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DB2® Information Management Software

OCLC Online Computer Library Center boosts productivity with DB2 data warehouse.

Overview

- **Application**
  Data warehouse for integrating enterprise-wide member and product information
- **Business Benefits**
  Number of system users increased by 75 percent; business areas enabled to make better, more timely decisions, minimize costs and maximize sales opportunities due to improved reporting capability; employee productivity enhanced due to dramatically reduced query times; decreased administrative costs
- **Software**
  IBM DB2® Universal Database™ Enterprise Edition, Version 7.2
- **Hardware**
  IBM @server® pSeries® 650; IBM @server zSeries®
- **Services**
  Business Objects; Cardinal Solutions Group

Using services like WorldCat, the world's largest bibliographic database with more than 52 million records, OCLC members receive cost-effective access to a wealth of global library materials.

Information is power, and few organizations know this better than the OCLC Online Computer Library Center (OCLC), a Dublin, Ohio-based, non-profit computer library service and research membership organization that provides information to academic institutions and libraries worldwide. Founded in 1967 as a computerized system linking the libraries of Ohio academic institutions, the cooperative now employs more than 1,000 people and serves over 45,000 libraries in 84 countries, helping them locate,

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–Dan Crawford, Section Manager, Corporate Management Systems Development, OCLC Online Computer Library Center

acquire, catalog, lend and preserve library materials. Students, scholars and professional librarians rely on its abstract and full-text information services as well as on WorldCat, its famed bibliographic database.

In an effort to enhance member services, OCLC established the Business Process Improvement Program which called for several key initiatives—to improve corporate communications by providing a business intelligence solution, and to support programs for sales and service staff by providing a relationship management system. In order to address these challenges, a project team was charged with replacing existing reporting processes which suffered from less-than-optimal query speeds and implementing a new total reporting solution. OCLC (*www.oclc.org*) recognized that to resolve the situation, it needed to bring its distributed information resources together for more effective access and sharing.

Faster access to sales and member information allows OCLC to improve member service and business decision-making.

"The robust capabilities of IBM DB2 software combined with the reporting features of BusinessObjects have provided a solid foundation for the warehouse and set a strong precedent for OCLC's future business intelligence needs."

*–Kim Bullinger, Section Manager, Data Resource Management, OCLC Online Computer Library Center*

Under the direction of Tim Schwab, director of the Information Systems division, the organization turned to its long-time vendor, IBM, for help in consolidating its data assets into a data warehouse based on IBM DB2 Universal Database Enterprise Edition. To create reports based on the information in the data warehouse, OCLC chose BusinessObjects, Version 5.1.7, from IBM Business Partner Business Objects. Cardinal Solutions Group of Cincinnati, Ohio, both an IBM and Business Objects Business Partner, helped OCLC implement the solution.

The combined solution has allowed OCLC to speed up data access and facilitate in-depth analyses that help guide its business strategies. "Our DB2 data warehouse has helped us to generate useful insights on our members and product sales that are enabling us to make better business decisions and develop strategies to more effectively serve our membership," says Dan Crawford, section manager, Corporate Management Systems Development, OCLC. "We anticipate that the data warehouse will provide increased value to our members by minimizing our internal reporting costs."

Consolidating data for better decision-making

Previously, internal data on OCLC members, products and billing was stored on three separate data marts housed on an IBM @**server** zSeries mainframe. "The data marts shared a common structure, but the speed of the joins and queries was hampered by a relational structure, preventing us from consolidating the data," explains Kim Bullinger, section manager, Data Resource Management, OCLC. "Residing in disparate silos, the information was difficult to retrieve and aggregate. Getting a view of the business as a whole, or even of certain segments, required a manual effort. Users were spending hours pulling information from different data marts, entering it on spreadsheets, cross-checking and validating it and, finally, analyzing it. We knew we had to eliminate this inefficient process by creating a common pool of accurate data that our different areas of business could easily access."

A common goal of the business intelligence project was to provide a single version of the information with respect to the corporate data. The data warehouse provided marketing, sales and support staff with just that. Today, reports are generated to support sales calls, answer member questions and provide billing analysis capabilities.
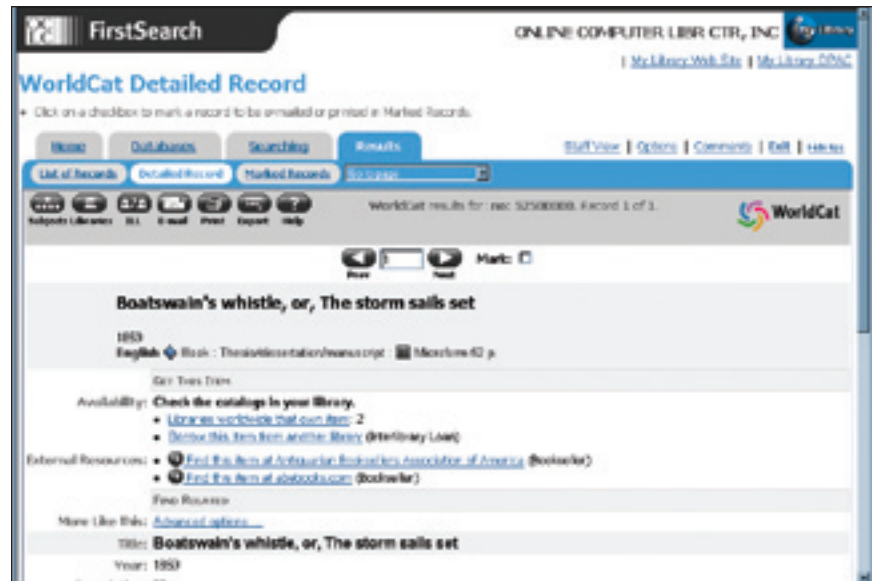
IBM and Business Objects technologies play a strategic role in ensuring OCLC has instant access to billing, product, library and marketing data for cornerstone products like WorldCat.

Improving information management

Before deciding on a solution, OCLC conducted an internal analysis backed by a third-party business consultant. Both the business consultant and IBM concluded that a data warehousing solution was the answer to its problems. OCLC's data warehouse resides on an IBM @**server** pSeries 650 infrastructure.

For the front-end reporting capability, OCLC leveraged its existing relationship with Business Objects and deployed BusinessObjects, Version 5.1.7. The solution provides powerful business intelligence functionality by running on top of DB2 and integrating query, reporting

and analysis capabilities. It also tracks data across the organization to enable divisions to gain a better understanding of their business performance, membership base and product sales, and to match the needs of members with the services they offer.

The tight integration between DB2 and BusinessObjects—and the fact that they are designed to work together for optimal performance on queries—were deciding factors in OCLC's choice of the components. "As a cooperative concerned with efficiency and productivity, we are impressed that the business intelligence architecture of DB2 enabled rapid deployment of our

warehouse, and that both DB2 and BusinessObjects provide the fast query response times we need," says Crawford. "We developed Corporate Travel Pack reports, which are used by sales staff to provide information prior to their site visits. We most often use the ad-hoc query function, which allows support staff to answer billing questions from members and provide management with current facts and figures."

Improving productivity and business performance

Since the data warehouse has been operational, the number of users accessing the reporting system at OCLC has jumped by 75 percent. With dramatically shortened query times — from four hours to two to three minutes in a particularly exemplary case — productivity has increased, as employees have been able to devote more of their time to value-added work. "We've received excellent feedback from users. Rather than spending hours just retrieving data, our analysts can now focus on analyzing the data and implementing their findings," says Crawford.

Ellen McCarthy, manager of market data for OCLC and a key project visionary, uses BusinessObjects for the data marts and praises the new data warehouse. "The new version of BusinessObjects blows the old one away," she says. "Performance problems are completely gone, and you see your results in a matter of seconds, rather than minutes or never, as before."

Looking forward, OCLC is exploring the option of implementing analytic applications from Business Objects, which it anticipates will enable senior-level management to have information at their fingertips and the ability to proactively monitor key performance indicators. The organization also plans to integrate the data warehouse with its Siebel relationship management system and PeopleSoft enterprise resource planning applications, enriching both systems with a continuous supply of data to improve decision-making.

"Our new system gives us a better awareness of business performance so that we can proactively address problems and improve our services," says Bullinger. "The robust capabilities of IBM DB2 software combined with the reporting features of BusinessObjects have provided a solid foundation for the warehouse and set a strong precedent for OCLC's future business intelligence needs."
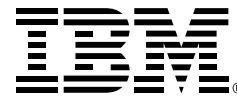
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