



Summary

DOC are currently scheduled go live with the IMS to DB2 migration in May 2003, ahead of the OMNI application roll-out planned in July. Looking to the future, DL/2 will be used to convert the remaining databases, removing IMS from the OBTS/OMNI environment and simplifying data management.

Commenting on the project Robert Swann said, "In the end the conversion effort was straight-forward with no surprises. From an application perspective, we have seen no appreciable overhead in running our OBTS application programs against DB2. DL/2 has proven itself to be the right solution in our case."

Results

- To date, 70% of legacy offender information migrated from IMS to DB2
- DL/2 successfully converted 6 IMS databases, 4 of which are bi-directionally logically related, containing over 160 physical segment types
- No changes made to the existing legacy application programs
- All data required to support the new application is now in DB2, making data synchronization between the old and new application far easier
- Results achieved quickly and at low risk

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About Circle

Circle Computer Group is a trusted supplier of software, training and consulting to the IBM mainframe community. Circle's DB2 data migration solutions are used by organisations worldwide to accelerate the move to DB2 while reducing much of the complexity and risk associated with migration projects.



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Washington Department of Correction deploys next generation applications to support current and future business requirements



The Washington Department of Corrections

The Washington Department of Corrections was created in 1981, assuming correctional responsibilities from the Department of Social and Health Services. The DOC has 7,700 employees and supervises over 15,000 offenders housed in 13 institutions as well as in 18 work training and pre-release facilities. It has 130 administration centers and oversees 93,000 offender field cases, of which 61,000 are supervised offenders in the community.

The Office of Administrative Services (OAS) provides

administrative and support services, including IT services, to the Department of Corrections. While certain applications such as personnel systems are outsourced to other agencies, OAS's IT function is responsible for the support of all offender-based applications.

The Existing Environment

The Offender Based Tracking System (OBTS) is the DOC's core application and was acquired and customized in the early '80s. It is based on COBOL and IMS and runs on the Washington State's IBM mainframe. In addition to OBTS,

there are a number of satellite systems based on NT that are used for monitoring offender activities. These systems update OBTS on a regular basis.

Company Facts

Washington Department of Corrections

Headquarters:
Olympia, Washington

Core Business:
Government Agency responsible for the administration of correctional programs in Washington State.

Business Need:
To better support current business requirements and to fulfill the information needs of the agency as its mission changes over time

Technology Solution:
Next generation applications developed by IBM Global Services (IGS) using legacy data migrated and maintained with DL/2 from Circle Computer Group

Looking to the Future

OBTS supports the functions of the DOC as the major repository of information regarding offenders and is accessed by over 4,000 users. In addition to statewide use by DOC personnel, it is also available to authorized individuals in other Federal, State, and Local entities. OBTS has changed significantly over time, growing to an integrated set of 34 sub-systems comprising 800 COBOL programs and covering a wide range of tracking and reporting requirements. However, by the mid 90's OBTS no longer adequately addressed the information needs of the agency as its mission continued to change and expand.

"OBTS has grown in functionality over the years to keep pace with changes in the Department of Correction's mandate and working practices," said Robert Swann, IT Projects Manager. "But we realized that to continue to provide increased functionality and information transparency in the future, changes were required to a number of the technology choices made back in the 80's."

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In 1998 the DOC decided on a technology refresh strategy - redeveloping the OBTS application using modern technologies including mainframe versions of WebSphere, Java and DB2. The replacement system would be called OMNI, which stands for Offender Management Network Information. Functional requirements of the new system included the development of a unified and maintainable information technology architecture and interfaces to a wide range of internal and external systems. A key requirement was the coexistence of OMNI with existing legacy systems during all phases of the new development process. This was a critical element as OMNI would be developed over several years.

The technology refresh was broken into a number of stages, in line with the State legislature's preference for funding smaller projects. Having secured funding for the redevelopment of half of the OBTS application, DOC went out to tender. 10 bidders responded and 4 were then asked to submit detailed proposals. In the end, IBM Global Services (IGS) was selected to carry out the project in conjunction with DOC IT personnel.

The Data Compatibility Problem

IGS recognized that a major challenge for the staged rollout of OMNI would be the coexistence of OMNI and OBTS throughout the project. Coexistence would require the synchronization of data between OBTS legacy applications running on IMS and new OMNI applications being developed in DB2. So in order to accelerate delivery while reducing project risk, IGS and DOC decided to tackle the data problem as a separate activity running concurrently with application development.

The team reviewed various approaches for data synchronization and migration including the use of DL/2 from Circle Computer Group, which had been successfully used by some of the IGS consultants on a prior project. In exploratory conversations with Circle and Lightyear Consulting, Circle's US distributor, the DL/2 approach became increasingly attractive for the following reasons:

- It would eliminate the IMS/DB2 synchronization problem by moving all data into DB2.

- Data migration could be achieved without requiring changes to the 800 OBTS application programs.
- While OBTS data would now reside in DB2, there was no requirement for OBTS development staff be conversant in DB2. OBTS application programs are frequently changed to reflect changes in legislation and the skills of the OBTS development personnel were in IMS, not in DB2. Therefore, it was crucial that application modification could continue as if the data still resided in IMS.

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- From the IGS perspective, mapping OBTS database schemas to new OMNI schemas would be far easier to do with both sets of data residing in DB2.
- Bi-directional synchronization of data from OMNI to OBTS could now be achieved by using DB2 triggers on both sides.

Following a 2-week proof of concept in April 2002 where one of the OBTS databases was successfully converted, IGS and DOC made the decision to go with DL/2.

The Migration Project

Circle was then contracted to perform the mapping of over 140 IMS segments to DB2 tables. A second database was converted in June and the rest of the databases were on schedule to go into production in September when a separate programming issue caused a delay in the deployment.

In November there was an opportunity to perform system testing and after 10 days of testing, a number of conversion errors were identified and corrected. Acceptance testing was completed in 3 days with great results.