Sector7

Shaw Industries, Inc.

Nature of Project

VAX OpenVMS to IBM RS/6000 AIX
COBOL: 1,200,000 lines **DCL:** 250,000 lines
Rdb: 385 tables **TDMS:** 850 screens

Shaw Industries, Inc., a subsidiary of Berkshire Hathaway, Inc., is the world's largest manufacturer of tufted broadloom carpet. Headquartered in Dalton, Georgia, Shaw sells carpeting for residential and commercial applications throughout the United States and exports to most markets worldwide.

In 1997, Shaw's administrative applications ran on IBM's RS6000 technology. Shaw's Manufacturing Execution Programs (MEP) ran on Digital Equipment Corporation's VAX OpenVMS technology. Shaw was faced with OpenVMS human resource shortages and the need to standardize technology across a single midrange platform. IBM was selected to provide the hardware solution and Sector7 was selected to provide the bridge from OpenVMS to IBM's RS6000 technology.

Sector7 has a five-step blueprint process for moving applications from OpenVMS to AIX. The first step was an assessment. During the assessment Sector7 performed a situational analysis. The MEP application was developed using DCL, TDMS, Rdb, RMS, COBOL, and DECnet. DEC Command Language (DCL) is the control language for OpenVMS. DCL is very powerful and users can write simple programs in it. Terminal Display Management System (TDMS) allows the user to create complex forms and have the form stored in the common data dictionary. This allows the data in the form to be used by Rdb. Relational Database (Rdb) is a proprietary relational database for OpenVMS systems. Record management System (RMS) is a file system manager integrated with the VMS operating system. RMS handles indexed, relative, and sequential files. Indexed and sequential can have fixed and variable length records. DECnet is a task-to-task protocol similar (in concept) to IP and operates over Ethernet, fast interconnect or serial connections. Subsequent to the situational analysis, Sector7 worked with Shaw to develop a migration approach to fit both tactical and strategic business needs. Sector7 can provide solutions ranging from low-risk migration to completely reengineered applications using Business Logic Extraction (BLE) methodologies. Migration requires making the minimum changes necessary to allow the code to function on the new system. This is usually the fastest way to get the code up and running on the new system. Issues such as text translation, non-portable code, and hardware differences are addressed. This kind of port is very low risk and it is possible to have follow-on work to improve design and performance efficiencies. It is low risk as long as adequate time is devoted to planning the changes. Reengineering using BLE requires extracting the business logic from the code to take full advantage of the features of the new system, reusing code where possible, and rewriting it where necessary. This process makes better use of the system features and usually results in better code. Often BLE is selected when organizations have set specific product standards.

(more)

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Sector7

Shaw Industries, Inc. (continued)

The solution selected by Shaw was a combination of migration and reengineering. COBOL was ported to AIX to compile on the Microfocus COBOL product. Sector7 has a product for converting DEC's flavor of COBOL to the Microfocus flavor of COBOL. For RMS, Shaw selected the Sector7 product VX/RMS. VX/RMS is an implementation of DEC's VMS RMS system for UNIX. VX/RMS allows VMS programs, which access RMS directly to function without change. All VMS file types and access modes are supported. Support for relative, sequential, and block mode files is supplied by direct access to the UNIX or NT file system. For DCL Shaw selected the Sector7 VX/DCL product. VX/DCL is an implementation of DEC's VMS Digital Command Language for UNIX. VX/DCL allows applications to use all of the VMS commands, which are so familiar on Windows NT or UNIX systems. All of the existing command scripts (.COM files) will run on the new platform. Rdb was reengineered to Sybase. Sybase is the Shaw corporate standard database product. This required converting RDO, a precursor language to SQL, to SQL. TDMS was reengineered to the standard forms package integrated with Microfocus COBOL. The project was ready for deployment in 14 months.

The successful project allowed Shaw to retain this valuable software investment on corporate standard hardware and software technologies. Human resource needs could be leveled between administrative and manufacturing areas.

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