

## Case Study for Neckar System Management Software

# NISSAN DIESEL MOTOR CO., LTD.

Upholding the Corporate Ideal "Continuing to Contribute to the Global Revolution in Distribution Through Customer-focus and Environmental-friendly Products and Services," the Company strives to implement the vision "A Nissan Diesel of Large Vehicles, Fuel Economy and the Environment."

Founded: Dec. 1 1935  
Headquarters Address: 1-1, Ageo-shi, Saitama 362-8523, Japan  
Employees: 3,166 (As of July 2003)  
Capital: 13,635.5 million yen (As of July 2003)  
Sales: 381,323 million yen (year ending March 2003)



## I-DEAS Version Upgrading Time Reduced to 1/4 and Work Costs to 1/3 by Parallel Remote Processing of Distribution and Installation

Nissan Diesel Motor has accomplished a reduction in the manpower and work costs expended in upgrading I-DEAS versions, a long-cherished challenge, by parallel remote processing employing Neckar. By remotely processing setup work such as groupware version upgrading and anti-virus software, the system environment has been controlled and interruptions to design work that occurred when designers performed setup work have been eliminated. An interview was held with section manager Mr. Osamu Mitsuhashi and Mr. Yasuhiro Matsuda of Nissan Diesel Motor's Information Systems Planning Dept., who have been in charge from installation to operation of Neckar.

**Why Neckar?** Doubling of the number of CAD clients made reductions in version upgrading work and in work costs an absolute requirement.

Mr. Mitsuhashi revealed in the interview "Nissan Diesel Motor operated I-DEAS on Windows NT as a major design tool. The problem was increases in the number of clients have increased the burden on of system administrator and cost of outsourcer for version upgrading work reduction with each year. In annual I-DEAS version upgrading, we would produce some master CD-ROMs and install the new versions in several hundred clients one by one, manually. The work required several days. We should not interrupt the design work for version upgrading, therefore version upgrading work is performed during year-end and New Year holidays and the annual summer vacation season. The version upgrading work was shared by the staff of the Information Systems Planning Dept. and by a software house which was contracted to perform the work. The employees had to come to the offices throughout the time whenever upgrading work was performed. Aside from reducing the work costs, a reduction in work on holidays for each version upgrading was a challenge that had to be tackled."

In May 2003, Nissan Diesel Motor changed its machine environment for both CAD and office information machines to Windows 2000. With the change to "all in one," the number of clients doubled at a stroke after



Information Systems Planning Department  
Manager Mr. Osamu Mitsuhashi



Information Systems Planning Department  
Mr. Yasuhiro Matsuda

integration of CAD and office information machines that had been operating independently, creating an environment of one I-DEAS machine for each designer.

Mr. Mitsuhashi explained: "The method had to be changed fundamentally to cope with this sudden doubling of the number of I-DEAS clients, and this was the reason for introducing the distribution tool."

Mr. Mitsuhashi added, "Unlike Windows 95 and 98, Windows 2000 does not give individual users the authority to install software. This created the problem that version upgrading of groupware and driver software could no longer be left to the users. Windows requires frequent driver software updating and a distribution tool had to be employed to change our office information machines to Windows 2000."

Neckar was introduced at Nissan Diesel Motor in May 2003 to solve this problem in conjunction with the change to Windows 2000. Neckar is the most suitable system management software in a research and development environment in which various applications function in machines supplied by different vendors. Neckar allows fast, easy and correct distribution and installation of CAD applications in large capacities through its unique compression feature, perfect parallel distribution control and other features.

"We studied eight tools in addition to Neckar before we decided to select Neckar. During the study and selection process, we asked the vendors, 'Can package applications of several GB be installed?' and 'Can deep parts of the OS be changed remotely, for example replacing a display driver?' Only Neckar provided satisfactory solutions for us. Only Neckar had experience in distributing and installing applications of several GB," explained Mr. Mitsuhashi.

**Operation** Distribution and Installation of I-DEAS 10NX and Anti-MS Blast Measure Completed Quickly

"All clients including personal computers at the corporate development department and Motegi Proving Ground and CAD clients at NISSAN DIESEL RESEARCH & DEVELOPMENT CORPORATION are managed by Neckar. These clients total about 1,200, all of which operate on Windows 2000 except for 30 clients that operate on UNIX," added Mr. Mitsuhashi.

Mr. Matsuda explained as follows: "Neckar was used on a full scale for the first time in August 2003 for the upgrading to I-DEAS 10NX. The application size increased significantly to 2.7GB compared with the previous version. The data in the Neckar distribution package was compressed to 1.1GB. The I-DEAS clients in the corporate development department were processed in eight parallel operations, one parallel distribution and installation task being completed in 16 minutes on average. The processing time is the same as that when parallel processing is not performed, and can be shortened further by increasing the number of clients that are processed in parallel to 16 or 32. In one parallel processing task, we made a setting error during distribution and all 94 clients were processed in parallel. However, after all, the work was completed successfully in about two hours. Manual

work required slightly less than one hour per client. This means that 94 clients could be processed within the same time as that required for two clients by manual work. The work could be performed successively and automatically so that processing finished in the morning of the following day when the process was executed during the night, and confirmation work could be started immediately."

"Distribution errors were less than 2% and all errors could be patched up by redistributing the packages. There were no errors that could not be recovered. I am very satisfied with the results of the selection and subsequent operations," said Mr. Mitsuhashi.

### Neckar processing performance during I-DEAS 10NX update

	Base A	Base B	Base C
Number of parallel processes	94	8	16
Processing time for one parallel process	142min.	16min.	15min.
Total processing time/total number of processed PCs	1.5min.	2.0min.	1.3min.

Mr. Mitsuhashi added "It affords us psychological relief if we can modify a distribution package even on the day before the version upgrading work. When we had to install manually, we prepared master CD-ROMs, of which as many copies were made as there were workers. With Neckar I-DEAS 10NX, distribution packages can be created in about 90 minutes. We cannot wait till the distribution company checks quality and that materials are prepared before the official release of new versions. We therefore start our version upgrading work by making necessary quality checks by ourselves before official release. If frequent patches are necessary before the version upgrading work, sometimes our work schedule has to be changed and it is very important for us to fix a distribution package quickly."

"The work on the AIX machine this time was easy and I am personally happy about it. Previously, I devoted myself to work on the OS and the outsourcer worked on I-DEAS. This time, Neckar did everything including installation of I-DEAS. Neckar did OS setting, OS patching, addition and deletion of the file system and other work, resulting in a significant reduction in work man-hours," added Mr. Matsuda.

Mr. Matsuda commented, "We were able to implement anti-virus measures quickly. When infection was found in MS Blast, we distributed a virus disinfection program and OS patch to about 1,000 machines in three locations during lunch time and finished processing in about 40 minutes. The ideal situation would be to avoid infection by virus, but the program is effective in implementing measures if infected."

### Effects of Neckar Introduction I-DEAS Version Upgrading Time Reduced to 1/4 and Work Cost, to 1/3

Explained Mr. Mitsuhashi: "The previous I-DEAS version upgrading work required four days and cost us 10 million yen (CAD data format conversion work + I-DEAS version upgrading work). This time, it required two days and cost us 5 million yen, the bulk of which was accounted for by CAD data format conversion work. Taking into account that the number of machines that has to be dealt with has doubled, proportionately speaking it has been possible to reduce holiday work by the personnel of the Information Systems Planning Dept. to 1/4 and work costs to 1/3. The expenses of introducing Neckar and its support cost can be recovered in three years by savings on work expenses. Needless to say, time to break-even between investment and savings can be shortened if the number of clients increases."

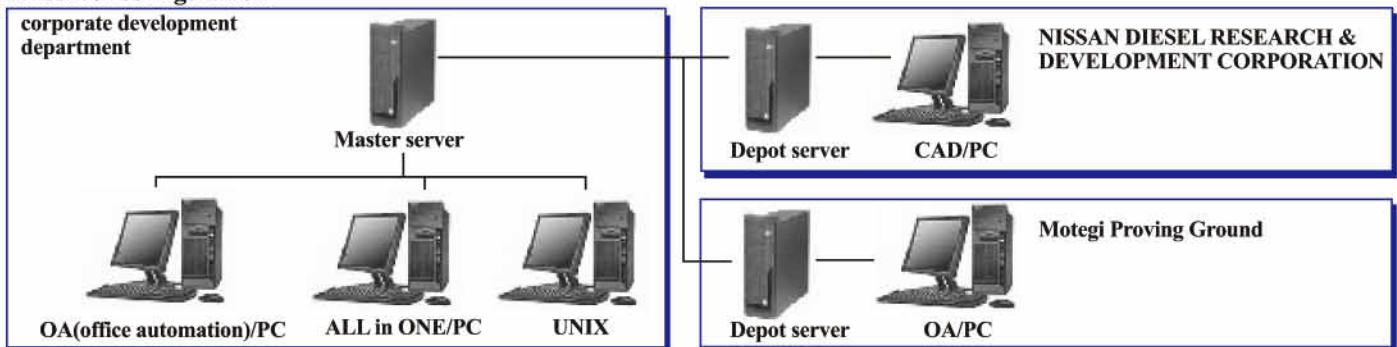
Mr. Mitsuhashi continued, "For example, in previous groupware version upgrading, the Information Systems Planning Dept. would distribute packages and the users would set up their systems. This means that several hundred designers spent several hours in this work and, resulting in interruptions of design work for a significantly long period in total. Now, Neckar can perform operations remotely and design work is no longer interrupted."

Mr. Mitsuhashi added, "Frequent display driver and other software updating work is required with Windows. When end users are asked to do the work by themselves, work execution is entirely left to the users. Another great advantage that can be obtained from the change to Neckar is that this work is remotely processed by the Information Systems Planning Dept. and the system environment can be controlled by the department."

### Future Plans Spectrum of Utilization Expanding from Cost Reduction to Enhanced Service Level

Mr. Mitsuhashi concluded, "We have been able to accomplish our objective in introducing Neckar. Our next objective would be to widen the spectrum of utilization such as by enhancing the level of service to the end users. For example, some designers need image processing software while other designers need certain interface software. Needed software differs depending on the work performed by individual designers. The users independently installed software by themselves before. Since the change to Windows 2000, software addition requests are sent to the Information Systems Planning Dept. Now we install manually on individual requests. If remote processing of these additional requests by Neckar is feasible, work can be facilitated and work man-hours can be reduced. Software and hardware inventory information of the client machines can be collected and a more painstaking service can be provided. We hope to make our skills inside the department parallel and to expand the use of Neckar."

### Neckar server configuration



The software Neckar is a product of the German science + computing ag. It is distributed worldwide under the name scVENUS. Due to trademark limitations, the software is known as

Neckar in Japan. science + computing is an IT service and software house for technical and scientific construction and simulation environments. The company specializes in opti-

mizing the design of open and distributed computer systems and has had many years of experience in the operation and administration of complex Unix, Linux, and Windows environments.