



DEFENSE LOGISTICS AGENCY

THE NATION'S COMBAT LOGISTICS SUPPORT AGENCY



SMALL BUSINESS INNOVATION PROGRAMS EXPLORED INNOVATIONS

SECURING RESOURCES FOR US DEFENSE & COMMERCIAL INDUSTRIES

NUCLEAR ENTERPRISE SUPPORT

ORBIS USES DLA SBIR PROCESS TO SOLVE OBSOLESCENCE REQUIREMENTS FOR MILITARY SERVICES

ORBIS was awarded a DLA Phase I Small Business Innovation Research (SBIR) award in November 2017 to demonstrate the feasibility of improving product availability and increasing competition to alleviate limited sources of supply for DoD systems and subsystems. During their period of performance, ORBIS completed the initial engineering, associated lifecycle logistics, and manufacturing to provide a complete solution to the customer. By building on technical synergies, focused processes, economies of scale and familiarity with stakeholders, ORBIS reverse engineered the NSNs and developed Technical Data Packages (TDPs) to become a qualified source of supply. The Source Approval Request (SAR) process qualified ORBIS to manufacture



Image provided by ORBIS, 2021

and market those NSNs for sale to DLA to improve availability, decrease cost, and broaden the industrial base for similar products.

ORBIS reverse engineered and developed a TDP for an emergency rescue bar for a High Mobility Multipurpose Wheeled Vehicle (HMMWV) and investigated the economic viability of doing the same for a disc brake caliper assembly for the same vehicle. In executing the work, ORBIS worked with potential manufacturers and resellers of HMMWV parts. DLA's need for alternate sources and the strong aftermarket demand for these parts created an ideal market opportunity for ORBIS to further develop additional TDPs for other HMMWV parts.

During the Phase I work, ORBIS worked with a local South Carolina company to identify other potential HMMWV reverse engineering candidates, including a body mount, NSN - 5340 -01-568-4874, with a strong market demand. ORBIS demonstrated in Phase I that its approach to reverse engineering related components using one company showed a 25% cost savings for the entire engineering, logistics, and manufacturing process for items as compared to

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TOPIC NUMBER:
DLA171-002

TOPIC TITLE:
Reverse Engineering
Technical Data
Packages for
Development of
Alternate Sources of
Supply for DLA NSNs

**CONTRACT
NUMBER:**
SP4701-18-P-0016

**SBIP COMPANY
NAME:**
ORBIS
Charleston, SC

**TECHNICAL
PROJECT
OFFICE:**
DLA J68 SBIP

PUBLISHED:
2021

Made in the USA





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individual companies that were completing the work. After demonstrating this successful method, ORBIS marketed their Reverse Engineering Obsolescence Management (REOM) Process to both DoD and commercial customers.

REOM caught the attention of Navy organizations, the Army, and companies in the Light Rail industry for reverse engineering obsolete material. ORBIS was awarded a Phase III SBIR contract with Naval Sea Systems Command in September 2020. This SBIR Phase III contract, managed by General Services Administration (GSA), was derived from the DLA SBIR Phase I objectives to successfully improve availability, decrease cost, and broaden the industrial base for the intended products. This is an Indefinite-Delivery, Indefinite Quantity (ID/IQ) contract, not to exceed \$29.4M over a five-year ordering period.

ORBIS is developing design modernizations with built-in features to rapidly implement follow-on technology and array upgrades. This effort will improve handling systems with frequent modular upgrades without expensive Original Equipment Manufacturer (OEM) support. This sophisticated approach is poised for rapid insertion into hydraulically controlled Towed Array Handling Systems, addressing obsolescence issues on critical Printed Wiring Boards and Assemblies (PWBs/PWAs) to provide significant reliability improvement benefits to the Navy fleet.

For more information, please contact DLASBIR2@dla.mil
