

Customer Profile

Information Builders enables agile information solutions with business intelligence (BI) and integration technologies. WebFOCUS – the most widely utilized business intelligence platform – connects to any enterprise system or application and enables simple and intuitive interaction with information.

Verizon

Snapshot

Organization

Verizon

The Challenge

Provide internal clients with access to extensive DB2 transaction data in order to achieve self-reporting goals for access carriers and to better understand customer preferences.

The Strategy

Implement WebFOCUS to reach extensive DB2 access carrier transaction tables to extend self-reporting capabilities.

The Results

Rapidly deployed an intranet application to provide query capabilities for improved tracking, analysis, and reporting of transaction processing. Can now target previously unavailable trend data for marketing efforts in the long-distance arena.

Information Builders Solution

WebFOCUS.



Cathleen Maloney, development manager for Verizon's Access Provisioning System group.

Verizon Rings Up WebFOCUS

BI Helps Verizon Expand Into New Telecom Markets

Deregulation of the telecommunications industry has escalated consumer demand for choice, flexibility, and low-cost alternatives in all their communications needs. Over the past decade, the battle among telcos has primarily been fought over long distance and wireless markets. Today, the industry is faced with another new frontier as the Telecommunications Act of 1996 opens up local calling and Internet markets, removing territorial barriers that have been in place since the Regional Bell Operating Companies (RBOCs) were created 25 years ago.

Verizon, the nation's largest local phone company – servicing 21.5 million households and more than 2 million businesses from Maine to Virginia – is well positioned to seize these new opportunities. But the company has felt the strain on some of its key business systems. For example, there has been increasing pressure to efficiently handle the growing volume of access carrier transactions while expanding its own business base into newly deregulated markets. "Right now, we are trying to break into the long-distance market," explains Cathleen Maloney, development manager within

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the Access Provisioning Systems group. “This has presented a number of data processing and reporting challenges.”

In particular, two business problems needed to be addressed. First, existing IT infrastructures had to be bolstered to improve transaction processing and self-reporting. Second, the company needed access to historical data to effectively identify customer preferences and develop effective marketing strategies.

To attain these goals, Verizon implemented a WebFOCUS application that taps into its extensive DB2 access carrier transaction tables. “Prior to WebFOCUS, we had no insight into transaction history, no self-reporting capabilities, and no trend analysis,” remarks Maloney.

Identifying the Missing Link

Verizon’s Business Office in Beltsville, Maryland is responsible for the timely and accurate processing of more than 300,000 daily transactions from access carriers. The transactions are mainly to switch long- distance service at the request of customers. To handle the large transaction volume, Verizon implemented a DB2-based application on the mainframe, called Express Electronic Access (XEA). Transaction data is submitted in batch mode directly from access carriers or entered by Verizon’s internal business office into XEA. XEA transmits the transactions to an interface system called Switch Manager, which does the actual PIC (Primary Interexchange Carrier) change at the end office switch. Data is then transmitted back to XEA acknowledging completion of the transaction, and Verizon informs the access carriers of the number of lost or gained customers.

XEA’s implementation facilitated the accurate and prompt processing of millions of transactions per month. However, the mainframe system lacked a query interface, which could provide valuable information about timeliness – such as how long it takes to actually complete a transaction. On a quarterly basis, access carriers rate Verizon on its performance and service. “They have certain standard measurements, such as transactions should occur within twelve hours,” says Maloney. “To respond to their questions and evaluations, we looked for a web-based product we could use to query the DB2 data.”

Looking to the Web

Verizon’s decision to explore web-based products was based on two important elements: the web is a user-friendly interface that most people have had some experience with, and the web eliminates a lot of software maintenance problems. “We looked around at several different web reporting products, including MicroStrategy’s DSS web Solution and Microsoft’s MS Query,” recalls Maloney. “We chose WebFOCUS because it was more robust and flexible. Another significant feature was the ability to govern how much data can be retrieved. We didn’t want clients trying to pull back millions of rows of data,” she adds.

A pilot project was launched in early 1998 to determine if WebFOCUS was a viable product. With the assistance of a consultant from Information Builders’ Professional Services department, an application prototype was developed in just six weeks, then expanded into a full-scale implementation. “Information Builders’ consultants and technical support team have been very helpful and extremely responsive to our needs,” says Maloney.

“WebFOCUS withstood the test and proved its ability to simultaneously process a large number of complex user queries.”

Maloney's group of four developers had no previous experience with WebFOCUS. Yet, after attending a two-day training class, they were able to rapidly enhance the prototype. “WebFOCUS is an easy product to use,” notes Maloney. “We became productive very quickly.”

WebFOCUS in Action

The WebFOCUS application has been in production since April with very positive feedback from users. It resides on a Hewlett-Packard LX ProNet Server running Windows NT 4.0, which connects to the XEA mainframe. Netscape Enterprise Server provides the intranet connectivity from user workstations running standard browser software. Developers used WebFOCUS in conjunction with Microsoft Front Page to create a managed reporting environment that limits input criteria and helps users create efficient queries.

“We built indexes on the DB2 tables to help facilitate user queries in a variety of ranges,” explains Maloney. “If they want to query something by a range of dates, there's an index built for that. If they want to query something by the telephone number or a service order number, they have that flexibility as well.”

The only changes required to the DB2 tables, other than additional indexes, were the manipulation of tables to prevent huge JOINS. The XEA system consists of about 100 DB2 tables with an average of 20 fields and millions of rows per table. Ten of these DB2 tables are used by WebFOCUS. “Those were the only things that we had to do on the DB2 side,” Maloney adds. “WebFOCUS interfaced seamlessly with DB2.”

One immediate payback of the application has been an improvement in self-reporting measurements. Prior to constructing the web-based query interface, Verizon could not accurately measure its performance for processing access carrier transactions. Instead, they had to rely on access carrier measurements, which were negatively skewed because of unqualified variables. “Now we can see where there are discrepancies and find ways to correct problems in order to improve our response times,” Maloney says.

Expanding to the Internet

Ultimately, Verizon hopes to enable Internet access to the WebFOCUS system so carriers can perform queries themselves. Security constraints will be put in place to ensure that each carrier can access only its own transactions. “WebFOCUS is a perfect solution, since no modifications will be required to port the intranet application to the Internet,” Maloney says. “The architecture will be upgraded with a more powerful server and Internet connection. The programs themselves won't have to change; only the URL will be different.”

With current intranet usage peaking at about 200 concurrent users and eventual Internet usage climbing to as many as 7,000 users, Verizon was concerned about scalability and performance.

To address these issues, the development team performed a simulated stress test of the system. “We did not want to put something in place and then have to revisit the entire application when it comes time to open it up to a wider user community,” explains Maloney. “WebFOCUS withstood the test and proved its ability to simultaneously process a large number of complex user queries.”

Find Out More

To find out how our solutions can help your company succeed, talk to an Information Builders representative today.

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call **(800) 969-4636.**

WebFOCUS applications use a combination of queuing, load balancing, and failover capabilities to ensure good performance for hundreds of concurrent users. With queuing, if there are 100 simultaneous sessions allowed by the web server, rather than bumping the 101st user with a "server not available" error message, that user will be placed in a queue in a wait state for a predefined period. Load balancing allows numerous application incidences to be established in a cluster on multiple servers. Requests can be routed among them, either on a random or round-robin basis. And because WebFOCUS applications can be ported among various hardware platforms and operating environments – all the way up to the mainframe – the server processing power is virtually unlimited.

Moving Into New Markets

Based on the success of the first WebFOCUS application, Maloney's team was asked to create another reporting environment to examine consumer information such as calling-card usage, customer preferences, and access carrier market share. The request came from Verizon's Global Network International group, which is responsible for helping the company move into new long-distance markets. Within one month, Maloney and her team developed a full complement of reports and queries, effectively mining the XEA database to address marketing questions specific to New York state. "Our analysts were not able to get this type of information before WebFOCUS came along," notes Maloney.

Verizon is determined to evolve into a multi-dimensional communications company, providing superior local, long distance, wireless, and high-speed data services to its customers. It's a constant challenge, but effective use of information technology is helping to pave the way. "WebFOCUS is helping us better understand and respond to the ever-changing demands and opportunities of our industry," concludes Maloney.