

Transition

SBIR Topic Number:
 AF99-323

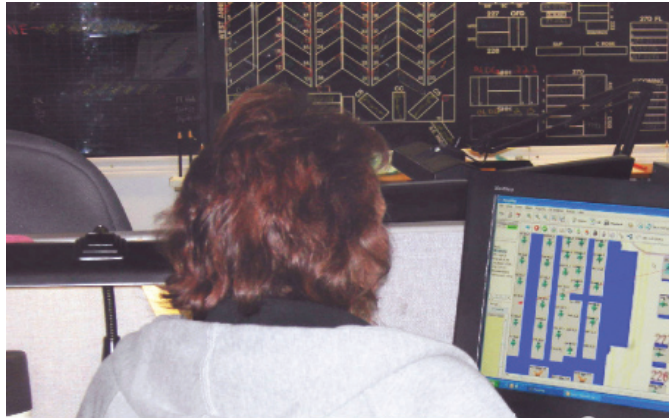
An example of Air Force supported SBIR/STTR technology that has been transitioned into an Air Force or other DoD system or subsystem or used by Air Force test ranges and facilities or maintenance depots.

SBIR Title:
 Extensible Markup Language/Integrated Definition 3 (XML/IDEF3) Based Training

Contract Number:
 F34601-00-C-0200

SBIR Company Name:
 Knowledge Based Systems, Inc.
 College Station, TX

Technical Project Office:
 Oklahoma City Air Logistics Center
 Tinker AFB, OK



RampMap™ is used in the Aircraft Maintenance Operations Control Center for asset tracking

Real-Time Visibility of Maintenance, Repair, and Overhaul (MRO) Assets

- The Air Force needed real-time visibility of aircraft and ground support equipment (GSE) to quickly locate, stage, deploy, and coordinate critical resources
- RampMap™ is a scalable computer-based replacement for the manual methods commonly used to track and manage aircraft, GSE, and other MRO assets
- This highly useful technology evolved from a SBIR-funded, software-based training project
- With its utility first proven at the Oklahoma City Air Logistics Center (OC-ALC), RampMap™ was subsequently installed at the Ogden and Warner Robins ALCs as well as the Aerospace Maintenance and Regeneration Group

Commercialization Pilot Program Series

OC-ALC 8109

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Air Force Requirement

The Air Force was experiencing difficulties in the real-time visibility of aircraft and ground support equipment (GSE), making it hard to quickly locate, stage, deploy, and coordinate critical resources for product and resource movement. In the depot environment, the inability to monitor the status and location of maintenance, repair, and overhaul (MRO) assets resulted in increased costs as well as delays in the repair flow day.

In response to this requirement, Knowledge Based Systems, Inc. (KBSI) was awarded a SBIR contract titled Extensible Markup Language/Integrated Definition 3 (XML/IDEF3) Based Training. Managed by the Oklahoma City Air Logistics Center (OC-ALC), the research effort focused on establishing technology to rapidly capture, integrate, customize, store, manage, and disseminate enterprise asset and process knowledge throughout the depot maintenance organization, supporting improvements in asset visibility, resource utilization, and production cost.

SBIR Technology

The SBIR-developed technology, named RampMap™, is today the Air Force Materiel Command's standard system for depot aircraft visualization and movement. RampMap™ is a scalable computer-based replacement for the manual methods commonly used to visualize and manage aircraft, GSE, and other assets located on bases. RampMap™ receives legacy data and information to enhance asset information available to personnel responsible for managing and tracking the location of aircraft and associated ground support equipment, ramps and docks.

The software package was initially intended for use by the Aircraft Maintenance Operations Control Center (AMOCC) at Tinker AFB, as a replacement for the manual process of maintenance asset tracking using a magnetic white board.

Transition Impact

RampMap™ directly reduced the phone time and man hours required by AMOCC to monitor and plan for MRO asset movements and, at the same time, improved the accuracy

and speed of the information and decisions made in support of day-to-day decisions regarding resource allocations to workload accomplishment. Capturing the information in an electronic environment enabled not only the quick, accurate dissemination of this information in the form of reports to management, but also automated the propagation of this information to other decision support tools (e.g., simulation modeling tools) to increase the analytical accuracy and speed of management decisions.

AMOCC controllers are now able to identify, at a glance, the status of aircraft on the ramps as well as see projected aircraft moves. RampMap™ offers the following user benefits:

- Increased operational availability of production assets
- Increased labor effectiveness
- Reduced non-essential moves and downtime
- Streamlined movement schedule
- Improved threat response
- Estimated return on investment of three months

Following its successful use at Tinker AFB, RampMap™ is currently installed at Ogden ALC at Hill AFB, Warner Robins ALC at Robins AFB, and the Aerospace Maintenance and Regeneration Group at Davis-Monthan AFB. This application is also being considered for a sensor and terrorist attack monitoring and training tool.

Company Impact

This SBIR program has been instrumental in KBSI's development of this MRO tracking technology which is quickly becoming a stable business line for the company. Because RampMap™ is a componentized solution, KBSI is looking to take relevant features into the commercial aviation industry since it has similar visualization and tracking needs.

Founded in 1988, KBSI is a dynamic analysis, modeling and systems/software development and integration company specializing in lean business redesign and improvements. The firm provides industry-leading software and customized solutions in the areas of decision support, enterprise metrics, business intelligence and data analysis, asset management solutions, commercial off-the-shelf (COTS) process modeling software, simulation, training and facilitation.



SBIR/STTR

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