

# New Specification Makes Engineer's Desktop More Efficient

Most Windows users are not familiar with the "object linking and embedding" (OLE/COM) component object model technology that works beneath the surface to provide intelligent data links between applications. Engineers, however, are not like most Windows users. They've been painfully aware that

OLE/COM technology could not be applied to the advanced CAD/CAM (computer-aided design and computer-aided manufacturing) applications that run on their desktops—until now.

"Until recently, a large percent of an engineer's time was spent translating data," says Brian K. Seitz, worldwide engineering-industry manager at Microsoft. "The data conversion effort took away from product development and improvement efforts."

In 1995, hoping to develop a specification to allow CAD/CAM applications to interoperate in a seamless manner without resorting to data translation, several Microsoft solution developers formed the OLE for Design and Modeling (D&M) Applications Council. Today, the OLE for D&M specification is revolutionizing the engineering desktop.

"By removing the data translation step through OLE for D&M, we've saved companies a tremendous amount of labor costs," says Seitz. "In addition, we've virtually eliminated the errors associated

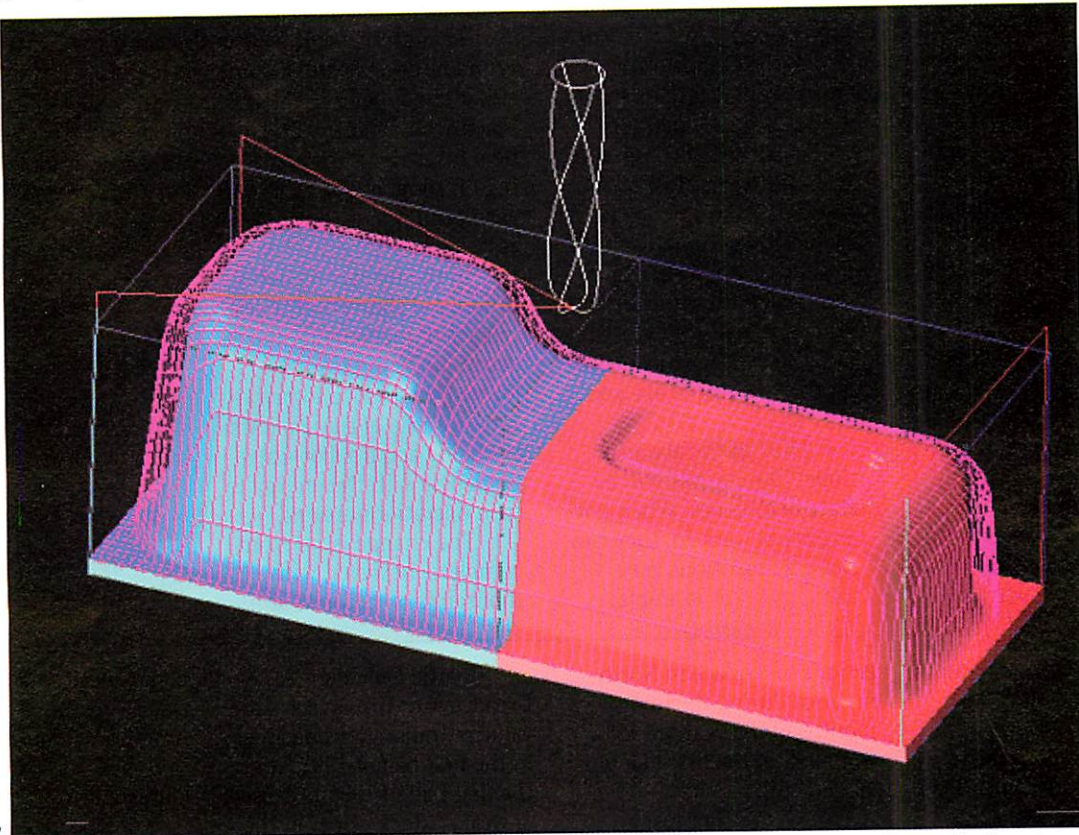
with data translation, so the specification is also responsible for improving quality."

For companies seeking to eliminate data translation errors and reduce engineering costs, the bottom line on OLE for D&M is that true plug-and-play performance is now being realized right on the engineering desktop. For example, a com-

pany can now select a CAD application that best suits its budget and requirements from one vendor and use it seamlessly with applications purchased from a different source with full confidence that the software packages can interoperate.

Together, Windows NT and the OLE/COM technology can improve business processes within, for example, a manufacturing company. Suppose a sales team uses a spreadsheet to maintain order data with quantity and widget dimensions specified by each customer. The spreadsheet can be sent, as an object in an e-mail message, to the engineering department. In turn, an engineer can embed the spreadsheet into a desktop file and use the dimensions to drive the CAD design application. Finally, the modified

design can be sent back to the sales department, so that the complete product specifications can be included within an order confirmation letter. This infrastructure uses object technology as a way to improve data flow between different applications and departments and enables the company to be more flexible and responsive to the needs of its customers. Improved internal communications reduces opportunity for error while increasing productivity. According to Seitz, the use of modular components is revolutionizing the software industry. Eventually, Seitz predicts, users will be able to mix and match systems



and snap fit them together readily through standardized interfaces that all applications will adhere to by convention. OLE for D&M is a major step toward this goal. For the people that run companies, OLE for D&M means more variety, more choice, and an easier time building an enterprise environment that features flexibility, low costs, and less overhead and maintenance. □

Diagram shows how the use of COM interfaces allows a CAD application to share transparently its geometry with a CAM application.

## Further Reading

[www.dmac.org](http://www.dmac.org)

By Marty Weil  
Staff Writer

# Mergers and Acquisitions Target China and Russia

In the backwaters of world economic activity, communist centralized economies were hardly players, but are now undergoing some of the same merger and acquisition activity as other areas, although in different ways.

In China, which is clinging to its communist government but allowing increasingly greater free enterprise, inefficient companies faced with bankruptcy and closure are being gobbled up by solvent companies, sometimes under government influence.

The Chinese economy is almost unbelievably fragmented. Central planning and local bureaucratic feuds created hundreds of small companies making the same products. For instance, *The Wall Street Journal* reported China has more than 120 television manufacturers, 700 beer companies, and 30,000 rubber-belt makers.

Because of such frag-

mentation, few companies have been able to make a profit or attain the size necessary to grow, even though selling to a vast home market of 1.3 billion people.

As the state gradually becomes more and more willing to surrender control over parts of the economy, the resulting mergers and acquisitions are transforming the country.

A *WSJ* report says there are indications that 1,100 company mergers will occur in 1997, up 33% from last year. Most of these firms were once run by local governments, but limited or no profits gave the local authorities little choice: allow outsiders to buy the dying companies or let them go bankrupt and close.

Most of the acquisitions, though, are still by state companies. When governments want to, they can make acquisitions very attractive. For example,

Shanghai Rubber Belt, which needed a production and distribution base in southern China, bought an ailing one in Nanchang. The local government, seeing the Nanchang facility faced with bankruptcy, was willing to write off two-thirds of the factory's debt and suspend interest payments on the remainder.

Though the central government doesn't order mergers, it encourages them with incentives. Typically, the help takes the form of paying off some of the debt and exempting interest on the rest.

In the former Soviet Union, old state enterprises, models of inefficiency and decay, are being transformed. In a move to privatization, some of these plants are being acquired by entrepreneurs, with the energy to turn operations around.

The change is far from complete, however, with thousands of factories still

headed by old management and standing idle for lack of working capital. Some haven't paid their workers for months, but have given manufactured goods instead, where that was possible.

Restructuring is not a choice for these managers, but a necessity. It's change or die. In such a climate, acquisitions are invited, but the mercurial Russian economy offers an insecure environment. Troubled paper and pulp mills are attractive in a country so blessed with forest reserves.

Business management skills are developing slowly, but they're coming. Russia has no business schools yet in the Western sense, but there are other ways to get business savvy, which will have to do, at least for the time being. □

**By Mark Emond**  
Executive Editor

ural gas interests and becoming an independent refiner-market.

The key to both the Tosco and Valero acquisitions was the bargain prices they paid for refineries. At lower investments, they could make satisfactory profits where the former owners couldn't.

## Other industries

Mergers and acquisitions in the technology industry continued at a rapid pace during the first half of 1997, according to a market study by Broadview Associates, Palo Alto, Calif., although at a slower rate than the year before.

The Broadview survey found that 1,177 M&A trans-

actions took place in North America during the first six months of the year, up 19% from 989 in the first half of 1996.

M&As are not just a Western hemisphere phenomenon. The number of transactions in Europe during the period increased to 198, up from 134 a year before, or 48%, led by U.S. company acquisitions.

Worldwide mergers and acquisitions came to \$94.9 billion in the first half of 1997, Broadview reported, down from \$128.1 billion the year before.

North American transactions totaled more than \$63.9 billion compared with \$97.4 billion.

Charlie Fedeman, Broadview chairman, says the value of transactions declined in the first half of 1997 from the first half of 1996 because of weaker stock prices in the United States, and he expected a resurgence in the second half.

A survey of top company executives by Deloitte & Touche, an accounting and management consulting firm based in Wilton, Conn., last year revealed that two-thirds of respondents expected their companies to buy other U.S. businesses in the coming year and 39% said they expected to make overseas acquisitions.

Western Europe was the most attractive overseas market, with 36% planning to buy

companies there. Some 28% said they wanted to buy South American companies and 25% said they would target Asian companies.

Almost all of the executives responding, 95%, said their companies had been involved in a merger or acquisition in the past several years.

The executives said global competition was the single most important issue facing corporate America.

John Cooney, a partner in Deloitte & Touche, says, "With the emphasis on growth and global competitiveness, it follows that U.S. companies will step up their acquisition and partnering activities, particularly overseas." □