

**The Secretary of Defense Performance-Based Logistics Awards Program
For
Excellence in Performance-Based Logistics
Section 2
Summary of Criteria Accomplishments**

Warfighter-Based Capabilities and Outcomes

Mission Success: The overall objective of the ALR-67(v)3 PBL contract is to meet and exceed fleet readiness expectations and requirements. The ALR-67(v)3 was first deployed aboard the USS ABRAHAM LINCOLN (CVN-72) Battle Group during Operation Iraqi Freedom (OIF). The system performed extremely well on its first combat deployment and the contractual availability metric of 90% was exceeded (97%). The Navy-Raytheon team met the challenge, and not a single aircraft was down due to non-availability during this wartime deployment.

Materiel Availability: The ALR-67(v)3 is a state-of-the-art, 4th generation airborne radar warning system capable of identifying and processing multiple threats from airborne or surface interfaces. The system is currently installed on F/A-18E/Fs, the Navy's premier tactical fighter/attack aircraft. NAVICP awarded the \$121.6 Million ALR-67(v)3 Radar Warning System Performance Based Logistics Team contract to Raytheon in September 1999, with a six-year base period and an additional five-year ceiling priced option. This contract expanded industry's role well beyond typical manufacture and repair of components for Navy aircraft and established several precedent setting features. The PBL was awarded one year before any production unit was even delivered; it was the first time NAVAIR APN-6 appropriated funding was included in a NAVICP PBL contract; the contract included guaranteed reliability growth and metrics for reliability and availability; all I-level infrastructure and resource requirements were concurrently deleted from the separate NAVAIR production program contract, enabling significant cost avoidance; no Contract Data Requirements List (CDRL) was required; a web-based integrated information system was established to provide all necessary information to

Government and Industry partners; and, contingency plans were explicitly identified in the contract in case of underperformance. Raytheon was chartered as the full service provider, encompassing overall program management, inventory control and engineering support for the ALR-67(v)3 Radar Warning System. Over the six years of the contract base period Raytheon has met or exceeded the availability and reliability metrics as set forth in the contract.

Under the ALR-67(v)3 PBL contract Raytheon provides the Navy with unparalleled levels of support for the F/A-18E/F Super Hornet. Raytheon Systems is required to fill 90 percent of fleet CONUS requisitions within 5 working days. Actual performance over the eight years of the contract averages a 99 percent fill rate.

Ownership Cost Management: The Naval Inventory Control Point's business case analysis projects the ALR-67(v)3 PBL will provide cost avoidances and savings of approximately \$62.7 million over the full 11 years (base plus options) of the contract. The cost avoidance breakdown is \$29.6 million for the base period and \$33.1 million for the option period. The savings and cost avoidances are attributed to Raytheon's use of technology insertion and failure diagnostics improvements. The coordinated efforts of the manufacturer and Fleet Support Team, combined with an eleven year contract which enables the vendor to make investment versus risk tradeoffs, allowed for the introduction and use of state-of-the-art interactive diagnostics, failure analysis and trouble shooting tools which have led to increased reliability, expeditious Maintenance/Repair/Overhaul (MRO) turn-around-time, and selective Condition-Based Maintenance. The PBL team's close interaction fosters NAVAIR/NAVICP/Raytheon collaborative planning on Spares Acquisition Integrated with Production (SAIP) at lower cost. These factors have been combined for the Reduction in Total Ownership Cost (R-TOC) by reducing spares requirements, reducing fleet returns, and eliminating the need for Intermediate (I) Level support.

Sustainment of Warfighter Capabilities

Public-Private Partnering: Prior to the September 1999 PBL contract award, the ALR-67(v)3 Radar Warning System was a new, non-fielded system for which no organic production or repair capability existed within the Department of Defense. In response to the need for support of this new system the ALR-67(v)3 Radar Warning System Team at the Naval Inventory Control Point along with the Original Equipment Manufacture (OEM) Raytheon Systems-Sensors and Electronics Division developed an innovative and precedent setting PBL contract. The contract structure provides incentives to Raytheon to employ best commercial practices and introduce innovations and efficiencies that help to further reduce total ownership costs. Among the creative features included in this contract are the following: reliability improvement guarantees, technology insertion incentives, material availability measures, obsolescence management, configuration management, requisition processing through Electronic Data Interchange, field installation and training support, and commercial wholesale inventory. The contract also calls for the development of an integrated web-based PBL information management system that allows for integrated data exchange and access between Raytheon and the Navy team.

In order to accomplish the performance based requirements of this contract, Raytheon has established two key Public/Private Partnerships with the Government. In the area of obsolescence management, Raytheon is partnered with NUWC Keyport, the USN center for Obsolescence Management. Under this partnership, Raytheon has provided all of the Engineering Parts Descriptions to Keyport. Keyport loads the engineering data into their Obsolescence Management Information System (OMIS), and then analyzes each part to identify current, pending and future obsolescence. As a third party, Keyport also manages obsolescence for Raytheon's Key Subcontractors. PIA's are in place allowing Raytheon's subcontractors to release their proprietary information directly to Keyport, permitting the same level of proactive analysis.

The second key Partnership is with the Fleet Readiness Center – Southeast (FRC-SE). Under this partnership, Raytheon has formed a consortium with several subcontractors and the Government for the purpose of repairing and refurbishing a key system element. Each member of the team contributes their resources to accomplish the refurbishment task. All team members, including the FRC-SE utilize the on-line data system for real-time data reporting and workload coordination. Data reported by the consortium using the on-line data system is used to update the Government's Contractor Asset Visibility (CAV) system through internet based electronic interfaces.

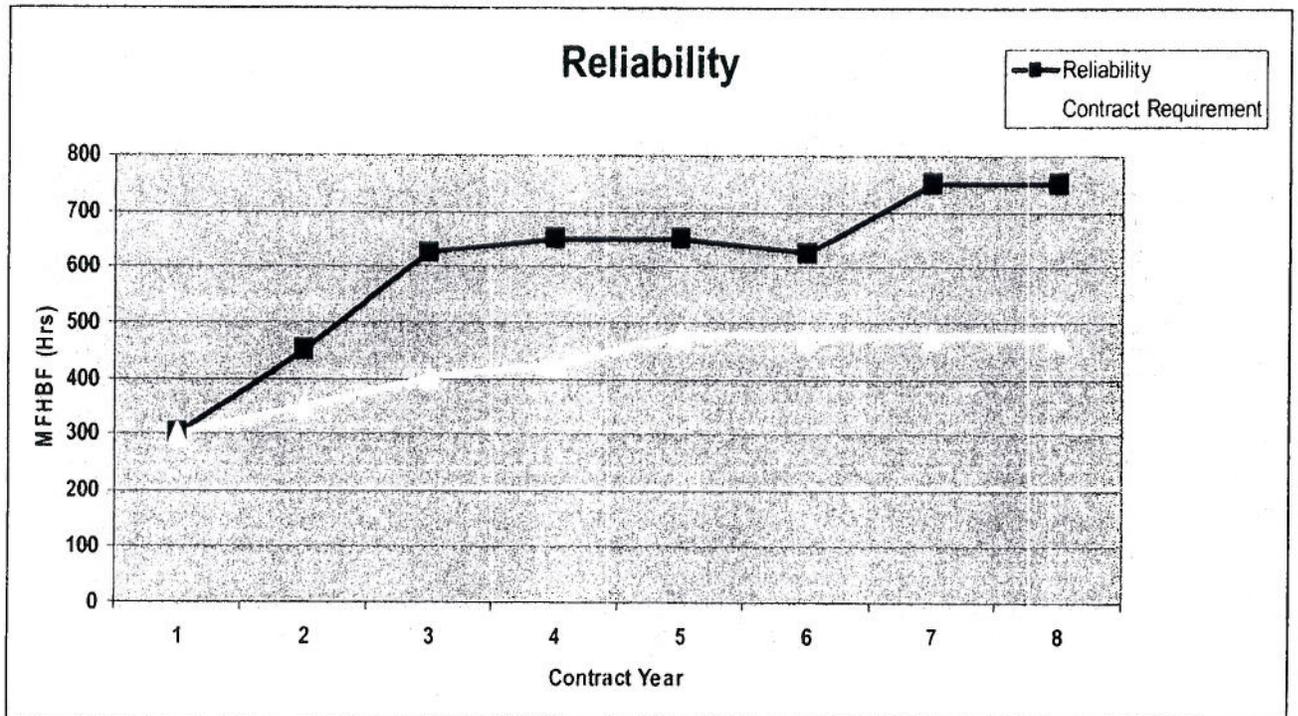
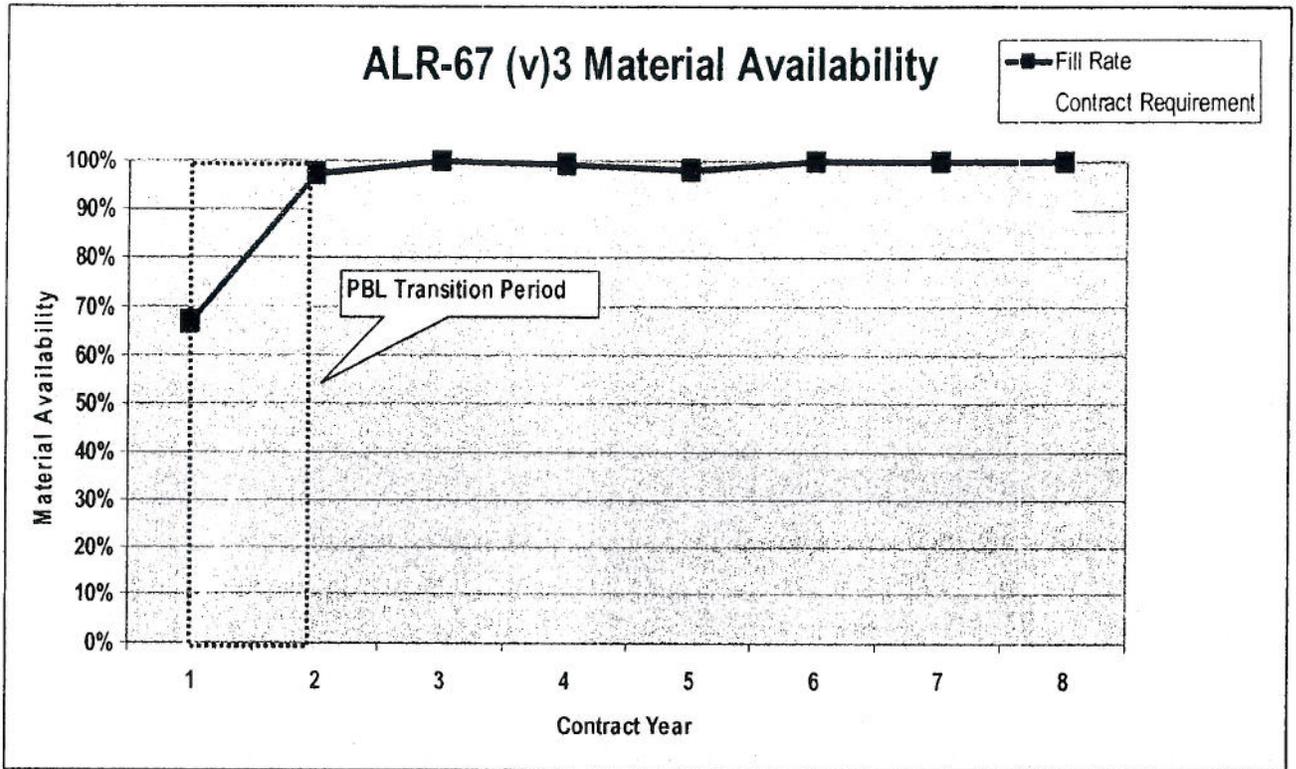
The infrastructure established to provide support for the USN has the potential to facilitate International partnering with the Royal Australian Air Force (RAAF) and other FMS users. International users may add their support requirements to the USN permitting reduced support costs for all participating Countries.

Systems Engineering Approach: With the Navy Fleet Support Team (FST) and NAVICP Engineering and Product Support Directorate acting as team members, Raytheon provides complete systems engineering for the ALR-67(v)3 PBL. This is accomplished through the use of technology insertion, reliability and maintainability improvements, obsolescence management, comprehensive failure mode analysis, integrated logistics support and on-site performance monitoring and technical assistance.

Footprint Reduction: The ALR-67(v)3 PBL has significantly changed the maintenance concept and support structure for this program making a sizeable reduction in the program's footprint. The guaranteed reliability built into this PBL enabled NAVAIR planners to eliminate Intermediate (I) Level maintenance support and aircraft carrier based test equipment. Eliminating I-Level maintenance and associated test equipment resulted in a significant footprint reduction. The higher reliability, backed up by the loaner spares clause and guaranteed 5-day requisition fill metric enabled a reduction of \$7.6 Million in initial retail spares procurement.

Obsolescence Management: One of the key tenets of the ALR-67(v)3 Radar Warning Receiver PBL support contract is obsolescence management. Raytheon is responsible for providing full, proactive obsolescence management, ensuring piece parts and WRA availability through timely parts procurement or technical enhancements, accomplished through Class II Engineering Change Proposals (ECPs). Additional cost efficiencies are gained through managing obsolescence in conjunction with their Government Partner (NUWC Keyport) and the Raytheon on-going ALR-67(v)3 production contract.

Reliability, Maintainability and Supportability Improvements: Reliability, maintainability, and supportability are a standard part of the ALR-67(v)3 PBL process. Reliability & Maintainability data and repair trends are monitored and technology insertion and corrective actions are taken to improve reliability. This has been accomplished through technology insertion by attrition in the repair process, ECPs introduced into production, process changes, and development of advanced interactive repair diagnostic capability. Raytheon has worked with the Navy team to identify field maintainability issues and implement configuration changes into production and the PBL repair process (most recent maintainability ECP changes were implemented in the Antenna Group because of maintenance related field failures). The IPT has also developed tools and training to assist the fleet maintainers. Raytheon has consistently exceeded the contractual reliability required. Current reliability is greater than 700 (life of PBL to-date) hours Mean Flight Hours Between Failure (MFHBF). This compares very favorably with the aggressive MFHBF requirements for the contractual period (start at 300, and grow to 475 hours). This reliability growth allows for more time on wing and adds to operational readiness and availability.



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**The Secretary of Defense Performance-Based Logistics Awards Program
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Section 4
Achievements**

The Deputy Under Secretary of Defense (Logistics and Material Readiness) takes great pleasure in presenting the 2008 Secretary of Defense Performance Based Logistics Award for PBL Sub-system to the NAVICP ALR-67(v)3 Radar Warning Performance Based Logistics Team. The results of this team's superb efforts culminated in the award of a \$34.3 million Performance Based Logistics (PBL) contract consisting of a six-year base period with an additional five-year ceiling priced option to Raytheon. This contract expanded industry's role well beyond the typical one of manufacturing and or repairing components for Naval aircraft, and established several precedent setting features: The PBL was awarded 1 year before any production unit was even delivered; it was the first time that a System Command's APN funding was included in a NAVICP PBL contract; guaranteed reliability growth; established metrics for reliability and availability; all Intermediate (I) Level infrastructure and resource requirements were concurrently deleted from the separate Production program contract by NAVAIR to accomplish substantial cost avoidance; no CDRL was required; a web-based integrated information system was established to provide all necessary information to Government and Industry partners; contingency plans were explicitly identified in the contract in case of underperformance. Under ALR-67(v)3 PBL Contract, Raytheon provides the Navy with unparalleled levels of support for the F/A-18E/F Super Hornet. Raytheon Systems is required to ensure fleet users receive shipments at sites within the continental United States (CONUS) within 5 working days from receipt of a fleet customer requisition, 90% of the time. Actual measured performance has been delivery within 5 days, 99% of the time, consecutively over the last 8 years (CONUS delivery average is 1.4 days). In addition, Raytheon has consistently exceeded the contractual

reliability required. Current reliability is at 527 hours Mean Flight Hours Between Failure (MFHBF). This compares very favorably with the aggressive MFHBF requirements for the contractual period (start at 300, and grow to 475 hours). Finally and most importantly, the Naval Inventory Control Point's Business Case Analysis (BCA) estimates that the ALR-67(v)3 PBL is projected to provide cost avoidances and savings of approximately \$62.7 million over the length of the 11 year contract. The cost avoidance breakdown is \$29.6 million for the base period and \$33.1 million for the option period. The hard work and dedicated effort of the NAVICP ALR-67(v)3 Radar Warning Performance Based Logistics Team is applauded.