

Provide Design Support & Customer Deliverables

- RMA Analysis to include Reliability Block Diagrams, Ao Calculations, MTTR, LDT
- FMECA to include Functional Failure Analysis & Identifying System Critical Parts
- LORA to include Identification of Who/How repairs are made
- MAC to include maintenance index pages & maintenance requirement cards (MIPs/MRCs)
- LCC/TOC analysis in conjunction with University of MD CALCE Center
- PTD to include ICAPS and APL Review




Incident No.	Date	Status	Priority	Other Fields
822110204	8/1/04	Open	High	...
822110204	8/1/04	Open	High	...
822110204	8/1/04	Open	High	...

Services Offered – Logistics (Cont)

Provide Proposal Support

- Functional Write-Ups
- BOEs
- Project Schedules
- Spares Prediction
- Initial Reliability Assessment

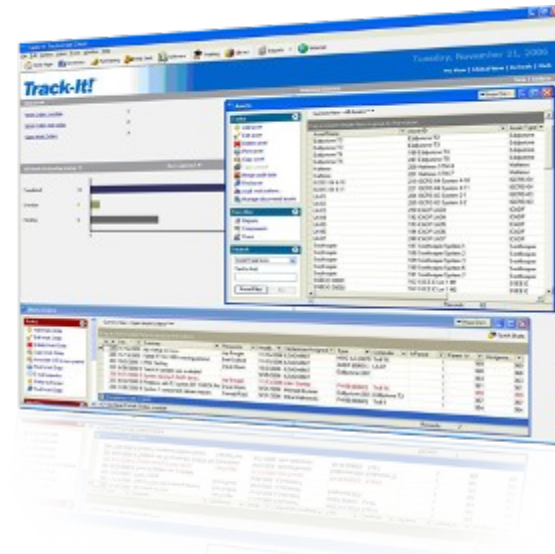
Provide Production Support

- Spares determined
- Supply Support

Support to Performance Based Logistics Efforts

Statistical Incident Report Data Repository (FRACAS)

Helpdesk Support



Services Offered – Safety

Provide Design Support & Customer Deliverables

- Environmental Safety & Occupational Health Plans
- Safety Assessment Reports
- Health Hazard Assessment Reports
- Program Environmental Safety and Health Evaluation



Tools Utilized – Logistics Analysis

Utilization of Industry Accepted Reliability Software:

Relex Tools

- Failure Reporting and Corrective Action System (FRACAS)
- Reliability Prediction
- Reliability Block Diagram Generation
- Failure Mode & Effects Analysis (FMEA)
- Fault Tree
- Maintainability Prediction
- Life Cycle Cost



At Argon ST, Relex Provides:

- Reliability Metrics Across Multiple Programs
- Trend Analysis Across Multiple Programs
- Shared Database Across Work Sites
- Flexible reporting capability



Tools Utilized – Logistics Support Data

Utilization of Government / Industry Parts Database

Haystack

- NSN Research
- Part Specification Research
- Demand History on Parts



The Source for Critical Information and Insight™

Aerospace & Defense Decision-Support Tool

Haystack® Gold

The world's most comprehensive parts
and logistics information management system



Operations Support Organizations

Field Support

Any System, Any Place, Any Time



Our Primary Objectives

Ensuring that Our systems are supported and meet all Mission Objectives:

- Technical Services (remote troubleshooting, Helpdesk, customer alerts)
- Hardware Support (installation, repair & return, diagnostics, upgrades)
- Software Support (software testing, upgrades, diagnostics)
- Operations Support (mission planning, mission support, analysis, tasking development, off-site support)
- Test Support (support to I&T, DT, OT, fleet battle experiments, Test Plan development)

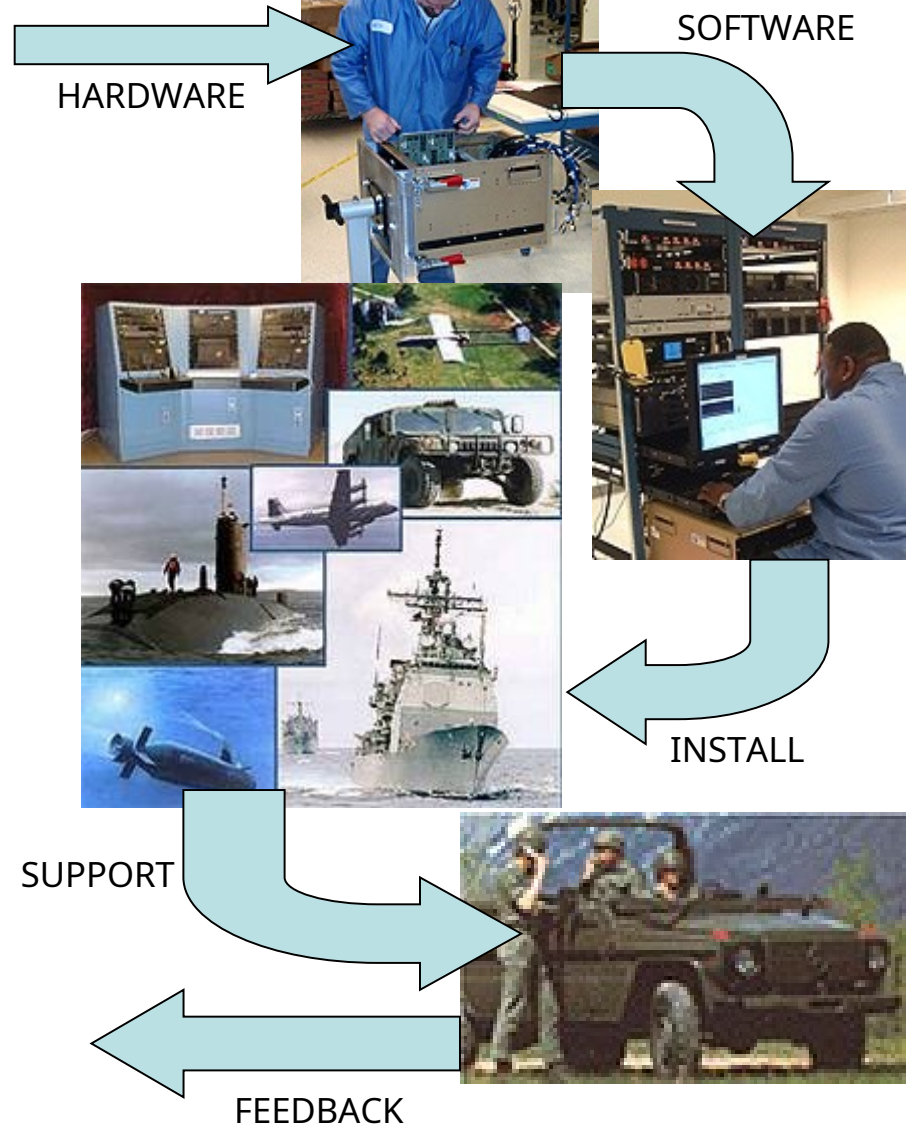


Domain Knowledge

- Dedicated Field Service Technicians with a wide range of military and commercial experience
- Experience supporting surface, subsurface, airborne, strategic, and land mobile sensor systems
- Ability to support system installation, integration, and to provide total life cycle support
- Experience with wide range of COMINT, ELINT, acoustics, and imaging systems



Cradle-to-Grave Support



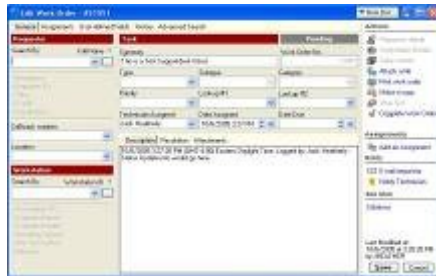
OUR Field Service technicians:

- Assist in building the production systems and have intimate knowledge of hardware components
- Provide integration and test support throughout software development process
- Provide installation and integration support
- Work in cooperation with our Customers to ensure their needs are being met
- Provide feedback from our Customers into the design process



Services

- **Helpdesk:** Web-enabled helpdesk services to initiate and track support requests and trends
- **On-Call:** 24/7/365 on-call support technicians
- **Service Alert Bulletins (SAB):** Provides corrective actions for various issues
- **Field Service Bulletins (FSB):** Provides procedures to modify, upgrade, or implement field changes
- **Knowledge Management:** Web enabled tools for trip reports, test data, system data packages, FAQ's, and other system information



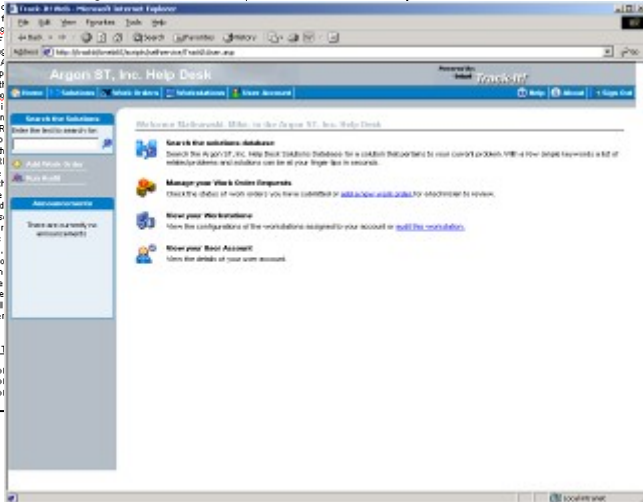
SYSTEM ALERT BULLETIN

PRIORITY: URGENT
BULLETIN#: 1400630
REVISION#: 1.0
PROBLEM NAME: RFDU-100 has switching transient noise present on ES Mast receiver feeds
SYSTEM/PROGRAM AFFECTED: TROLL 8002, Systems 9 - 11

DESCRIPTION OF ISSUE: The RFDU-100 provides band switching between the various HF bands as well as notch filters. There are three S element switching ISCRS system. A system had also was discovered to be induced by the system through splitters on the acquisition system and R Mast configuration performance of the system operated in a BRI Synopsys. The observed when the Mast mode. The HF band, and at the entire noise several times per switch transients of VHF and UHF jump in noise floor Workaround: This problem, however performance when mode. There will degradation when configuration.

ACTIONS BEING TAKEN: RD-01 has developed a fix for the switch

PART(S) AFFECTED:
 RFDU-100:
 S/N RFD1
 S/N RFD1
 S/N RFD1




Specialized Support

Support to the Customer

- Monitor production trends for end-user impacts
- Monitor mission requirements and provide capabilities
- Monitor trends and provide corrective actions
- Monitor end-user requirements and feedback to design efforts
- Support to testing and evaluation

Support to the Mission

- 24/7/365 access to support
- Remote troubleshooting & diagnostics
- Global Fly-Away Support
- Sustained Off-site Presence
- Tactics, Tasking, IO development, Mission Support
- Provide on-site Support to War-Fighters



Operations Support Organizations

Technical Training

Dedicated to Improved Performance Through Innovative Products and Services

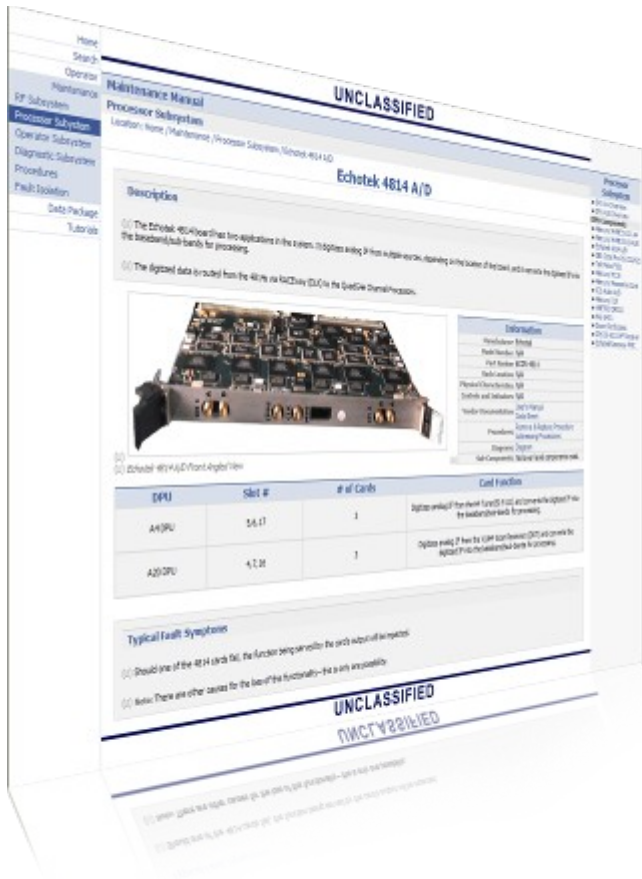


Team Experience

- Resource pool composition
 - 80% former military systems operators/maintainers/instructors
 - 20% writers and multimedia instructional designers
- 118 years combined military experience
 - *We understand the needs of our military customers.*
- 52 years combined instructional design experience
 - *We hold mastery in traditional courseware development methods.*
- 51 years combined Interactive Multimedia Instruction (IMI) development (levels 2-5) experience
 - *We also excel in cutting edge instructional technologies.*
- 41 years combined teaching experience
 - *We maintain expertise in effective instructional techniques.*



Interactive Electronic Technical Manuals



- Much more than a PDF or “page turner”
- Makes important technical data and procedures available to users quickly and easily
- Easy to navigate using any of today’s Internet browsers
- Allows for conversion of existing technical data at a low cost and a high quality
- Emerging XML-based IETM design will allow us to link IETM content to customer data warehouses for real-time updates and additions
- Automated Updates

3-D Models and Simulations

- We have the experience and talent to design and develop leading-edge 3D models and simulations. This unique approach for performance-based tasks saves our customers time and money.
- Using specialized software tools for 3D development, we employ common (Acrobat Reader) applications to view the simulations.
- Controls in the PDFs allow users to zoom in and out, rotate, and pan the 3D scene at any point during the animation sequence.



Instructional Video

- Our customers, acknowledge the value in this often “overlooked” and “underutilized” instructional medium.
- We can convert “page-turning” CBTs and paper-based products into videos for a more effective and engaging instructional experience.
- We can produce self-paced instructional videos which allow students to learn the material at their own pace, as often as they need it.



Emerging Instructional Techniques

- We embrace new instructional techniques to enhance and improve our product lines (gaming, PC simulations).
- We understand our customer's operational environment.
- We use leading-edge multimedia strategies and techniques, which increase a learner's retention and recall of technical subject matter.



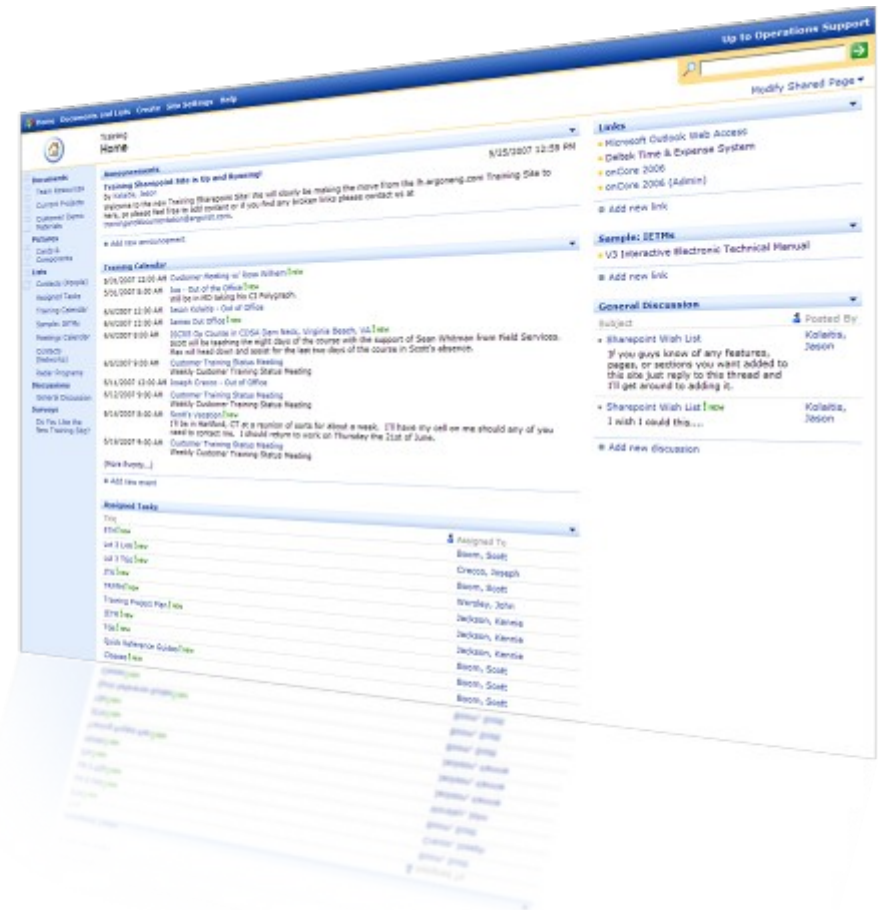
Computer Based Training (CBT)

- Based on HTML and Flash, which support universal deployment
- Allows learners to work at their own pace and revisit the learning events at their convenience
- Allows for true multimedia delivery methods, including text, audio, still graphics, video, animation, and simulations
- Covers complete range of styles including information-based, animated demonstrations, and interactive tutorials



Training Needs Analysis

- Ability to understand and capture our customers' needs and develop training solutions tailored to those needs
- Familiarity with a Learning and Personnel Management System portal to assist our customers transition to and implement their own training and personnel systems
- Well-versed in coordinating and facilitating training events, seminars, and working meetings



State-of-the-Art Training Facilities

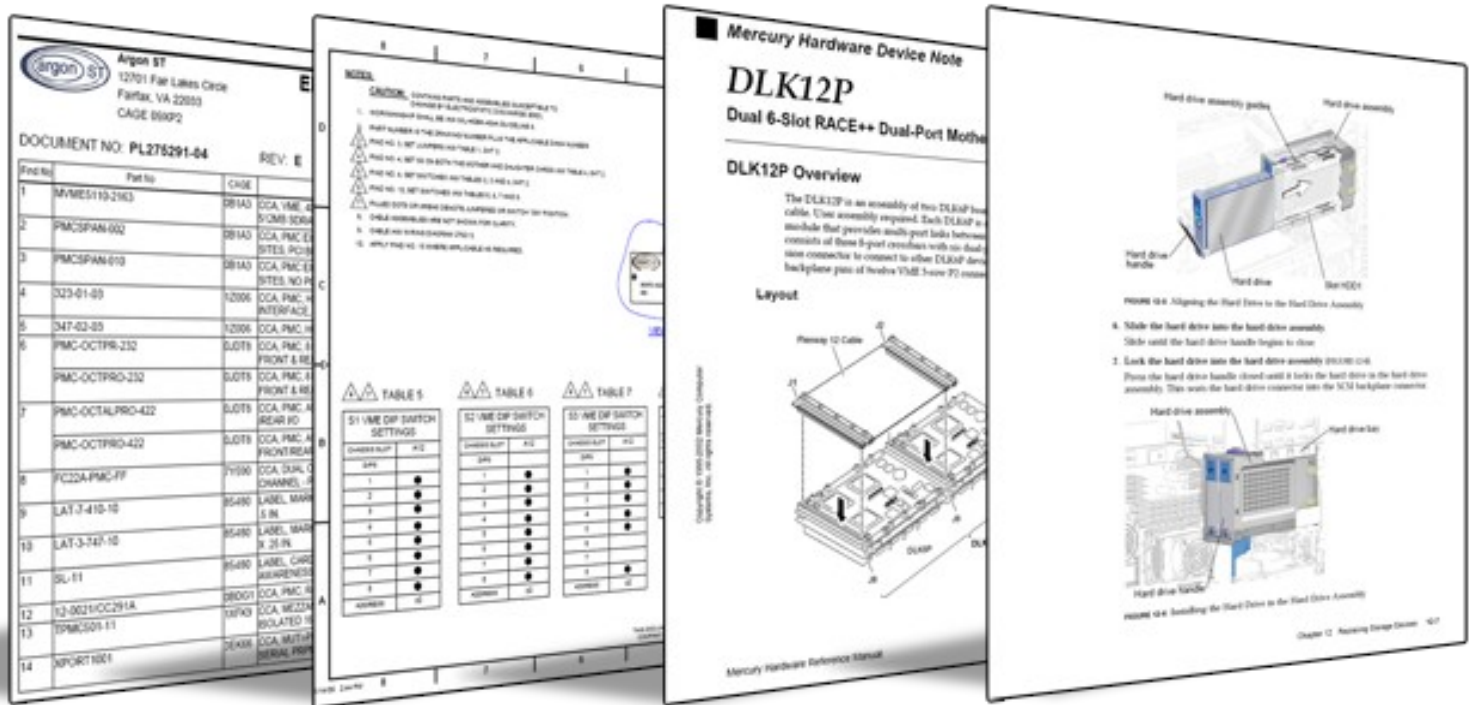
Traditional Training

- Can accommodate up to 60 learners
- Fully equipped with audio/visual equipment
- Outfitted with networked laptop computers



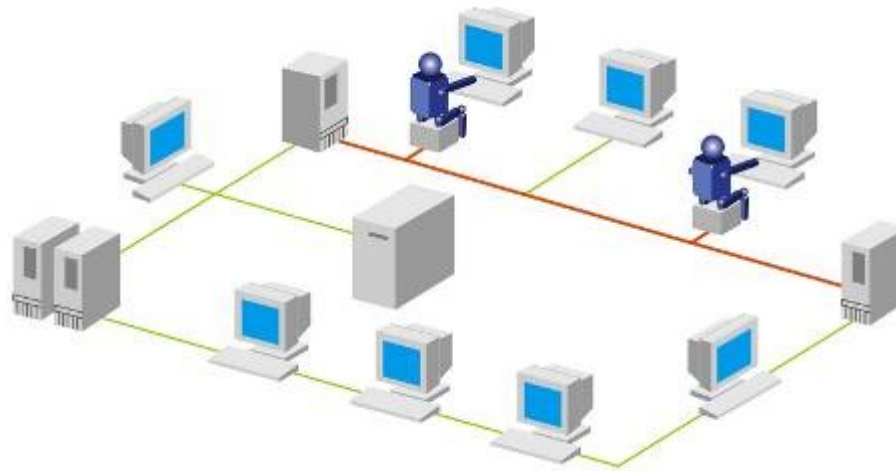
Tutorials & Quick Reference Guides

We can design, develop, and produce print-based tutorials, quick reference guides, and job aids for our customers just as we have for our own employees!



Embedded Training

- Users gain the hands-on experience through the use of our unique task-based simulations.
- Allows students to work on the actual systems that are deployed.
- Simulates realistic drills in a virtual environment, which makes it seem like you're in the application, but you'll be safe within the bounds of the training course.



Blending our Talents with These Tools

Classroom Training

- Adobe PDF & MS Word (print)
- MS PowerPoint & Adobe Flash (presentations)

Computer-Based Training

- Adobe Captivate
- Adobe Flash
- Adobe Illustrator
- Adobe Photoshop
- TechSmith Camtasia

IETMS & 3D Development

- Adobe Dreamweaver
- Adobe Acrobat 3D
- Adobe Photoshop
- Adobe Flash
- Autodesk 3D Studio Max
- Right Hemisphere Deep Exploration

Audio/Video

- Adobe Audition
- Adobe Premiere
- Adobe Bridge



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