

Enterprise Systems for
small- to mid-sized companies

A REAL BARGAIN

NDS Applications on Oracle Workgroup server for Windows NT,
for a new class of manufacturer

In the world of relational databases, there's Oracle and then there's everything else. Practically speaking, a de facto standard, technology from Oracle Corp., Redwood Shores, Calif., has become the database platform of choice for Fortune 1000 companies and such mission-critical database users as the U.S. government and military.

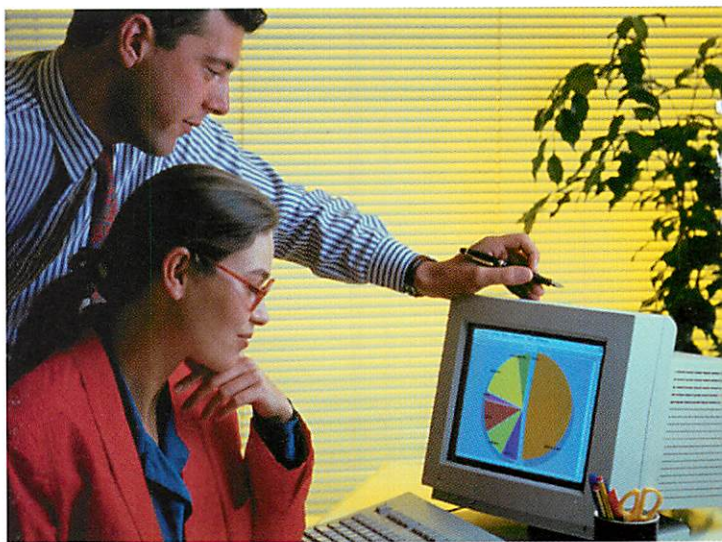
The only thing keeping many smaller companies from incorporating an Oracle database into their information technology infrastructure was its cost, which tended to limit its implementation to Tier One, large corporate users. But with Oracle's recent price reductions, the rules of the game have changed. "Oracle is now affordable for all companies. It can be integrated for as little as \$300 per concurrent user," says Michael E. Taylor, a company vice president with Synergistic Computer Solutions, Clearwater, Fla., an enterprise resources planning (ERP) vendor.

And with the Oracle Workgroup Server for Microsoft Windows NT companies save even more. "Oracle and Windows NT, combined with our Financial, Distribution, and Manufacturing Suites of NDS Applications offer world-class functionality with minimal investment for small- to mid-sized companies," adds Taylor.

NDS is one of only a few manufacturing systems written in Oracle's own application development environment. "NDS is 100 percent Oracle and written using their fourth-generation relational database tool—Oracle Developer 2000, with database stored procedures and triggers," says Taylor. "As Oracle improves and updates its products, NDS applications update correspondingly. There's no need to write new code, and NDS is fully Year 2000 compliant."

Marty Weil

WMC Inc.
Arlington Heights, Ill.



Windows NT, the client/server operating system from Microsoft Corp., Redmond, Wash., has become a robust, secure, and scaleable operating system since its introduction several years ago. More than just an operating system, Windows NT is the heart of a total Microsoft-based enterprise solution that includes server technology, systems and network management tools, graphical programming environments, and the means to easily integrate both functionality and data drawn from different production and business applications. Widespread use of Microsoft Office is another reason why Synergistic thinks Microsoft is ideal for its small- and mid-sized customers.

NDS Applications include modules for master production scheduling (MPS), material resources planning (MRP), manufacturing routing and workcenters, purchasing, sales order management, distribution replenishment, product structure processing, work order

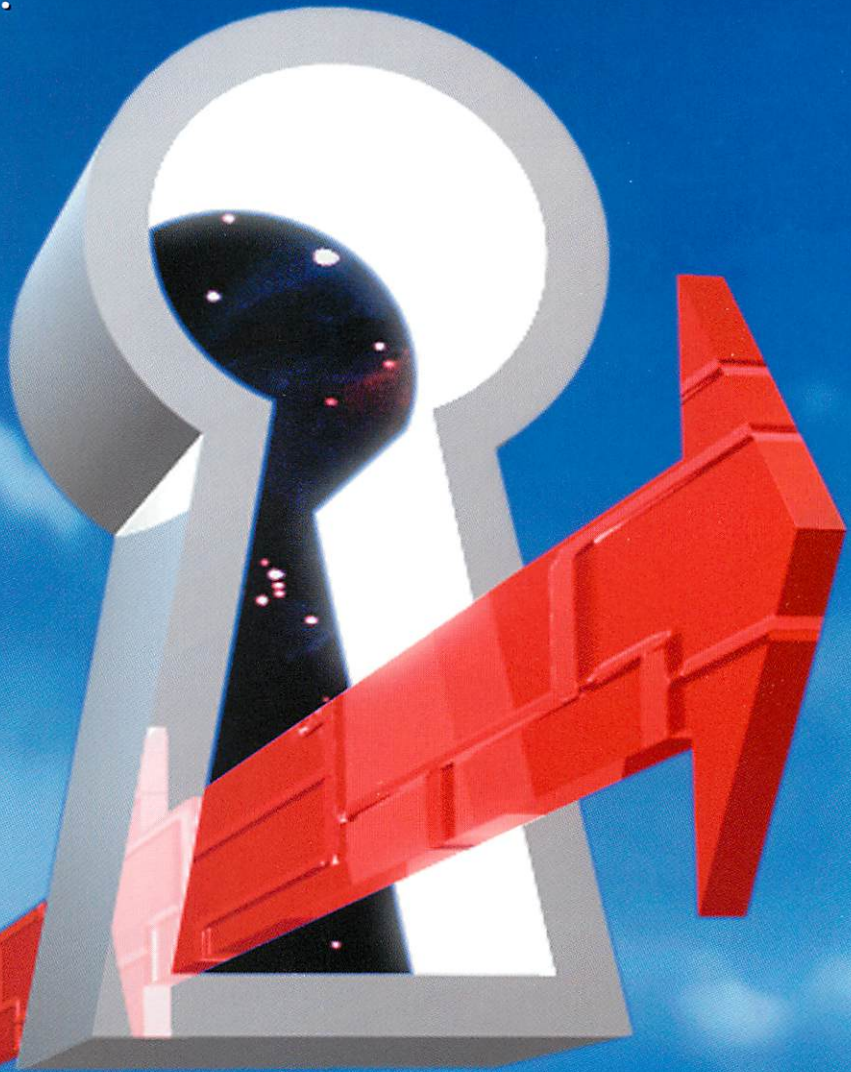
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management, and production tracking. The package frequently is used by companies pursuing ISO 9000 certification, and in a manufacturing world that's increasingly moving toward global strategies, the "pure Oracle" structure has powerful advantages.

Because NDS Applications are written for Oracle relational databases and run on Windows NT, small- and mid-sized repetitive and discrete manufacturers like **Huron Gage Blanks LLC**, Taylor, Mich., **Bristol Thermal Technologies**, Bristol, Ind., and the Kent Interior division of **Hexcel Inc.**, Kent, Wash., find the system a cost-effective way to have a fully functioning ERP system that can serve as a platform to the future.

A perfect fit

Kent Interior is a supplier of composite interior components to the aerospace industry. Lonnie Knechtel, manufacturing systems manager for the division, remembers some of the planning problems Hexcel once faced.

"One of the challenges we had was our complex engineering environment, with lots of item masters and a large number of bills of material—lots of engineering variation," Knechtel says. "We wanted to run in a

floor functionality, which solved problems we were trying to work through."

Knechtel says Oracle technology made it easy to implement necessary modifications to the system. "We had specific needs that no other system was going to address. We used extensions to help us handle engineering change control and other site-specific needs we had."

Hexcel likes the flexibility of the NDS application logic. For example, it allows positive or negative module values. This type of flexibility is important "because there are times when you need to step outside the box and do something creative in order to solve a particular problem," Knechtel says.

Hexcel lists several benefits of the NDS implementation:

- Better scheduling has reduced cycle times from an average of 33 manufacturing days to 15 manufacturing days—an improvement of nearly 55 percent. This is key to Hexcel's customers as well, as cycle times are critical to their success.
- Work-in-process and inventory are under control, and extensive back flushing reduces labor in managing inventory and data in the system.
- Better visibility and tracking of work orders are available.
- Hexcel's information systems group has experienced a threefold increase in productivity since the adoption of NDS.
- Reduced costs resulting from use of the Oracle database, which doesn't require elaborate coding, is manageable, as well as easy to read and understand.
- Ease-of-use due to the graphical user interface makes it easy for users to train themselves on the system.

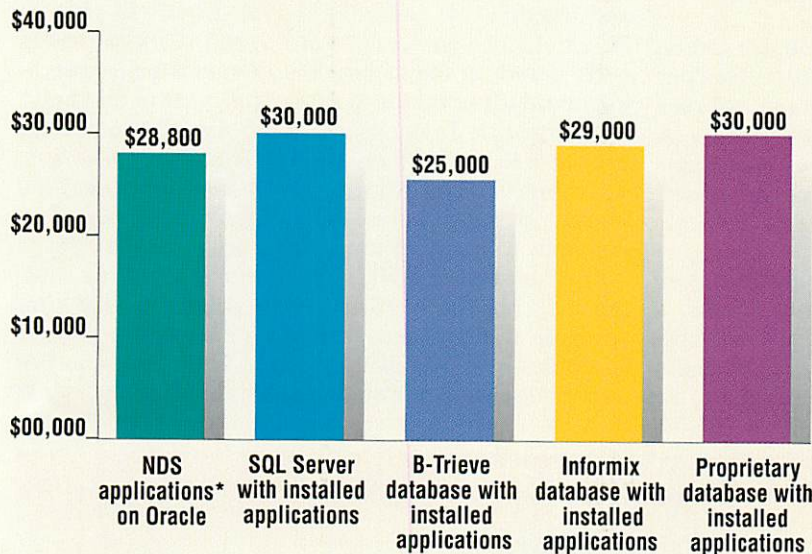
Client/server metaphor

By working with Oracle database technology and the Windows NT operating system, Synergistic takes advantage of true client/server architecture. With client/server, individual users—or clients—are served over a network by a central machine that acts as a common repository of information and programs. So-called three-tiered client/server goes one step further, involving

clients that are simple, or thin; application servers, where program logic resides; and central database servers.

To Synergistic's Taylor, it's a matter of extending accessibility. "Managers enter their company's data into the computer system, and want to be able to get back out of the system what they put into it," Taylor says. "Most traditional software database systems were flat-file systems, and it was difficult, if not impossible, to get data out in the proper form. Oracle allows managers to get any element they need easily without being a

The power of Oracle for the small- to mid-sized business



*includes HP Net Server, Oracle Developer 2000, 5 user licenses, NDS manufacturing suite with Oracle Workgroup Server

Source: Synergistic

repetitive manufacturing setting instead of a job-shop setting, and we had some particular goals as to how we wanted to set up our shop. This proved too cumbersome to accomplish in our first go-around with an MRP system—run times were long, extensive data entry was required, and a lack of features caused us to do a lot of things manually."

Enter Synergistic with NDS. "When we turned to NDS, system performance became excellent," says Knechtel. "It's rich in features, especially in manufacturing shop-

professional programmer. The core reasons Oracle has become the industry standard is because of its speed, portability, security, ease-of-use, and reliability."

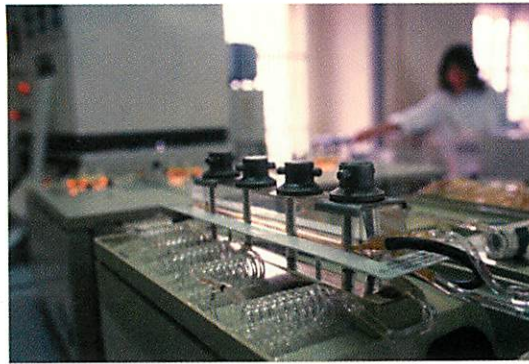
As part of a client/server environment, distributed processing uses one or more processors to divide work into subsets of related tasks. This reduces the load on any given processor, thereby improving the performance and capabilities of the system as a whole. Oracle, as the top relational database vendor, delivers client/server benefits many ways, including the Oracle tool SQL*Net. It facilitates data sharing between databases, even if those databases are on different types of servers running different operating systems and communications protocols. It also allows client/server applications to be created, as well as transparently connects applications to remote databases.

Oracle's System Global Area (SGA) facilitates the transfer of information between users. It also holds the most commonly requested structural information about the database. By means of caches and buffers, SGA manages data, ensuring the most efficient use of database resources.

To optimize use of system resources, Oracle can be configured to vary the number of user processes per server. In a dedicated server configuration, a server process handles requests for a single-user process. A multithreaded server configuration allows many user processes to share a small number of server processes.

More validation

One of the key advantages of NDS applications is its easy integration techniques. Huron Gage Blanks, a supplier to finished gage manufacturers, used NDS for its transition to becoming an independent business unit. "Huron is a spin-off of another company, so



we had to pull data from that company's mainframe," Gerald Lindemann, president, says. "We retrieved that data in one month and were up and processing orders by the first of the next month. NDS was easy to implement and use."

Bristol Thermal Technologies, a supplier of assemblies to the automotive industry, had a similar experience. Barbara Coddens, an office manager at Bristol, says, "We needed a more thorough manufacturing system and NDS provided that. It helped us come to a more complete understanding of our business." Among the benefits Coddens cites are an 80 percent reduction in processing time over Bristol's earlier system, and same-day response from Synergistic to any inquiries or challenges Bristol faces.

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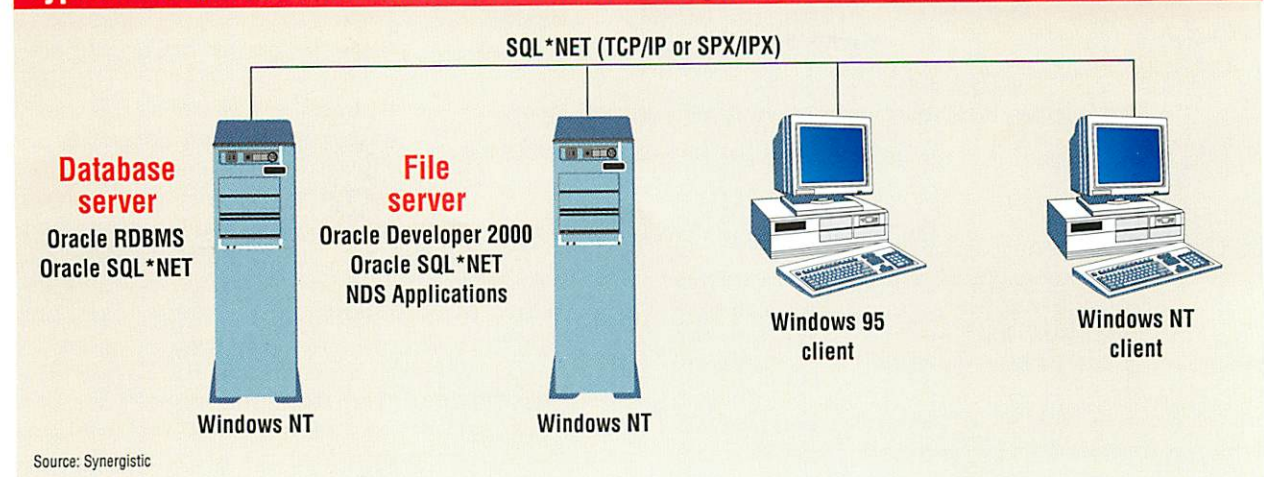
Surfing into the future

Hexcel's Knechtel is eagerly awaiting the availability of NDS's Web-enabled applications developed in Oracle, expected to launch in June. "The Internet gives us the ability to support on a low-cost basis large numbers of shop-floor terminals for occasional data entry and inquiry," he says. "High-end users will still get PCs, but since we can't afford to put workstations in every corner of the facility, the Web-enabled system is important to our efforts to support all areas of the shop."

Synergistic's Taylor echoes this point. "It's important to be able to run NDS on the Web so clients, customers, or whomever you want to give access to around the world, can get to your system. Systemic problems indigenous to many other systems are eliminated."

Knechtel believes NDS applications support a best-practices approach. "The product reflects solid processes in terms of how it manages inventory, how it schedules—the overall approach to MRP. The quality of information we get from the system is excellent." ■

Typical NDS/Oracle client/server network configuration



Source: Synergistic