

By John McCormick

Think you have integration indigestion?

While Hewlett-Packard corporate tackles its mega-merger with Compaq, smaller groups within HP have been wrestling since well before the merger with hefty integration efforts of their own. Though small by comparison, they're massive by most scales and involve some of the latest Web integration tools on the market.

HP's OpenView business unit, for example, which controls the company's systems management software line, has been working quietly on a huge Web integration effort that is connecting some 30 sites behind a single customer relationship management portal. The move is giving customers the ability to sign on to OpenView Web properties with just one password and allowing the company to collect OpenView customer data more easily. The \$81.7 billion computer equipment giant just embarked on a second phase of the project, according to a company involved in the project, which will expand the usability of the sites and push customer data received online into a sales-lead generating system.

For its tools, HP chose XML database products—a move being made by other big-name companies. HP turned to Coherity, a Palo Alto, Calif., company founded by HP expatriates. The eXtensible Markup Language (XML) is a format that lets developers define elements on a Web page, then allows information from that document to be easily managed and shared across the Web. OpenView managers were not available for comment, but Coherity said it finished the project's first phase in late 2000.



Hewlett-Packard was among the first to embrace XML databases, but others followed suit. In February, for example, Philips Business Communications, a unit of electronics company Royal Philips Electronics, implemented an XML database to give employees real-time access to product information. Some 10% of Fortune 500 companies are now exploring XML database deployments, according to Ted Friedman, a Gartner Inc. analyst.

XML Vs. Relational

But while some XML vendors claim their databases are robust enough to support most business needs, software experts agree that XML databases can't match the capabilities of established relational databases for transaction processing applications, and are better positioned as a complement to those more senior databases. Which might not bode well for the long-term viability of stand-alone XML databases. Larger relational database companies, including IBM and Oracle, are adding robust XML features to their existing products. And some analysts say today's stand-alone XML databases might not be able to stand up to the competition.

"The smaller guys might not survive," Friedman says.

For now, XML databases have some advantages over relational databases. Their data management systems, designed to handle the storage and retrieval of documents in XML, are well suited for Web services, which are mostly based on XML protocols, as well as the integration of content-rich Web

sites, which increasingly use XML. (See p. 84 for a primer on native XML databases.) An XML database stores XML documents in their entirety. Storing and indexing those documents in their native form allows data to be efficiently accessed and compiled. Relational databases also can store XML data, but only in chopped-up chunks that are forced to fit into the row-and-column structure of a relational database, which makes it hard to store and retrieve XML data.

The XML market is dominated by Software AG and a handful of smaller companies, including Coherity, eXcelon, and NeoCore. According to research group International Data Corp., the XML database market generated just \$45 million in sales in 2001 and will be flat this year. Sales have stalled for two reasons, according to IDC analyst Susan Funke. The first is budget tightening. The second is that buyers want to see how well relational database vendors incorporate XML features into their offerings. For instance, Release 2 of Oracle's 9i database, introduced last month, includes a repository for XML data.

The OpenView unit didn't have time to wait. Coherity says HP was looking for a Web integration solution in early 2000. The unit had scores of independent Web sites offering product information, technical support and the like. These data silos made it difficult for the OpenView unit to collect and share information about its customers. It also resulted in redundant data collection efforts and often required that customers re-enter background information whenever they visited a new OpenView Web site—a major nuisance.

Coherity's database products include tools for storing, searching, and aggregating large amounts of data. Coherity provided profile management, which allows customer data to be merged and shared, as well as authorization management, which extends directories and security systems to allow a company to control access better to restricted areas of a site. Coherity also says it linked up with the HP Passport system, which gives users a single sign-on password for accessing Web sites.

The HP project went so well that, according to Coherity's Chief Executive Officer Joe Ellsworth, the company is talking to other department managers within HP and Compaq. "They're interested," he says, declining to elaborate.

Coherity would not put a number on its HP contract, but says major product implementations can run from \$500,000 to \$1.5 million. Yet, Ellsworth says, companies can see a return on their investment in as little as a year as content publishing costs are lowered, customer feedback is painlessly aggregated, and data is turned into sales leads.

Coherity has found a sweet spot in Web integration. However, as the major database vendors move further into the XML camp, it's going to be hard for the native XML database vendors to find their niche.

Additional reporting by Deborah Gage

Integrating Databases

Faced with data integration challenges? Here's how to make them manageable:

- 1. Plan for change. There always will be more integration work to do. Be ready to move. XML databases, while not as functional as relational databases, are more flexible
- 2. Keep hands off the data. Do an integration project at the Web level. Try not to mess with the underlying data or code
- 3. Hire smartly. If you're thinking of using XML, make sure you have the right people and tools to do the job
- 4. Take it step by step. Break the project down into pieces to attain integration expertise and a return-on-investment track record
- 5. Choose partners carefully. Make sure your vendors will be around for the long haul

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