

COBOL - Premera Blue Cross - ADAS

Premera Blue Cross

Automated Document Assembly System (ADAS)

WANG COBOL to C++

History: Premera Blue Cross required the assessment, transformation and re-factoring of its existing Automated Document Assembly System (ADAS). ADAS was written in WANG COBOL and self generated WANG COBOL programs tailoring health care booklets for specific customer needs. WANG platform obsolescence and escalating operating costs became major drivers for the modernization of this document generation system.



A manual rewrite of ADAS was considered but rejected because of the high cost associated with such a rewrite. Cost estimates were particularly high because the new system required additional modifications to self generate C++. TSRI was selected to assess, transform, and re-factor the WANG COBOL code, migrating the system into a C++ Windows NT environment with full functional equivalency.

Challenge: The Premera ADAS project was conducted in three phases. In phase-1 the ADAS system's WANG COBOL was transformed into C++ with 100% automation. Minor enhancements to TSRI's *JANUS*[™] tool set were required to support ADAS features not previously encountered by TSRI found in the user interface tier. The modernized C++ version of the system was installed at the customer site for testing. No errors were discovered in the nearly 50,000-line system during customer acceptance testing. During phase-2 the new C++ ADAS system was re-factored using fully automated methods. TSRI used their *JANUS*[™] toolset for automatic consolidation of redundant code. During phase-3 extensive hand re-factoring was required for the replacement logic that would generate C++ programs. Hand re-factoring was necessary to complete this process because this project predated the *JANUS*[™] toolset's capability for semi-automated re-factoring.

Results: Upon completion, the re-factored and upgraded version of ADAS was delivered to Premera Blue Cross and successfully deployed. Subsequent testing and implementation confirmed the accuracy of TSRI's transformation including the capability of the new system to self generate C++. The architecture of the C++ version proved much better for code generation than the original COBOL generator. TSRI's automated approach to legacy system modernization proved highly effective. The C++ version of ADAS is used today to generate the health care booklets for many major corporations.