

COBOL - U.S. Air Force Center - CAMS

U.S. Air Force - Gunter

Core Automated Maintenance System (CAMS)

COBOL Assessment

History: The purpose of this effort was to assess the Core Automated Maintenance System (CAMS), a large high profile Air Force logistics system. This assessment was needed to provide comprehensive high-quality "As Is" functional analysis-level UML design documentation to support analysis of business processes and business rules in the system. Analysis of the legacy system's existing business processes was required to facilitate integration of unique CAMS functionality within the future "To Be" Integrated Maintenance Depot System (IMDS).



Challenge: CAMS consisted of a Unisys DMS 2200 database and over 3.5 million lines of Unisys COBOL code. For this system, TSRI generated 120 Gigabytes of high-fidelity hyper linked graphic and text documentation consistent with UML functional-analysis documentation standards. In addition, special purpose extensions to the "As Is" documentation generation were made allowing the Air Force to identify business rules, document the database, and relate business entities to the system's design and code. The DMS hierarchical CODASYL data dictionary and program layer DMS 2200 data manipulation language (DML) calls were separately indexed to map the relationship between the database and the business logic down to the statement level. All data entity usage locations were linked to textual documentation, graphical documentation, and the domain data dictionary. The entire UNISYS DMS 2200 transaction flow was analyzed, separately documented, and indexed for all programs within CAMS down to the statement level. This analysis permitted CACI, the project's prime contractor, to successfully identify the functionally unique CAMS components to be included in the IMDS system. The project required significant extension to TSRI's standard assessment and documentation capability to include these project specific displays. Because of the system's size and the massive quantity of documentation generated, the analysis exceeded memory limitations of 32-bit processors. This required that the documentation generation be divided into multiple parallel processes. Documentation segments were then combined and indexed to compose the multi-gigabyte documentation set.

Results: The final deliverable consisted of over a million pages of HTML and Scalable Vector Graphic (SVG) documentation and nearly a hundred million hyperlinks. TSRI delivered this assessment package with the requested enhanced functionality on time. The assessment of CAMS facilitated the Functional Baseline Study for the consolidation and interoperability of Key Air Force systems into the new IMDS architecture.