

# Sun Software Solution Profiles

*March 2004*



# Applied Relational Technology

## IT Services

### Sun Products

- Sun Ray™ Server Software; Sun Enterprise™ 220R and 420R Servers; Sun Ray 100 and Sun Ray 150 Ultra-Thin Clients

### Business Background/Charter

Applied Relational Technology (ART) is a leading IT company with a reputation for delivering quality, innovative, and cost-effective solutions. Since 1991, ART has worked hard to deliver “outstanding IT services” based on “quality, not quantity.” The company’s software development team is skilled in all stages of delivering an application. From high-level business analysis, they prototype, design, and iteratively deliver solutions to a wide variety of businesses.

### Business Drivers/Technology Challenges

ART needed to provide two of the U.K.’s newest shopping centers — one in WestQuay, Southampton, and the other, BAA McArthur Glen Designer Outlet, in Livingston, Scotland — with an advanced IT infrastructure to replace traditional paper processes and provide communication among stores and with center management; human and vehicular traffic monitoring; and retail sales reporting.

### Sun Solution Overview

Along with a central Cisco Gigabit network infrastructure, ART implemented Sun Ray 100 and 150 ultra-thin clients and Sun Enterprise 220R and 420R servers as the core technology to deliver functions such as alerts, messaging, and reporting. The system can also be linked to consumer touch-screen kiosks in the centers to provide information such as gift ideas, job opportunities, bus and train schedules, and maps. ART markets the system as a packaged turnkey solution called Retail Advantage.

### Business Benefits

The new system brings a number of significant advantages. Managers, retailers, and customers are all provided with far better communications. This, in turn, leads to a more positive shopping experience and allows the center owners and the individual retailers to be more competitive and responsive to customer needs. Additionally, the system can be managed remotely, and has performed extremely well since its implementation.

# Athens International Airport

## Transportation Services

### Sun Products

- Sun Java™ Enterprise System (beta version) with the Sun Java System Directory Server, Sun Java System Identity Server, Sun Java System Portal Server, and Sun Java System Web Server; Remote Agents; Java 2 SDK; Java 2 Platform, Enterprise Edition (J2EE™ Platform) Application Services; Sun StorEdge™ A1000 and A5000 Arrays; Sun Enterprise 450 and 4000 Servers; Sun Fire™ 280R, V240, V480, and 6800 Servers; Sun Ultra™ 5 and 10 Systems

### Business Drivers/Technology Challenges

Athens Airport was looking for a way improve their existing IT infrastructure, and more importantly, they wanted to be able to extend their existing IT technology without having to replace their legacy systems. They wanted a way to manage their wide range of disparate, multivendor airport applications — which require user-level policy protection and single sign-on (SSO) — as well as a solution that could manage both the client-server applications necessary for remote access purposes and multiple application databases. Lastly, their new solution had to be able to work with their existing customized legacy applications.

### Sun Solution Overview

For Athens Airport, the solution to their technology challenges was a combination of Sun's software and hardware. Athens Airport used Sun products to create their IT solution, which now meets all their technology challenges. The Sun portal serves the entire airport community, which includes the airline companies, service companies, shops, public services such as the Civil Aviation Authority and customs, and 15 million passengers per annum. It provides the fundamental needs of a modern airport — employee access to databases relating to information such as arrivals and departures in real time; weather forecasts; means of transport; and telephone directory information. It also allows access to e-mail, an electronic calendar, and personalized access to pages containing information only of interest to the individual. The entire emphasis is to provide information to passengers, wherever they are in the airport, quickly and effectively via the portal.

### Business Benefits

Athens Airport anticipates they will receive several benefits once they have fully deployed their Sun Java Enterprise System solution. Some of benefits they hope to achieve include improved application security; a single sign-on feature for multiple sites that will use an identity server remote agent; client-server applications via Tarantella software that will be integrated with the Sun Java System Portal Server; and a master user database with remote application credential capabilities.

“Athens International Airport's requirement for the Sun Java Enterprise System is to interface with existing applications and provide single sign-on through the airport portal server. Simplicity, predictability, and availability in one installation.”

— Karonis Fotis, Information Technology and Telecommunications Director, Athens International Airport

# Bromley Council

## Government

### Sun Products

- Sun Java System Application Server; Sun ONE Certificate Server; Sun Java System Directory Server; Sun ONE Integration Server; Sun ONE Integration Server EAI Edition; Sun Java System Portal Server; Solaris™ Operating System; Sun StorEdge Availability Suite; Knowledge Management Services

### Business Background/Charter

The Bromley Council is composed of 60 Councilors elected every four years. Councilors are democratically accountable to the entire community, and owe particular responsibilities to the residents of their Ward, including those who did not vote for them. The Council provides a wide range of services, including leisure facilities; parks; social services; roads and pavements; refuse collection and recycling; education; planning; conservation; environmental services; and trading standards.

### Business Drivers/Technology Challenges

Bromley government embarked on a three-year strategic development program that would provide its constituents (citizens, service users, businesses, etc.) more proactive customer relationship management (CRM) capabilities; a single point of contact for services; and access to services through multiple channels.

### Sun Solution Overview

The Bromley Council deployed the Lynx solution, created by Sun's iForce™ partner ECsoft, to meet their business needs. The Lynx solution runs on Sun software and hardware and is designed to solve one of the core problems local governments face: The lack of integration between various services. This solution helps provide a blueprint for simplifying and integrating processes, taking account of the commonality across them, which can result in huge improvements in service quality and efficiency.

The Sun Java System architectural framework provides a flexible service delivery platform, and includes Sun Java System e-commerce applications running on the Solaris Operating System. Sun servers and storage arrays comprise the hardware infrastructure that delivers high quality of service (QoS). The Sun Java System offering is an open, integratable stack designed to create and deploy the Web-based services, and serves as the foundation for the Lynx business solution.

### Business Benefits

By the Bromley Council streamlining their processes and removing duplication, the ECsoft/Sun solution helped them do more with less — it helps cut costs while also making it much easier to open up services to new channels of communication. For example, the Bromley Council now can make information about taxes, housing, and social services benefits available via the Web, an interactive voice response system, or a kiosk deployed at a high-traffic area such as a shopping mall.

# Carrollton City Schools District

## Education

### Sun Products

- Solaris 8 Operating System; StarOffice™ Office Suite; Sun Ray Server Software; Netra™ t1 Server; Sun Enterprise 220R, 420R, and 450 Servers; Sun Ray Ultra-Thin Clients

### Business Background/Charter

Established in 1886, the award-winning Carrollton City School System consistently produces high-level educational opportunities through a process of continuous improvement, creating a quality educational community that meets the intellectual, physical, social, and emotional needs of all students. The school system not only serves the children of Carrollton, but others who may enroll as nonresident, tuition-paying students. In fact, roughly one-third of the system's enrollment is made up of these students who have opted to become part of the tradition of excellence the school system has enjoyed for more than a century. Among the school system's amenities is a centralized 150-acre campus that houses three schools serving approximately 3500 students: Carrollton High School, Carrollton Junior High School, and Carrollton Elementary. Another 200 students attend the 4-year-old prekindergarten program in a nearby off-campus facility.

### Business Drivers/Technology Challenges

Using a fiber optic network to connect Carrollton schools and enable communication among the more than 1200 PCs in classrooms, library media centers, and computer labs, the district's technical support resources were becoming overtaxed. Routine tasks such as installing or upgrading computers and software required administrators to physically visit each system, consuming the valuable time of the technical specialists and limiting their effectiveness. Carrollton needed to implement a complete solution that provides easy, reliable access to desktop applications and the Internet for daily curriculum while keeping administration costs to a minimum.

### Sun Solution Overview

Carrollton considered alternatives to traditional fat-client PCs to address their challenges and enable them to move toward their vision of a Web-based environment. Proven performance and reliability prompted the Carrollton City School System to turn to Sun for their next-generation desktop solution. Carrollton deployed Sun Ray thin-client desktops along with Sun Enterprise and Netra servers. All applications run on a central server, and the desktop client is used only for input and output. Hot Desk technology enables users to instantly access their own personal sessions and work in progress from any desktop in the workgroup using smart card access.

### Business Benefits

Sun Ray thin clients provide Carrollton with a lower-cost, easy-to-use desktop solution that enables them to implement their vision of a Web-based environment for learning. Sun's reliability helps to ensure that students and teachers can work where and when they need to, and the combined scalability and flexibility of Sun servers and the Sun Ray architecture provide a system that can grow along with their needs.

# Channelfly

## Media and Entertainment

### Sun Products

- Solaris Operating System

### Business Background/Charter

Channelfly plc comprises an innovative group of businesses with a focus on new and alternative music. These businesses include channelfly.com, The Fly Magazine, the Barfly chain of live music venues, and the Animal Noise record label, as well as Stephen Budd Management, a leading music producer management business, and SuperVision Management, an artist management business.

### Business Drivers/Technology Challenges

Launched in 1999, channelfly.com experienced such rapid growth that in early 2000, in order to cope with demand and deliver even bigger and better content, the site needed to be redeveloped — both in appearance and in terms of the infrastructure and technology behind it. Having commissioned a new design for the site, Channelfly engaged Nettec — a Sun Microsystems iForce partner and specialist provider of content-managed corporate portals — to build and host the revamped Web site. The company needed a robust Web site with the scalability to grow with their audience — a Web site that could be easily adapted, developed, and have content added, as required.

### Sun Solution Overview

Nettec proposed a solution based on a custom-made Content Management System (CMS) running on an Informix database, on a Sun Solaris platform. The CMS was tailored to meet the company's specific needs; modifications can be quickly and easily be made whenever required. The infrastructure for channelfly.com is located in Nettec's state-of-the-art data center. The Web site infrastructure comprises the main CMS database server running on Sun, together with other servers, including a media server and a Linux server, running some of the smaller, subsidiary Web sites. Nettec supports the Web site infrastructure on a managed service basis, providing 24x7 availability as well as ongoing expertise and advice on the development and expansion of the CMS. In addition, integrating the processes and compiling each site's information centrally on the main CMS eliminates the need to repeat tasks several times in order to generate a contract and update the Web site.

### Business Benefits

For Channelfly, the Nettec solution running on the Sun Solaris platform provided numerous benefits in terms of performance, scalability, and ease of use and management:

- External hosting reduces Channelfly's system maintenance and system management costs, enabling the company to focus on its core business activities without worrying about the IT infrastructure.
- The Sun platform solution delivers maximum uptime due to its high levels of reliability and availability.
- The scalability of the Sun platform will help Channelfly meet the challenges of growth in the future.
- Having Nettec host the infrastructure gives access to high-level bandwidth, something very difficult and expensive for Channelfly to replicate in its own offices.
- Channelfly is reducing costs and saving time by centralizing information onto the CMS.
- Nettec's CMS has been tailored to meet Channelfly's specific needs, and is highly flexible. Modifications can quickly and easily be made whenever required.

# Chelsea Financial Services

## Financial Services

### Sun Products and Services

- Solaris 8 Operating System; StarOffice Office Suite; Sun Ray Server Software; Netra t1 Server; Sun Ray Ultra-Thin Clients; Knowledge Management Services

### Business Background/Charter

Chelsea Financial Services was founded in 1983 as a firm of independent financial advisers by its present Chairman, Dr. John Holder. The company was the first intermediary to discount initial charges on unit trusts and bonds, and later PEPs. Over the last eighteen years, their clients have saved many millions of pounds they would have otherwise paid in charges had they bought direct from investment companies, and they are still leading the way with ISAs. Chelsea Financial Services plc is regulated by the FSA, and offers an execution-only service. The company gives no individual investment advice and acts only on instructions received. The company is the second largest independent discount broker in the U.K., handling 150,000 customers and 200,000 investments.

### Business Drivers/Technology Challenges

Managing Chelsea's more than 100,000 customers and 200,000 investments was putting a strain on the company's seven-year-old back-office administration system, which was no longer robust or responsive enough to meet the company's increased business and customer needs. Chelsea needed to invest in a new solution that could accommodate current and future growth requirements while reinforcing Chelsea's competitive advantage.

### Sun Solution Overview

Chelsea's long-time IT consultants, Team Netsol, specified, supplied, and hosted the new solution via an ASP model. Netsol recommended the Sun Ray solution to Chelsea, including Sun Netra t1 servers with 20 Sun Ray desktops and a Netra t1 Oracle database and application server, all running on the Solaris Operating System. Team Netsol also wrote a custom-made, process-driven, object-oriented, Java technology-based database entry and management system for an Oracle8i database. For traditional office applications, Team Netsol installed the StarOffice productivity suite.

### Business Benefits

The Sun Ray solution employed by Chelsea provides a highly robust, easy-to-use system that requires no system administration at the customer site. The new system is faster and more responsive than the previous system, has had zero downtime since it went live, and Team Netsol is able to provide centralized ASP services and system management from its location.

# City of Amsterdam

## Government

### Sun Products

- StarOffice Office Suite; Sun Ray Server Software; Sun Enterprise 250 Server; Sun Ray Ultra-Thin Clients; Knowledge Management Services

### Business Background/Charter

In 1997, the city of Amsterdam, five educational partners, and the SARA Academic Computing Services consulting firm joined together to form CIAO (Computers in Amsterdam Primary Schools). CIAO's goal was to make computer technology accessible to pupils at each of the city's 212 primary schools and to effectively integrate computer technology into the overall education program.

### Business Drivers/Technology Challenges

Needing to find simple-to-use platforms that would offer financially-sensitive schools the lowest possible total cost of ownership (TCO), CIAO evaluated a number of computer solutions.

### Sun Solution Overview

After six months of reviewing several computer architectures, CIAO concluded that network computers would provide the best solution and deliver immediate benefits to both its teachers and students. CIAO started with a six-school pilot program, and implemented a combination of Sun Netra servers and JavaStation™ network computers. Later upgrading the JavaStation systems to Sun Ray 1 desktops, CIAO also replaced their existing servers with 55 Sun Enterprise 250 servers.

### Business Benefits

For CIAO, the Sun Ray solution provides a robust, reliable, and scalable environment; offers a safe Internet environment for students; reduces total cost of management with centrally managed servers; and delivers simple, easy-to-use tools to the desktop.

# De Novo Pharmaceuticals

## Life Sciences

### Sun Products

- Java Technology; Java 2 Platform, Enterprise Edition (J2EE Platform); Solaris 8 Operating System; Sun Grid Engine; Sun Management Center

### Business Background/Charter

Founded in 1999, De Novo Pharmaceuticals (De Novo) is a pioneering drug design company specializing in the development of computational approaches to the automated design of novel drugs. The company recently completed the installation of a high-performance computing platform from Sun Microsystems, as part of a major project to develop a comprehensive chemoinformatics platform to house designs of potential drugs produced by De Novo's proprietary software. The new technology platform comprises a fully integrated, scalable, 80-node Sun compute farm running De Novo's structure-generator software, Skelgen.

### Business Drivers/Technology Challenges

Because of the shortfall in the number of new chemical entities being patented within the drug discovery pipeline, De Novo required that their new technology platform address the pharmaceutical and biotechnology industries need to increase the speed and efficiency with which new drugs are discovered and developed. Much of the data needed to develop new chemical entities already exists within pharmaceutical companies, but the traditional processes used to synthesize and test this data are extremely time-consuming and resource-intensive. The use of computers to carry out innovative chemical design approaches is becoming increasingly important, with both patentability and speed being key to the survival and success of a drug discovery project. De Novo recognized the need to help pharmaceutical and biotech companies reduce their time to market while keeping ahead of the competition. A platform must be robust and reliable, with 24x7 access to the technology and scalable performance.

### Sun Solution Overview

De Novo's powerful platform solution allows exploration of chemical space for each therapeutic target, based on Skelgen and Sun's high-performance computing environment. The comprehensive computational platform will enable the conversion of structural information from drug targets into the design of potential drugs. The initial investment with Sun comprises a fully integrated, highly scalable, 80-node compute farm based on Sun's Throughput Engine Software Stack (TESS). TESS provides a single operating system stack comprising the Solaris 8 Operating System, Sun Management Center 3.0, Sun Verification Test Suite 4.3, and Sun Grid Engine 5.2.3 resource management software. Developed from the ground up, the platform uses Java and J2EE technologies, reflecting De Novo's commitment to open standards. A key factor in choosing Sun was its unique ability to deliver a single SPARC® and Solaris architecture that scales from one-processor machines up to systems with tens of thousands of processors.

### Business Benefits

- De Novo can now deliver results on more targets and compare results across targets.
- All Applied Design group members can now concurrently use the system and load as many jobs onto the system as appropriate for the projects they are running.
- Sun software enables the design group to run jobs much faster — increasing production.
- Load balancing is completely seamless and invisible to the users, who are unaware of the intelligent job control going on behind the scenes.
- In benchmark tests, Sun demonstrated that its 500-MHz solution was 1.8 times faster than an 850-MHz Intel Architecture-based system, proving that Sun's integrated solution was capable of achieving a total system performance well above any comparable Intel system.
- Tests confirmed the power consumption of Sun's solution was typically 25-40 percent less than a comparable Intel/Linux farm, resulting in lower electricity costs for power input and air conditioning.

# Devon Energy

## Oil and Energy

### Sun Products

- Solaris 8 and 7 Operating Systems; Sun Blade™ 1000 System; Sun Enterprise 420R, 220R, and 4500 Servers; Sun StorEdge T3 Arrays; Knowledge Management Services

### Business Background/Charter

Devon Energy Corporation is an independent energy company involved in oil and gas property acquisition, exploration, and production, and ranks among the top five U.S.-based oil and gas producers. Devon sells oil and gas on the open market. In the last several years, the company has grown tremendously — mostly through acquisitions, including Northstar Energy (1998), PennzEnergy (1999), and Santa Fe Snyder (2000).

### Business Drivers/Technology Challenges

Devon Energy was faced with a number of business challenges, most notably of trying to grow their business and find the IT solution that would meet all their needs. A few of the issues they faced included:

- Complexity and costs of managing different IT systems
- Providing effective computing for 3D seismic software
- Providing a single-vendor, integrated, and expandable infrastructure
- Increasing disk space and speed

### Sun Solution Overview

In late 2000, Devon purchased 17 Sun servers and 11 terabytes of disk space using Sun's StorEdge T3 disk arrays. With this purchase, current usable disk space was doubled while in turn decreasing the number of servers by 47%. The new Sun servers and storage systems were divided among Devon's three key divisions: Corporate, offshore, and international, with offshore receiving the majority of the servers and disk space. A key factor in deciding which systems to buy was how they handled 3D rendering software and graphic-intensive applications. Devon uses Landmark's OpenWorks, a suite of approximately 25 different applications specific to the oil and gas industry. Within OpenWorks is a 3D seismic application which, along with well logs and history, is commonly used to find oil.

### Business Benefits

By implementing Sun technology, Devon Energy was able to receive numerous business benefits, such as:

- Seamless scalability to support growth
- The consolidation from 25 servers to 17
- Simplified and reduced administrative costs
- More than doubled performance
- Increased efficiency of 3D software

# Heartlab, Inc.

## Manufacturing

### Sun Products Jini™ Technology

#### Business Background/Charter

Heartlab, Inc. specializes in the development of cardiac imaging software and the integration of cardiac imaging network systems. Today, Heartlab's networks are installed in more than 150 of the nation's leading heart centers, and the company's cardiac archiving systems manage a volume of more than 950,000 patient cases, with an installed DVD-R storage capacity of 1.9 million exams.

#### Business Drivers/Technology Challenge

Traditional file systems have proven to be expensive and unreliable, requiring time-consuming custom installations. Their traditional architecture is also reliant on each component of the network to continuously perform faultlessly. If one component fails, the entire system goes down.

#### Sun Solution Overview

Jini network technology is an open architecture that enables Heartlab to create network-centric services that are highly reliable and adaptive to change. Unlike the traditional way of approaching system development, Jini technology provides Heartlab with a development environment that provides a "smart network." The Jini architecture makes each service, as well as the entire network of services, adaptable to changes. Jini technology enables a network to be self-healing and self-configuring, allowing Heartlab to create a reliable, fault-tolerant cardiac image data system.

#### Business Benefits

Jini technology makes configuration and reconfiguration of Heartlab's system environment much easier. As their system becomes more and more complex, it is harder to keep track of each individual component. Jini technology allows communication between each component, providing a "self-aware collection of cooperative peers" and resulting in a self-sufficient system. This is a vast improvement and fundamental change over traditional architecture. The result is a product with greater reliability and dependability, with no single point of failure, and the ability to compensate automatically for any outage. In the creation of products for the medical industry, this is a critical necessity.

"Unlike other development approaches, Sun's Jini network technology is an open development environment that delivers a 'smart network' that is fully adaptable to change. For our medical customers, the result is an affordable, fault-tolerant cardiac image data system that helps ensure zero downtime, streamlines processes, and ultimately, improves patient care."

— Joseph Cascio, Jr., CTO, Heartlab, Inc.

# InsiTech Group, Inc.

## IT Services

### Sun Products

- Java Technology; Sun Java System Application Server Standard Edition 7; Sun ONE Studio 4, Enterprise Edition for Java Software

### Business Background/Charter

The InsiTech Group, Inc. is a leading-edge information technology firm specializing in the use of Java and XML technologies to create network- and platform-independent distributed applications. The company provides value to their clients by combining their IT expertise with their patent-pending Java technology-based/XML development platform, called XML Tunneling Technology (XTT). XTT is built upon the latest Java, J2EE, and XML technology standards.

### Business Drivers/Technology Challenges

InsiTech's goal was to create a tool that would enable developers to build applications that would run the same on any platform, network type, data source, or communication layer — while providing a rich graphical user interface (GUI) delivered in a very thin client.

InsiTech wanted to give a jump-start to developers who are building complex applications, for example, a complete medical or purchasing system. Their plan was to take away many of the complexities from the developer, such as how to make database connection, write/rewrite the data, read the data, display it, and so forth, so that developers need only worry about the business logic.

### Sun Solution Overview

The Sun architecture supports the development and deployment of dedicated and Web-based applications today, and the emerging service delivery methods of tomorrow. Because Sun ONE Studio is a critical component of the Sun Java System architecture, InsiTech selected this powerful environment to develop services on demand. This IDE serves as a medium for quickly building and deploying efficient and highly scalable cross-platform applications that shorten the development and deployment cycle.

### Business Benefits

The combination of Sun ONE Studio 4, the Java platform, and InsiTech's XTT technology will enable customers to develop distributed solutions that are far superior to any other approach, while also providing greater productivity for the developer. XTT technology, together with Sun ONE Studio 4, provides the best solution for developing thin-client and rich GUI applications that are also platform independent.

# Kasenna

## Computer Software

### Sun Products

- Solaris 9 Operating System

### Business Background/Charter

Kasenna provides high-performance, cost-effective systems for broadband service providers to offer advanced services like video on demand (VOD), subscription VOD, and server-based digital video recording technology. These services are delivered across a variety of industries, such as residential VOD for telecommunications and cable applications, in-room services for hospitality, and a variety of rich media delivery services training and learning-on-demand applications in the enterprise market. Running on open, off-the-shelf servers and storage, and based on industry standards, Kasenna's products also scale cost-effectively from small or trial deployments to large deployments.

### Business Drivers/Technology Challenge

As network access expands to include mobile devices, game consoles, and set-top boxes, there is a strong increase in consumer demand for interactive entertainment and data services. Kasenna's software technology, coupled with Sun server and storage platforms, help make video-on-demand services a reality for customers and their end users. Kasenna offers the flexibility to run on nonproprietary hardware platforms in centralized, distributed, or hybrid network architectures, which can be expanded gradually as customer demand grows. Kasenna's Cluster Manager technology overcomes the challenge of managing a large pool of servers with automated load balancing and management tools.

### Sun Solution Overview

Kasenna partnered with Sun and selected the Solaris 9 Operating System as one of three open platforms its products run on (Linux and IRIX are the other two). The Solaris 9 OS delivers the security, manageability, and performance Kasenna was looking for to increase service levels and decrease costs and risks.

### Business Benefits

Kasenna's solution, delivered on Sun's open software and hardware platform, provides both Kasenna and its customers with a time- and cost-effective video delivery platform. Customers benefit from a tremendous cost savings compared to purchasing a proprietary hardware platform. Kasenna also experiences increased performance compared to a proprietary hardware platform. Sun's Solaris Operating System boosts application speed without upgrading hardware or altering applications. In addition, since moving its solution to the Solaris 9 OS, Kasenna has experienced a 40% increase in performance.

"From IP and broadband to cable and wireless, today's customers want systems based on industry-standard hardware like Sun's. The performance we achieve with our software on Sun's Solaris Operating System is ideal for carrier-grade deployments requiring high-performance, open video-on-demand solutions."

— Mark Gray, Chairman and CEO, Kasenna

# Kent Fire Brigade

## Government

### Sun Products

- Solaris 8 Operating System; Sun Fire V880 Server; Sun Ultra 10 System

### Business Background/Charter

As one of the largest fire brigades in the U.K., Kent Fire Brigade is responsible for delivering fire and rescue services to over 1.5 million people in the county of Kent, from 66 fire stations and 13 District Fire Safety Offices. The brigade employs over 1700 firefighters and almost 200 professional and technical support staff to service an area including over 200 km of motorways, over 225 km of coastline, and the busiest sea channel in the world.

### Business Drivers/Technology Challenges

In the course of its duties, the brigade has to deal with a high number of hazardous and dangerous incidents on the county's roads on a daily basis, and works closely with HM Coast Guard and the Royal Air Force, assisting with offshore ship fires and rescues. Kent is also home to several papermaking factories, processing plants, and nuclear fuel power generators, all of which can present their own challenges to the brigade. Kent Fire Brigade receives an average of 50,000 calls every year, of which 26,000 are classed as an incident, mobilizing a brigade resource in response to the call.

Since 1998, the brigade has been using Thales Information Systems' MOBS (Mobilizing System) incident and resource management system to coordinate emergency calls and allocate the appropriate resources to attend to incidents. As soon as one of the brigade's operators receives a call and has verified that resources are required, they enter the details into the MOBS system, which automatically creates an address match to identify the exact location of the incident. The necessary resources are then mobilized — ideally within 60 seconds of receiving the call — and details of the action taken and resources dispatched are recorded into the incident log.

The MOBS system enables the brigade to record and measure its response times and evaluate its performance — in accordance with the government's Best Value guidelines. Kent Fire Brigade has to ensure that it provides services that are efficient and high quality. The brigade has to publish an annual Best Value Performance Plan, outlining what it is doing to improve performance and detailing the results of Best Value Reviews it has undertaken. To help deliver against the requirements of Best Value, Thales has been working closely with Kent Fire Brigade to implement a range of enhancements to the MOBS system. These enhancements have focused on helping to reduce the time taken to mobilize resources.

### Sun Solution Overview

The Fire Brigade's MOBS system comprises a main and a standby system, with the standby system located approximately 3 miles away from the main system. Although the original main system was based on a Tandem platform and the standby on a Sun server, the standby Sun server, upgraded to a Sun Ultra 10 system in 1999, had outperformed the Tandem in terms of speed and flexibility. When Compaq announced it was withdrawing support for Tandem hardware, Thales made a number of suggestions, including keeping the Ultra 10 system as the standby server and replacing the Tandem with a Sun Fire V880 server with mirrored disks, and running both systems on the Solaris 8 Operating System. A number of application enhancements were also made to the system, improving both the time it takes to perform an address match as well as mobilize resources.

### Business Benefits

- The brigade is now mobilizing approximately 85 percent of all calls within 60 seconds. Prior to the enhancements and upgrade, only approximately 25-30 percent of all calls were mobilized within 60 seconds.
- The upgraded MOBS system allows all "address matches" to be made within 2 seconds — a vital reduction in time that could help save lives.
- Thales completed the changeover to the Sun platform within a very demanding time frame, thus ensuring there was no break in support for the system.
- Sun provides a highly resilient and robust platform, with the processing power to support additional functionality and system enhancements for the brigade, including a prealert function, which should enable the brigade to reduce mobilizing time by an additional 25-30 seconds.
- A significant improvement in performance has been noticed since the upgrade to the Sun Fire V880 server, enabling the brigade to respond quickly and efficiently to potentially life-threatening situations at all times.

# Kingsford Stacey Blackwell

## Legal Services

### Sun Products

- Solaris 8 Operating System; Sun Ray Server Software; Sun Enterprise 250 Server; Sun Ray Desktop Clients; Sun Ultra II Systems

### Business Background/Charter

Kingsford Stacey Blackwell (KSB) Law is a pioneering legal practice with a solid history of service to major commercial clients for over 150 years. As a medium-sized, London-based law firm, KSB Law is big enough to have served some of the largest banks, brewers, retailers, and property developers in the country, and yet small enough to offer personalized service to a private client seeking discreet advice on inheritance planning or family disputes.

In 1999, the firm established a trend-setting Personal Injury department, KSB Claims, which has been called “the law office of the future” by The Times. The huge success of this new concept with private clients as well as insurance companies and other institutions has encouraged KSB Law to evolve its traditional range of legal expertise into client-focused service centers offering one-stop, integrated, legal assistance tailored to the specific client and industry needs.

### Business Drivers/Technology Challenges

In October 2000, KSB decided to look for a new desktop solution. The firm had recently set up a personal injury division that was growing rapidly and needed to purchase new desktop terminals. KSB partner Ken Smith looked at the new technology on offer from Sun, and after seeing the Sun Ray desktops in operation at PCS, decided to give them a trial. The initial trial installation comprised 10 Sun Ray desktops, with an additional 25 being added in February 2001.

### Sun Solution Overview

KSB was one of the first U.K. companies to pilot Sun Ray technology, with a Sun Enterprise 250 server running Sun Ray Server software and 35 Sun Ray desktops. KSB initiated a revolutionary IT strategy seven years ago, installing a network based on Sun's Solaris Operating System. KSB's original SPARCstation® 20-50 and 20-70 servers are still in use, and a further four Sun Ultra II servers and a Sun Enterprise 250 server have since been added. The company now runs just over 200 seats across four offices. The Sun Ray environment migrates the computing function away from the desktop — all services and resources reside centrally on a server. With this centralization of resources, KSB uses its existing Sun servers as file servers, providing access to Microsoft Windows and X Windows applications across a Solaris platform via a Tarantella implementation.

### Business Benefits

- The Sun infrastructure has brought significant savings — from an easy upgrade path, longevity, stability, and low support costs.
- The system streamlines administration; KSB can process paperwork more quickly, enabling its partners to focus on clients.
- The Sun Ray solution has minimal support overhead, ensuring a huge cost advantage in terms of administration.
- Sun Ray Hot Desking enables users to work from any Sun Ray terminal on the system.
- The Sun Ray solution enables KSB to use its existing Sun servers as application and file servers, providing X Windows applications across a Solaris platform, and access to Microsoft Windows applications via a Tarantella implementation.

# Las Vegas Sun

## Media and Entertainment

### Sun Products

- Solaris 8 Operating System; Sun Ray Software; Sun Enterprise 420R Servers; Sun Ray Desktop Clients

### Business Background/Charter

Born from a movement to aid the little guy, the Las Vegas Sun newspaper has been an important part of the Las Vegas community for more than 50 years. Founding publisher Hank Greenspun died in 1989, but he left a legacy of intrepid and forthright journalism that Sun reporters and editors follow to this day.

Today, the Sun is published under a Joint Operating Agreement with the Las Vegas Review-Journal, which guarantees a second newspaper voice in the community. The Sun is still owned by the Greenspun family, but the Review-Journal handles the advertising, circulation, production, and marketing functions of the Sun. The Review-Journal has no involvement in the operation of the Las Vegas Sun Web site, and the Sun news department remains an independent and separate entity.

### Business Drivers/Technology Challenges

Before March 2000, the Las Vegas Sun newsroom was populated with dumb terminals, providing only database access. Additionally, 85 staff members had to share five PCs for access to the Internet and other Microsoft applications. The paper needed to improve its building and data security, simplify system administration, and provide staff with better access to resources.

### Sun Solution Overview

The Las Vegas Sun deployed a system of Sun Ray 150 desktop clients and Sun Enterprise servers. The system employs smart cards for integrated, secure access to the building and to vital applications and information used in preparing the paper.

### Business Benefits

Sun Microsystems' solution provides a single, integrated security system for building entry and system access. As such, security against unauthorized access is vastly improved and the threat of information theft or destruction by viruses is greatly reduced. System administration is centralized and substantially simplified, and staff now have universal access to the Internet and e-mail. Costs have been reduced and the Sun Ray system provides superb reliability.

# Life Time Fitness, Inc.

## Health Care

### Sun Products

- Java Technology (Java 2 Platform, Enterprise Edition and Enterprise JavaBeans™); Solaris 8 Operating System; Sun Java System Directory Server; Netra t1 Server; Sun Enterprise 220R and 420R Servers

### Business Background/Charter

Life Time Fitness, Inc. is a privately held, category-redefining operator of 24 multipurpose, state-of-the-art sports and fitness centers in Minnesota and five national markets, including Illinois, Michigan, Ohio, Indiana, and Washington DC. The company has set the standard in providing consumers with the absolute finest in lifestyle fitness facilities, full-service spas, personal training consultation, health and nutrition education, corporate wellness programs, adventure fitness, and personal care products, as well as the most scientifically advanced nutritional products and supplements.

### Business Drivers/Technology Challenges

Life Time Fitness realized it was having serious problems with its enterprise platform and software. The platform was neither growing with the business nor preparing them for the future of Internet technology. With plans to diversify the company's offerings, Life Time Fitness required a technology platform that would grow with its business needs. In addition, the Minnesota-based company expected to grow to more than 30 sites by the end of 2002. That kind of growth means a lot of information to process and organize. The existing Microsoft technology Life Time Fitness used was unable to scale with its business, was proprietary, and required vendor lock-in. The company needed technology that could support the company's growth and handle the complexities of an enterprise system.

### Sun Solution Overview

Today, with the help of Sun Microsystems, Life Time Fitness has become the first and only health and fitness club management system based on an open Web services architecture. Using the Java 2 Platform, Enterprise Edition (J2EE platform) and Enterprise JavaBeans (EJB™) components, Life Time Fitness has built a dynamic member management/point-of-sale system that expanded the company's offerings and allowed the company to reach the Internet community through online services. This system is a critical aspect to the success of the Life Time Fitness business. This multimillion-dollar behemoth stores membership and payment data for thousands of members. The system handles millions of transactions, and provides intranet and Internet functionality to employees and customers through the Web and kiosks. The system also provides reporting and analytics for customer relationship management functions and call center integration.

### Business Benefits

By unifying its existing systems with the Sun Java System Directory Server, which delivers a Lightweight Directory Access Protocol (LDAP)-based user management infrastructure that acts as a central repository for information, the company is now able to store all of its membership information in one place. And by moving to the Solaris 8 Operating System, Life Time Fitness overall operations have more speed, stability, and uptime — all of which have drastically reduced server administration costs. Together with the Java 2 Platform, Enterprise Edition (J2EE) component architecture and Enterprise JavaBeans (EJB) components, Sun helped Life Time Fitness seamlessly incorporate products from different vendors. By incorporating Sun's open and available standards into its architecture, Life Time Fitness now has more flexibility and more creative options.

"That's Sun's real competitive advantage. You don't feel any proprietary headlock."  
— Brent Zempel, CIO, Life Time Fitness

# Michigan Tech University

## Education

### Sun Products

- Sun Ray Server Software; Sun Enterprise 250 and 450 Servers; Sun Ray Desktop Clients; Sun Ultra 10 System

### Business Background/Charter

Since 1885, Michigan Tech University (MTU) has granted bachelor's, master's, and doctorate degrees within the following colleges and schools: Engineering; Sciences and Arts; Business and Economics; Forest Resources and Environmental Science; and Technology. MTU has 7000 students.

### Business Drivers/Technology Challenges

With its strong engineering and computer science programs, MTU needed to continue to provide its students and faculty with cutting-edge computer technologies while remaining within its limited IT budget. The school wanted to replace existing desktop computers with a lower administration and TCO solution.

### Sun Solution Overview

MTU deployed 200 Sun Ray 1 desktop clients. On the back-end, the Sun Ray systems are supported by a variety of mid-range Sun Enterprise servers: Ultra 10, Sun Enterprise 250, and Sun Enterprise 450 servers accessed via a 10/100Mbit Ethernet environment. While some of the servers were already in use at the school, others came bundled with the Sun Ray desktops. Existing servers were transformed into Sun Ray servers by simply installing the Sun Ray Server software.

### Business Benefits

Sun Microsystems' Sun Ray 1 desktop clients provide Michigan Tech with big computing power and flexibility for a low per-user cost. Specific benefits include:

- System administrators and technical support staff have less administration at the desktop and more freedom for innovation on the server site
- Clients are easily replaced in the event of failure, with no end-user downtime
- High-level security
- Lower TCO, enabling tight education budgets to enjoy the latest technology

# Miller County Hospital

## Health Care

### Sun Products

- Solaris 8 Operating System; StarOffice Office Suite; Sun Ray Server Software; Sun Fire V880 Server; Sun Ray Ultra-Thin Clients

### Business Background/Charter

Miller County Hospital has been serving Colquitt, Georgia residents since 1957. This 38-bed, not-for-profit hospital was named "The Hospital of the Year" in 2000 by HomeTown Health. The hospital offers a full range of inpatient and outpatient services to the residents of Colquitt and surrounding areas. It accepts Medicare and Medicaid, as well as all commercial insurance. Miller County Hospital is dedicated to delivering quality care for Southwest Georgia residents. This philosophy is upheld throughout the facility, and is evident in the professional staff of physicians, nurses, and other healthcare workers that provide care beyond the patients' expectations.

### Business Drivers/Technology Challenges

In 1999, a local foundation purchased a popular healthcare information system (HIS) for Miller County Hospital. At the time, the PC-based solution appeared to deliver required functionality at a great price. Unfortunately, the system was unreliable and difficult to use. After three years of system struggles, Miller County Hospital was forced to modify its computing technologies. It needed to replace its unreliable, PC-based healthcare information system solution with one capable of meeting Health Insurance Portability and Accountability Act (HIPAA) guidelines. Key business challenges include:

- Boost system reliability, efficiency, and usability
- Meet HIPAA guidelines

### Sun Solution Overview

iForce system provider Creative Healthcare Systems delivered its end-to-end, Sun technology-driven solution, the MedGenix Health Information Network, along with configuration, training and support. The MedGenix HIS includes a combination of Sun hardware, the Solaris Operating System, and the StarOffice 6.0 office suite.

### Business Benefits

Miller County Hospital has been so pleased with everything that they plan to be a showplace for the MedGenix Health Information Network. Not only is its new solution easy to use, the system is extremely reliable and affordable for a hospital of its size.

#### Key business benefits:

- Centralized, real-time computing environment, promoting data sharing, accurate reporting, and simplified administration
- Enhanced system reliability, usability, and functionality
- Easy scalability to accommodate growth and change
- Single point of contact for services
- Hot Desking capabilities

# Mountain View Elementary

## Education

### Sun Products

- Solaris Operating System; StarOffice Office Suite; Sun Ray Server Software; Sun Enterprise 250 Server; Sun Ray Desktop Clients; Onsite Training Courses

### Business Background/Charter

As a suburb of Denver, Colorado, Broomfield is home to one of Sun Microsystems' educational campuses and the Mountain View Elementary School. In the Adams County District 12 Five Star School District, Mountain View Elementary has a population of 700 students from kindergarten through fifth grade. Mountain View Elementary is a special education center school. Of the 700 students, 75 of these students have special needs, ranging from hearing impaired and emotionally disturbed to learning disabled. The largest group within this special population is the hearing impaired with a population of 50 students.

### Business Drivers/Technology Challenges

Already considered a technology leader in the school district, Mountain View Elementary was looking to expand to its current computer inventory and improve access to the Internet and browser-based applications. Mountain View Elementary was also looking for a word processing application that would enable students to research and develop writing projects, in order to increase writing scores.

### Sun Solution Overview

Through a grant provided by Sun Microsystems, Mountain View Elementary deployed 50 Sun Ray desktop clients, one Sun Enterprise server, and onsite training, providing the school with its own Sun lab that students use several times a week to complete their assignments. 30 Sun Ray desktop clients are in the computer lab; 20 are in satellites throughout the school. With the Sun Ray desktop, all applications run on a central server, and the desktop client is used only for input and output. Sun's Hot Desk technology enables users to access their own personal sessions and work in progress from any desktop in the workgroup — providing anytime, anywhere learning. Smart cards deliver secure access to the system and enable easy mobility. Users can withdraw their smart card to stop mid-sentence in an application, then continue where they left off by reinserting their smart card into any Sun Ray desktop on the school's network.

### Business Benefits

Mountain View Elementary's Sun solution delivers easy access to the Internet and browser-based applications, enhancing the learning experience for both teachers and students. Since the implementation has been completed, students' access to the Internet has doubled. Previously, students accessed the Internet approximately 45 minutes a week. Now, with the Sun solution, students have access to the Internet for over two hours a week, depending on their grade level. Sun's cross-platform support is also enabling students to expand their computer skills by enabling them to learn different computer environments. The Sun Ray desktop clients have eliminated the use of hard drives, floppy disks, and CD-ROMs for storage of information, resulting in a more cost-effective solution. And because it is a free download for educational institutions, Sun's StarOffice software also provides a more cost-effective solution than competitive offerings.

# Ocado

## Retail

### Sun Products

- Solaris 8 Operating System; Sun Cluster Software; Sun Enterprise 220, 250, 420, 3500, 4500, and 10000 Servers; Sun StorEdge T3 Arrays

### Business Background/Charter

Ocado is a revolutionary online supermarket, designed to change consumers' shopping habits and make supermarket shopping a quick and easy, stress-free, and enjoyable experience. In partnership with Waitrose, Ocado's dedicated home delivery service includes online access to hundreds of offers on Waitrose goods, with free delivery for orders of £75 or more. And because users can see what's in stock before they buy, Ocado provides a service that actually delivers precisely what's been ordered, to the door, next day.

### Business Drivers/Technology Challenges

The idea behind Ocado was to utilize the very latest Web and business technologies to create an online supermarket with no "bricks and mortar," and to develop a brand new distribution center, with a fleet of delivery vans that use a state-of-the-art electronic route scheduling and optimization system to ensure speedy, cost-effective deliveries. With no high street retail outlets to support, acquiring and servicing customers should be much less expensive, therefore enabling Ocado to be very competitive. As a greenfield site, Ocado needed a technical infrastructure to support both its Web site and its internal business systems.

### Sun Solution Overview

Ocado's platform infrastructure uses a wide range of Sun servers and technologies, including a pair of clustered Sun Enterprise 10000 servers with StorEdge T3 storage arrays providing the key database-serving environment. A number of Sun Enterprise 220, 250, 420, 3500, and 4500 servers are used as Web and application servers, and the Sun Enterprise 10000 solution supports Ocado's key Web site applications. Providing super-high resilience and a system that is "permanently on," the Sun Enterprise 10000 domains running the major Oracle databases are clustered using Sun Cluster 2.2 software. The Sun Enterprise 10000 solution has been built to provide capacity on demand (COD). If a group of domains has excess CPU capacity, it can be switched on for additional power at peak times and turned off as required. The extra power is only paid for when it is used, giving Ocado a system that can be scaled up as needed without paying for power it does not use, thus providing a cost-effective, scalable solution to increases in demand.

### Business Benefit

- The stability of the Sun Enterprise 10000 system delivers high levels of uptime — over approximately 18 months there has been no system downtime — ensuring that Ocado's Web site is available 24x7 and responds quickly to users' requests.
- With no downtime, Sun's application servers have enabled Ocado's staff to work more efficiently, with no time wasted owing to system crashes.
- The Sun Enterprise 10000 solution offers capacity on demand (COD), with extra power only paid for as and when it is used — thus providing a scalable and cost-effective solution that copes with peaks in demand.

# Ohio Supercomputer Center

## Education

### Sun Products

- Sun Grid Engine and Sun Java System Portal Server

### Business Background/Charter

The Ohio Supercomputer Center (OSC) is a technology initiative of the Ohio Board of Regents. OSC provides a reliable, high-performance computing and communications infrastructure for a diverse, statewide/regional community, including education, academic research, industry, and state government. In collaboration with this community, OSC evaluates, implements, and supports new and emerging information technologies. OSC, as a shared resource, accelerates the use of information technologies to strengthen the state's attractiveness and global competitiveness.

### Business Drivers/Technology Challenge

OSC needed a reliable, high-performance computing and communications infrastructure for a diverse, statewide/regional community, including education, academic research, industry, and state government.

### Sun Solution Overview

In April 2001, Sun selected OSC as a Sun Center of Excellence in High-Performance Computing (HPC) Environments. Through this partnership, the Ohio Supercomputer Center is using Sun Grid Engine and the Sun Java System Portal Server to give students and scientists browser-based access to their programs and jobs on the grid without having to learn the complexities of the UNIX® OS or its commands. The Sun Java System Portal Server has helped establish a new computing paradigm for the State of Ohio, using portal-based interfaces so that researchers can access their work from anywhere, anytime, over any device.

### Business Benefits

The Sun Java System Portal Server solution has provided Ohio Supercomputer Center with the ability to develop and deploy a scalable, portable, and extensible technical computing portal. Drawing upon projects from both OSC and Sun, the portal has integrated browser-based portal software with the Sun Grid Engine product. The resulting developments have drawn on OSC's extensive knowledge of creating portals, including the SciPortal project. Other successful examples of programs and jobs include the TimeLogic DeCypher system, Tera-BLAST applications, Hidden Markov Model applications, and other custom target creations. Additionally, the portal has provided custom interfaces for sequence manipulation and analysis as requested by researchers, typically not immediately available in open-source or commercial software. Multiple public domain codes have also been integrated into the portal, as well as computational chemistry supported with a basic interface to the Gaussian program.

"Sun is a well-established company with a reputation for excellent technology. The Sun Java System Portal Server filled our need for a reliable, high-performance computing and communications infrastructure. Its open and flexible design has made customization easy, and support and maintenance a breeze."

— Eric Stahlberg, Senior Systems Manager, Ohio Supercomputer Center

# Ohlone College

## Education

### Sun Products

- Sun Ray Desktop Clients

### Business Background/Charter

Established in 1965, Ohlone College serves the cities of Fremont and Newark, California. The main campus is located in Fremont on a beautiful 534-acre hillside site just south of historical Mission San Jose. Ohlone College also operates a Newark Center. Ohlone College is part of the Ohlone Community College District (the name of the district was changed from Fremont-Newark College District to Ohlone Community College District in December 2002).

### Business Drivers/Technology Challenges

Ohlone College wanted to simplify and improve its network infrastructures, improve its security, and lower its costs of maintenance.

### Sun Solution Overview

The college selected the Sun Ray architecture with Extreme Networks' high-performance Gigabit Ethernet switching solutions as the primary components of its new campus network. The solution allows Ohlone to keep up with the pace of emerging multimedia applications, communications, and daily operations that touch finance, enrollment, and human resources. Additionally, it provides advanced network-level security to protect the privacy of students and faculty.

### Business Benefits

The Ohlone infrastructure supports more than 10,000 students and 400 faculty members. The college evaluated several options for upgrading its campus IT systems. The Sun Ray architecture provided a competitively priced solution, one that is consistent, simple to manage, and easy to upgrade. The solution has delivered better performance, enhanced security, and greater uptime. In addition, students have a smooth and consistent experience regardless of which terminal they choose to work from. These features, along with superior solution design, deliver significant improvements to the way that systems were previously managed, maintained, and upgraded.

# Orcutt Union School District

## Education

### Sun Products

- StarOffice Office Suite

### Business Background/Charter

The Orcutt Union School District is located on the central coast of California, half way between Los Angeles and San Francisco in the suburbs of Santa Maria. The district serves 4800 students in six elementary and two junior high schools.

### Business Drivers/Technology Challenge

The Orcutt Union School District continues to strive to prepare students for the Internet age. Among its goals was to standardize on a single, affordable, comprehensive productivity software suite that would enhance student learning. Like any school, it needed to do this while conserving precious school budget.

### Sun Solution Overview

The Orcutt Union School District found its solution in Sun's StarOffice office suite. The software provided a straightforward installation and enabled quick deployment on all 540 of the district's PCs.

### Business Benefits

Using StarOffice software has resulted in stunning accomplishments by students of all ages. It provides uniform, powerful productivity applications on school and home PCs with zero impact to the school's tight budget. In fact, with the money it saved, the school district was able to purchase additional PCs and laptops for its ever-increasing school body population. Now, 540 of the systems are equipped with StarOffice software, including 31 wireless-enabled laptops that are rotated among the classrooms at the district's Joe Nightingale Elementary School.

"Sun's StarOffice office suite meets our needs in so many ways. It's a full-featured set of programs that is easy to learn, and its cost-effectiveness allows us to afford more technology, which wouldn't be possible at the prices charged by competitors. It's amazing what students bring to life with their own creativity and StarOffice software at their fingertips."

— Buzz Eyler, Director of Educational Technology, Orcutt Union School District

# Productivity Computer Solutions

## IT Services

### Sun Products

- Solaris 8 Operating System; StarOffice Office Suite; Sun Ray Server Software; Sun Enterprise 220R and 450 Servers; Sun Ray Ultra-Thin Clients; Sun Ultra 10 Systems; Knowledge Management Services

### Business Background/Charter

Productivity Computer Solutions' (PCS) mission has always been to deliver integrated IT solutions backed by unrivaled technical expertise and a flexible approach to providing real business solutions. Since its inception in 1988, PCS has actively developed partnerships with key suppliers, investing heavily in training to create a broad-based solution portfolio supported by comprehensive customer support services. PCS has been so successful in achieving its business objectives that today it is one of the U.K.'s leading data center-accredited Sun Microsystems resellers and enterprise solution providers. As such, PCS serves the business needs of the Sun community by providing the exceptional level of service that customers expect from a fully accredited Sun Microsystems reseller. PCS customers currently cover a varied spectrum of markets, including media, telco, retail, finance, government, education, legal, travel, manufacturing, engineering, and oil and gas.

### Business Drivers/Technology Challenges

PCS was looking for a new desktop solution that would help them reduce the total cost of ownership while increasing the effectiveness of its IT systems. They decided it was time to consolidate onto a common platform throughout the organization because over time they had acquired quite a diverse collection of desktop systems. The main problem they were facing was that virtually everybody had a different device on their desktop, and administration and support had become nearly impossible to manage.

### Sun Solution Overview

Sun was able to create a new desktop solution that would reduce PCS's IT cost and also decrease the amount of time tech support needed to support the desktop division. The new solution for PCS included Sun hardware — Sun Enterprise 220R and 450 servers, Sun Ray ultra-thin clients, and Sun Ultra 10 systems — and Sun software — the StarOffice suite, the Solaris 8 Operating System, and Sun Ray Server software. The Sun Ray solution for PCS has been implemented on a company-wide basis and includes the installation of 70 Sun Ray desktops at PCS's head office in Wakefield and three satellite offices in the U.K. The Sun Ray desktops are being used primarily to deliver StarOffice productivity applications, which are hosted on central Sun servers in each of the four locations. The system can also be accessed by remote users via PCS's virtual private network (VPN).

### Business Benefits

The Sun solution has enabled PCS to reduce administration time and costs, simplify its IT systems support, and improve security within their network systems. For example, the systems administrator is able to mirror each user's desktop and assist with problem solving without leaving the help desk, thus reducing support costs.

# Sheridan College

## Education

### Sun Products

- Sun Java System Directory Server; Sun Java System Portal Server

### Business Background/Charter

Sheridan College is the fifth largest college in Ontario, Canada, with over 13,000 full-time post-secondary students and 42,000 continuing education students.

### Business Drivers/Technology Challenge

The process of providing laptops to its students required Sheridan College's IS team to spend many hours preconfiguring each laptop to meet individual student's needs prior to lending them out. While this process ensured the laptops contained all applications to meet student needs, Sheridan College was looking for a way to decrease the IS hours and costs involved. In addition, the college was looking for a new way to post and retrieve student grades. The old-fashioned way, via paper, made it difficult and time-consuming to obtain past student grade information.

### Sun Solution Overview

The Sun Java System Portal Server solution allows students, working on laptops borrowed from the college, to access antivirus software needed during the installation process. Students only see download links for the applications they have access to and can see only their own grades. Students can also update their personal information. Continuing education students can also register for classes online. Telnet access and Netfile use is planned, which will allow students to access and transfer files on the network as well as enable the possibility of secure access online learning. The Sun Java System Portal Server also allows faculty to post grades for students to retrieve online.

### Business Benefits

Because of the Sun Java System Portal Server solution's easy access and high performance, students can now quickly download all needed applications during their laptop/portal training session and begin their work immediately. Sheridan College has also been able to save significant IS dollars and utilize their IT staff's talents on other IT projects rather than having them reconfiguring laptops. In addition, the college has significantly decreased the timeframe for posting and retrieving students' grades.

"Our portal solution with Sun Java System Portal Server and Sun Java System Directory Server software has dramatically improved the productivity of students and IS staff. Students can now download and install the applications they need themselves and start working sooner, as well as retrieve their grades online. This not only cuts IS costs and frees the staff for other projects, but improves the overall educational experience we provide."

— Casey Carvalho, Director, Information and Communications Technology, Sheridan College

# Synopsys

## Computer Software

### Sun Products

- Sun Java System Portal Server; Sun Enterprise 220R Server

### Business Background/Charter

Synopsys, Inc. (Nasdaq: SNPS) is the world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms to the global electronics market, enabling the development of complex systems on chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time to market for its customers. Synopsys is headquartered in Mountain View, California, and has offices in more than 60 locations throughout North America, Europe, Japan, and Asia.

### Business Drivers/Technology Challenges

Synopsys wanted to replace its legacy system with a robust customer support portal, and wanted the extra capabilities of a portal server. Because the company wanted the ability for users to customize their environment, flexibility was essential.

### Sun Solution Overview

Using the Sun Java System Portal Server, Synopsys created SolvNet, a 24-hour-a-day, Web-based problem-resolution support service. SolvNet provides an aggregation of content for their customers and partners.

### Business Benefits

The Sun Java System Portal Server solution provides more than 20,000 Synopsys customers with aggregated customer support content, along with the ability to resolve problems in context, using actual libraries with a design environment. The Sun Java System Portal Server provides Synopsys with the flexibility to bring in different types of content to users, allowing them to easily build channels and take content from its user groups to repurpose and reuse to create documents such as white papers, customer-generated presentations, and the creation of customer surveys and polls. The flexibility of the Sun Java System Portal Server provides the ability to turn these channels off and on, and has tremendously improved the company's problem-resolution support service.

"Synopsys and Sun have a long and productive history. We chose Sun for our customer support portal, and the results have been consistent with our expectations. We now have a flexible, robust customer support solution that has produced significantly improved performance, reliability, and customer satisfaction."

— Vito Mazzarino, Senior Director of Internet Enabled Services, Synopsys, Inc.

# Texas Instruments — U.K. Design OP

## Computer Hardware

### Sun Products

- Sun Ray Server Software; Sun Enterprise 3500 Servers; Sun Ray Desktop Clients; Sun Ultra 60 and 80 Systems; Knowledge Management Services

### Business Background/Charter

Texas Instruments Incorporated (TI) is a world leader in digital signal processing and analogue technologies — the semiconductor engines of the Internet age. The company first began operating in the U.K. in 1956, and its relationship with Sun Microsystems dates back to the late 1980s when TI began designing and building SuperSPARC® processors for Sun servers.

When TI relocated its U.K. design operation to a new site in Northampton in 1995, it took the opportunity to move from its previous heterogeneous systems environment, (based on a combination of Sun, Apollo, and HP-UX products) to a 100-percent Sun-based systems infrastructure — in recognition of Sun's high performance, high reliability, and outstanding price/performance ratio.

### Business Drivers/Technology Challenges

In the late 1990s, TI migrated to a Load Sharing Facility (LSF)-managed server farm environment, based on Sun Ultra 60 and Sun Enterprise 3500 servers, to optimize computing resources in order to reduce development cycles. They began to see great benefits by moving to a managed server farm environment, and turned attention to the desktop environment and the concern about the high cost of desktop CPU ownership. The company wanted to reduce the costs of their desktop devices — both the purchase/lease and maintenance costs — in order to focus their investment in CPUs for the compute farm. For each CPU in the farm, they could achieve over 70-percent utilization, versus the desktop at about 20 percent utilization. In terms of compute resource, each CPU in the farm is worth over 3 CPUs on the desktop. TI was using Sun Ultra 10 workstations as dataless desktops, storing the data on a separate file server. They considered alternative thin-client solutions, including Intel solutions with Microsoft Windows or Linux, but found the base support and retraining costs far too high. At this point Sun launched its Sun Ray technology.

### Sun Solution Overview

Following a successful trial period, the company now has a large number of Sun Ray desktops for design engineering applications, which were introduced in a phased deployment program — replacing existing desktops as their leases expired. With the acquisition of additional design resources, the program was unexpectedly expanded, giving the team just 7 weeks notice to increase the size of the desktop installation by 80 percent. The Sun Ray desktop clients are hosted by Sun Ultra 80 servers, each with 4 processors and 4 GB of memory, which provide the necessary robustness, and load balancing. If one of the Sun Ray servers is taken down for maintenance, users can still use their Sun Ray desktops; they will automatically cross connect to the other servers. The compute farm itself comprises Sun Ultra 60 and Sun Enterprise 3500 servers — a combination of systems that is fairly common across TI worldwide — and supports chip design applications including Cadence, Synopsis, Mentor, and Avant.

### Business Benefits

- TI has doubled its desktop capacity without any increase in monthly maintenance costs.
- The Sun Ray solution yields very low total cost of ownership (TCO) through centralized system administration and management.
- The Sun Ray solution enables TI to retain its high-performance engineering desktop environment.
- The low TCO of the Sun Ray solution has enabled TI to increase investment in its compute server farm.
- Smart card capability enables design engineers to take their sessions to any Sun Ray desktop.

# The TMP Company

## Distribution

### Sun Products

- StarOffice Office Suite

### Business Background/Charter

The TMP Company is a Seattle-based, full-service distributor serving the watch, clock, and jewelry industries. TMP is a small, agile firm that prides itself on the excellent value it offers to retail customers, with a legacy of delivering top-quality products and service for very reasonable prices.

### Business Drivers/Technology Challenges

- Conserve costs
- Be free to run any office productivity application on any computer at any time without paying exorbitant license fees
- Run multiple applications at once without constant fear of crashing

### Sun Solution Overview

TMP switched from Microsoft Windows to the Linux OS and downloaded the StarOffice suite. StarOffice software loaded immediately, and TMP liked its look and feel as well as its ease of use.

### Business Benefits

The StarOffice suite is very well designed and runs great on Linux. It opens up Word documents easily. TMP can run multiple applications with confidence that the system won't crash. Customers can replicate StarOffice software on all their computers at no cost and without the concern of violating any software rights rules.

# University of Ulm

## Education

### Sun Products

- Solaris 9 Operating System; Solaris 9 Resource Manager; StarOffice Office Suite; Sun Grid Engine; Sun HPC ClusterTools; Sun Java Studio; Sun Ray Server Software; Sun Enterprise 420R; Sun Fire 6800; Sun Ray Ultra-Thin Clients; Sun Ultra Systems; Knowledge Management Services

### Business Background/Charter

Founded in 1967, the University of Ulm, located in Ulm, Germany, is a specialized technical university dedicated to the teaching of science and medicine. Designed theoretically and architecturally as an elite technical institute of higher learning where teaching and research coexist under one roof, the university offers degrees in the natural sciences, medicine, electrical engineering, mathematics, and computer science. As one of Germany's foremost medical and scientific institutions, the university demands a huge amount of reliable computing power to drive high-level scientific, chemical, mathematical, engineering, and medical research computations. To support this infrastructure most effectively, the University of Ulm forged a partnership with the much larger Stuttgart University to create a shared computing center that was more sophisticated, with greater computing power than either university could justify on its own.

### Business Drivers/Technology Challenges

As one of Germany's foremost medical and scientific institutions, the university demands a huge amount of reliable computing power to drive high-level scientific, chemical, mathematical, engineering, and medical research computations. To support this infrastructure most effectively, and to establish shared computing resources, the University of Ulm forged a partnership with the much larger Stuttgart University. When the joint venture first went live, managing these valuable resources and juggling the demands of a host of partners proved to be challenging. A "fair-share" agreement was almost impossible to determine and maintain for each group of users on a consistent basis. "Too often the manual approach either overloaded the servers or left CPUs idle — none of which is really acceptable from a financial or resource allocation standpoint. If you pay millions of dollars for a box, you want to keep it busy as much as possible," said Thomas Nau.

### Sun Solution Overview

The solution to the university's resource allocation dilemma arrived with Sun's Solaris 9 Resource Manager software. Solaris 9 Resource Manager is fully integrated with the Solaris 9 Operating System. With Solaris 9 Resource Manager and Sun Grid Engine, they can now easily distribute computing resources according to specific needs or to the goals defined by their partners on the research network. They have much more fine-grained control over activity on the school's servers, and can ensure that classes using StarOffice software or running compilers are undisturbed by users surfing the Web. They also now have more powerful, easy-to-use tools to create and prioritize workloads and balance computing needs across the network grid. Server capacity priority ratios between workloads limits are enforced only when there's competition for CPU capacity.

### Business Benefits

Since deploying Solaris 9 Resource Manager, the university has improved its ability to provide the performance cycles each workload needs. With Solaris 9 Resource Manager, multiple users, groups, and applications benefit from predictable service levels. Jobs launched within Sun Grid Engine also automatically respond to limits and settings established by Solaris 9 Resource Manager. By dynamically allocating unused CPU capacity to active user groups and applications, resource utilization is increased. And because IT can set and enforce policies that control how resources are used, systems are easier to manage, thereby making the most of the university's computing center servers.

"With Sun's Solaris 9 Resource Manager and Sun Grid Engine, we can now easily distribute computing resources according to specific needs or to the goals defined by our partners on the research network. We also have much more fine-grained control over activity on the school's servers...and now have powerful, easy-to-use tools to create and prioritize workloads and balance computing needs across the network grid."

— Thomas Nau, IT Director, KIZ, University of Ulm

# University of Westminster

## Education

### Sun Products

- StarOffice Office Suite; Sun Ray Server Software; Sun Enterprise 450 Servers; Sun Ray Ultra-Thin Clients

### Business Background/Charter

The Cavendish School of Computer Science at the University of Westminster has four areas of activity: Software engineering, information systems, mathematics, and electronic systems. Courses are developed to provide students with the skills to become electronics and computer professionals. There is a strong emphasis on the needs of industry, with industry-standard techniques used on all courses. Students, therefore, graduate with a portfolio of marketable skills. Each course is delivered by friendly, experienced staff and taught within a specialist department.

### Business Drivers/Technology Challenges

In order to meet the demands of its curriculum as well as those of its academic staff and 1600 students, which require the best IT facilities possible, the university needed to upgrade the IT facilities provided by its Cavendish School of Computer Science while not letting performance fall victim to budget.

### Sun Solution Overview

On the recommendation of Sun reseller e-Net Software, the university decided to bypass PCs for the Sun Ray 1 desktop client, which gives users access to a wide range of applications without the support overheads traditionally associated with desktop computers. The user accesses all applications through a 100BaseT network, which connects each device to a Sun Enterprise 450 server. This in turn is connected to the university network. By simply slotting their smart card into the system unit of any available Sun Ray system, the user logs on and has immediate access to a wide range of applications. These include course-specific packages and Sun's StarOffice software running on the Sun Enterprise 450 server; PC applications from a Microsoft Windows server; and the Web.

### Business Benefits

The Sun Ray solution has provided reduced TCO, improved access to information, an enhanced user experience, and a flexible, scalable platform to support future growth.

"The Sun Ray 1 system has given us a high-performance, low-cost, and low-stress answer to the challenge. Users are happy because they have access to all applications from any workstation. This ability to hot desk is also very attractive to the systems support staff because we can concentrate all our efforts on the servers, where all the software and data now resides, and the network. The Sun Ray 1 systems — and therefore, the users — pretty much look after themselves."

— Thierry Delaitre, Systems and Services Manager, University of Ulm

# Valaran Corporation

## IT Services

### Sun Products

- Jini Network Technology; Sun Enterprise 4500 and 5000 Servers; Sun Fire 15K Server

### Business Background/Charter

Valaran has built a dynamic business framework that is a breakthrough in aligning business needs with information technology and network capabilities. For communications service providers, it allows for system consolidation, the creation and management of automated business processes, the repurposing of legacy systems, and makes it easier to launch new services, such as those based on IP. And most importantly, the new framework embodies a new wave of thinking. Valaran's framework excels in dynamic environments where things are in flux, and as such, is well-suited for the harshest environments within service providers, allowing the creation of self-healing applications that have no single point of failure.

### Business Drivers/Technology Challenges

Valaran's customers run on disparate computing systems that are connected over complex networks and built on a number of different and often confusing standards. Given this tangle of hardware, software, and network protocols, it is easy to understand why business and technical managers struggle when asked to decrease their short-term and long-term spending while simultaneously providing strategic business capabilities. Valaran's mission was to create a product that would streamline business processes, cut the costs of operations, and provide a flexible means for creating new services.

### Sun Solution Overview

Using Jini technology, Valaran integrated new and existing applications, network elements, and devices, creating a common and evolvable infrastructure platform across the entire enterprise. Valaran provides a distributed business infrastructure that unites design, implementation, and measurement of business processes.

### Business Benefits

The Valaran Dynamic Business Framework, created with Jini technology, enables customers to dynamically model, implement, and manage distributed business processes across applications and networks. It also integrates applications, network elements, and devices while leveraging existing assets, providing a strategic platform for business evolution. Jini technology's flexible infrastructure and open support system easily handles all dynamic architecture, auto-discovery capabilities, and makes migration easier than traditional or alternative approaches.

"Sun's Jini network technology is years ahead of its time, and provided a superior solution to a very difficult problem. With it, we're giving our customers common, flexible enterprise infrastructures that leverage existing assets and integrate applications and network elements, providing a strategic platform for business evolution."

— George Faigen, Chief Marketing Officer, Valaran Corporation

# VIP Tone

## Computer Software

### Sun Products

- Sun Java System Application Server Platform Edition 7; Java 2 Platform, Enterprise Edition (J2EE Platform); Sun Enterprise 250 Server; Sun Fire V880 Server; Java Architecture Assessment; Security Services

### Business Background/Charter

VIP Tone, Inc. provides a unique data integration and knowledge management platform for the global education market that is a key enabler in addressing the market's two highest priorities: Measuring and benchmarking of student achievement and improving school accountability. This platform integrates various networks for communications, computing, and information into a single, remotely managed, broadband-based secure network. VIP Tone's solution integrates enterprise data for data-driven decision support, student assessment, and school accountability reporting, while enabling student-centric achievement measurement and e-learning tools. VIP Tone's major client base consists of five of the six Australian state departments of education. VIP Tone is a privately held company headquartered in San Mateo, Calif., with an Australian subsidiary, VIP Tone Australia PTY, Ltd., based in Adelaide, South Australia.

### Business Drivers/Technology Challenges

VIP Tone provides a totally outsourced management of its customer's IT infrastructure, and requires a secure and scalable solution that can run centrally on one site.

### Sun Solution Overview

The Sun Java System Application Server provides a mission-critical assessment solution to run on a single Sun server, which is critically important in high-stakes, Web-based testing services where the system must be responsive and accessible in a volume-load environment.

### Business Benefits

VIP Tone has derived many benefits from its migration to the Sun Java System Application Server. The Sun Java System Application Server's initial performance delivered a 98-percent transaction improvement over the company's previous application server. Its deployment on a Sun Fire V880 server demonstrates the ability of the company's mission-critical assessment solution to run on a single server. In addition, the Sun Java System Application Server's high availability, scalability, and security helps meet the company's mission-critical Web and enterprise application requirements and helps increase developer productivity and speed overall time to market. Tests on VIP Tone's Quiz Studio application provided further evidence of the responsiveness of the system in managing a heavily loaded environment with a large number of transactions. It also provides a compatible platform for developing and delivering Java Web services.

"Sun enables us to provide higher-performance Web and IT management services to our education customers. Sun Java System Application Server software has essentially doubled transaction speeds while running mission-critical applications from a single Sun server. This is critically important in Web-based services where systems must be highly responsive and accessible in a volume-load environment."

— Robert Iskender, CEO, VIP Tone

# Virgin Atlantic Airways

## Transportation Services

### Sun Products

- Solaris 8 Operating System; Solaris Bandwidth Manager; Sun Management Center; Sun StorEdge Resource Management Suite; Sun Fire 280R and 6800 Servers; Sun Enterprise 420R and 450 Servers; Sun Educational Services; SunSpectrum Platinum™ Service

### Business Background/Charter

Virgin Atlantic Airways, under the direction of Richard Branson, has grown in its 18 years of existence to become Britain's second largest long-haul carrier, serving 19 destinations worldwide. Although Singapore Airlines purchased 49 percent of the company in 1999, Branson retains majority ownership of Virgin Atlantic.

### Business Drivers/Technology Challenges

- Improve the performance, capacity, and scalability of platform infrastructure
- Provide an upgrade path for its 90 Oracle-based databases
- Resolve degradation in support from third parties for the Sequent platform

### Sun Solution Overview

Sun worked with Virgin Atlantic to migrate the platform infrastructure from nine IBM Sequent SE30 and NUMA-Q servers to two Sun Fire 6800 servers. Sun consultants helped the company's DBA staff develop a consolidation plan that encompassed an architectural design, operational processes and procedures. A Performance Analysis and Capacity Planning Service helped identify quality-of-service requirements and verify that the proposed architecture would accommodate current demands as well as future growth. Sun also helped the company set up the Sun Fire servers and partitioned each of them into two domains. Virgin Atlantic's highly skilled DBA staff completed the migration while Sun consultants helped review and ratify the migration methods used to minimize outages. As a further measure to maximize availability, Virgin Atlantic contracted for SunSpectrum Platinum support. In addition, Virgin Atlantic has taken substantial advantage of the educational opportunities offered by Sun.

### Business Benefits

All IBM Sequent Oracle databases have been completely migrated to Sun, and the company is getting first-tier support from Oracle and third-party vendors. Virgin Atlantic is in the process of migrating applications and data running on IBM AS/400 and Windows NT servers to the Sun Fire platform — noting lower total cost of ownership and enhanced system performance as key factors.

# W Pauley & Company

## Distribution Services

### Sun Products

- Java Technology; Solaris 8 Operating System; StarOffice Office Suite; Sun Ray Server Software; Sun Enterprise 250, 450, and 3500 Servers; Sun Ray Ultra-Thin Clients

### Business Background/Charter

W Pauley & Co Limited is a national fresh produce distributor in the U.K. Specializing in the supply of fresh fruit and vegetables to the food service market, Pauley has a turnover in excess of 50 million and a national next-day delivery service that it will combine with the Brakes fleet of 1500 vehicles.

### Business Drivers/Technology Challenges

Pauley's wanted to empower staff with office productivity applications on a slim budget; reduce IT support costs; maintain compatibility with customers and suppliers; and control office applications from Java technology-based applications.

### Sun Solution Overview

The StarOffice suite was chosen, running on Sun Enterprise servers and Sun Ray desktop clients. W Pauley & Co Limited has 200 users that share 80 StarOffice seats on 80 Sun Ray 100 desktops. They all run on a dedicated Sun Ray server in a hub.

### Business Benefits

W. Pauley & Co Limited received many benefits by deploying the Sun technology:

- They were able to save hundreds of thousands of pounds by replacing their Microsoft technology.
- Support functions were reduced by 95 percent of support resources for 5 desktops, to half an hour per day for 80.
- They now have a highly reliable operation

## WiredTime.com/TELUS Mobility

### Sun Products

- Java 2 Platform, Micro Edition (J2ME™ Platform); Solaris Operating System; Sun Fire 15K Server; Knowledge Management Services

### Business Background/Charter

Located in the Canadian Technology Triangle in Kitchener, Ontario, WiredTime.com provides mobile task management solutions for organizations with mobile work forces. Company president and CEO Eric Keller founded the company in 2000 to commercialize a task management and reporting solution he developed to improve efficiency and reporting for his own property maintenance business, which provides services as diverse as asphalt repair, snow clearing, and electrostatic painting.

### Business Drivers/Technology Challenges

When Eric Keller, CIO of WiredTime.com, managed his own service companies, he perceived an emerging need for a more effective way to track the time and task activities of mobile workforces that provide repair, security, inspection, maintenance, construction, or delivery services. Traditionally, service companies have tracked employees' time on tasks using manual methods, such as route sheets or handwritten logs that someone later enters into a computer system. This method introduces the possibility of data entry errors. What's more, company managers must wait until the data is entered to view reports — when it's often too late to act on information, such as an available technician or a job taking longer than anticipated.

### Sun Solution Overview

WiredTime.com used Sun's Java 2 Platform, Micro Edition (J2ME) technology to develop its task tracking solution. WiredTime.com's current development program includes TELUS Mobility's CDMA network. Mobility Mike phone transmits the time, worker ID, and bar code data — which provides the location or task — to the application server, which resides on a Sun Fire 15K server running Sun's Solaris Operating System. The application server can reside at the customer data center, the WiredTime.com data center, or the TELUS Mobility data center, depending on the customer's business model and system availability requirements. The Java technology-enabled phones collect data. The WiredTime.com server converts the data to useful business intelligence for billing, payroll, contractor and subcontractor payments, and liability documentation.

### Business Benefits

Companies that use the WiredTime.com solution allow managers to be able to view up-to-the-minute information on task completion from a secure, Web-based interface. They also can generate a variety of standard management reports, including shift reports, payroll reports, and reports on workers currently in the field. With real-time knowledge of workers' locations and duration of jobs, service companies can improve job scheduling and monitoring, ensure accurate job billing, and ultimately enhance customer service.

“Sun's J2ME platform is the only technology that enabled us to download our task management application to TELUS Mobility wireless phones. Eliminating the development costs of a custom wireless device helped us keep our product affordable.”

— Eric Keller, President and CEO, WiredTime.com

# World Book

## Media and Entertainment

### Sun Products

- Sun Java Enterprise System, including the Sun Java System Application Server and Sun Java System Portal Server; Sun Fire V120 and V240 Servers

### Business Background/Charter

Since 1917, World Book, Inc. has set the standard for providing accuracy, objectivity, and reliability in research materials for both children and adults. Based in Chicago, Illinois, World Book is an industry leader in the production of award-winning encyclopedias, reference sources, and multimedia products for the home and schools. For over 80 years, World Book has been committed to publishing encyclopedias and references that meet the highest standards of editorial excellence while keeping pace with the technological developments that define the computer age. This commitment has culminated in the publication of the number-one selling print encyclopedia in the world, World Book, and market-leading electronic products such as World Book Multimedia Encyclopedia and World Book Online. Recent publications include World Book Student Discovery Encyclopedia, a new Childcraft — The How and Why Library — and Animals of the World.

### Business Drivers/Technology Challenges

The diminished performance and high cost of World Book's existing IT infrastructure led the company to look to implement a new solution that would provide a reliable, cost-effective, open systems computing environment. The company wanted to deploy a flexible, high-performance platform to create new reference and research offerings for its World Book Online Reference Center subscribers. As World Book's online reference business continues to grow, customers must be able to access current information via the thousands of articles, maps, pictures, sounds, and video that are delivered via the Web. Controlling IT costs are crucial to the company's competitive strategy.

### Sun Solution Overview

World Book, Inc. is one of the first corporate customers to sign a contract under Sun Microsystems' new per-employee pricing model, and will deploy the Sun Java Enterprise System — including the Sun Java System Application Server and the Sun Java System Portal Server — for its employees to deliver its World Book Online services. Powered by Sun Fire V120 and V240 servers, World Book will be able to rapidly deploy its World Book Online reference, research, and online learning services to millions of subscribers, resulting in faster time to market, enhanced customer services, and greater return on investment. The Sun Java System Portal Server will be used as a portal for customers to gain access to these online services.

### Business Benefits

As one of the first corporations to sign a contract under Sun's per-employee pricing model, the Sun Java Enterprise System, World Book estimates it will save 50 to 75 percent over its previous standard "per-processor" pricing model for Sun software products. This savings will dramatically reduce the company's software acquisition costs and provide a predictable IT cost structure under which to manage its growing business. The fully integrated range of components and broad range of technologies provided by the Sun Java Enterprise System allow World Book to develop and deploy more functionality to its online services faster, enabling it to spend less time upgrading and testing its software and more time exploiting opportunities, such as enhancing content delivery, increasing functionality, and introducing new customer service offerings.

"The Sun Java Enterprise System enables us to deploy more functionality to our online services faster, spend less time upgrading and testing software, and devote more time enhancing and introducing new customer service offerings. We expect to save 50 to 75 percent over our previous standard per-processor pricing model for Sun software. This will dramatically reduce our software acquisition costs and provide a predictable IT cost structure."

— Tim Hardy, CIO, World Book, Inc.

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