

# NEWS/4 YOU

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# NEWS/4 YOU

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**NON-TECHNICAL**

**MODERATE**

**TECHNICAL**

# AS/400 – built for business

MODERATE



**David Russell**  
 Manager, Business Servers  
 IBM Australia and New Zealand

As you may be aware, on February 9 IBM announced evolutionary changes to the AS/400 range. The latest announcements are profiled in detail overleaf, but firstly I thought it would be useful to reflect on why AS/400 continues to be so successful and focus on why AS/400, now more than ever, really is 'built for business'.

Whatever the industry buzzword is, the AS/400 would have implemented it already. Object-oriented database, Client/server, 64-bit architecture, Technology Independence, Internet, Java and e-business.

In a span of a decade, the AS/400 has transformed itself into the world's most popular modern, multi-user, commercial business computer. Unbelievable, but true.

No wonder industry analysts have dubbed the AS/400 IBM's best-kept secret.

### The aim is customer delight

A decade of excellence for the AS/400 isn't just for technology excellence. It's for customer satisfaction. The AS/400 has delivered what customers want, including advanced features like pure Java, native Lotus Domino, datawarehousing and Windows NT. And it has done so without the complexities and frustrations associated with new technologies.

To remain globally competitive in today's business environment, companies must make quick and effective use of information technology. In an industry that is marked with multiple vendors and platforms, and diverse and rapidly changing technologies, it's no wonder businesses find it difficult to select the right IT solutions.

The AS/400 was designed precisely to help make this decision easier.

### Unique technology – neutral architecture

What's special about the AS/400 is the fact that it's not defined by its hardware. Programs running on the AS/400 speak to a Technology

Independent Machine Interface (TIMI) which lies between the hardware and the operating system (OS) and application programs. Hardware changes, along with changes to the Interface, do not affect the OS and applications.

For example, AS/400 customers have been able to upgrade from 48-bit CISC to fully exploit the power of 64-bit RISC processors. Programs originally written for 48-bit hardware are automatically converted to full 64-bit. Rewrites and recompilations on existing application software are not necessary, protecting the investment on these applications.

Simply put, the AS/400 has the advantage to easily change and adapt to future technologies. The same architecture that allows you to seamlessly move from 48-bit to 64-bit will also enable you to move to 96-bit and 128-bit should they become available.

### Integration is key

Another dramatic feature of the AS/400 is its Operating System, OS/400. IBM developed OS/400 with all of the prerequisites to enable business applications to run straight out of the box. Once you buy an AS/400, you don't have to shop for components such as relational database, security or communications software. These are fully integrated into OS/400. And by 'fully integrated', we mean fully tested. No sense in having a product that is integrated but untested.

For business users, AS/400 integration provides cost efficiency as well as ease of use. According to a 1997 IDC study, AS/400 costs US\$500,000 less over its lifetime than alternative solutions. This same study found that AS/400 took less time to implement and required fewer personnel.

## Questions to ask

Why should you choose an AS/400 over another system? What are the benefits? And why should it matter to you, a business person, whose main concern is large sales, low costs and high profits?

Well, with the accelerating rate of change of both hardware and software technologies, ask the vendor if the system is designed with the future in mind and its track record in the past years as technologies changed. Ask if the system has all the features needed to run your business applications straight out of the box. Ask how long it takes to set up and implement. Ask if the system is easy to operate. Ask how many people it takes to run. Ask if your applications need to be changed when the system changes. These questions may seem immaterial but it pays off in the end. Systems vendors make many claims, especially about futures, but how many have actually delivered on their promises?

## Keeping promises

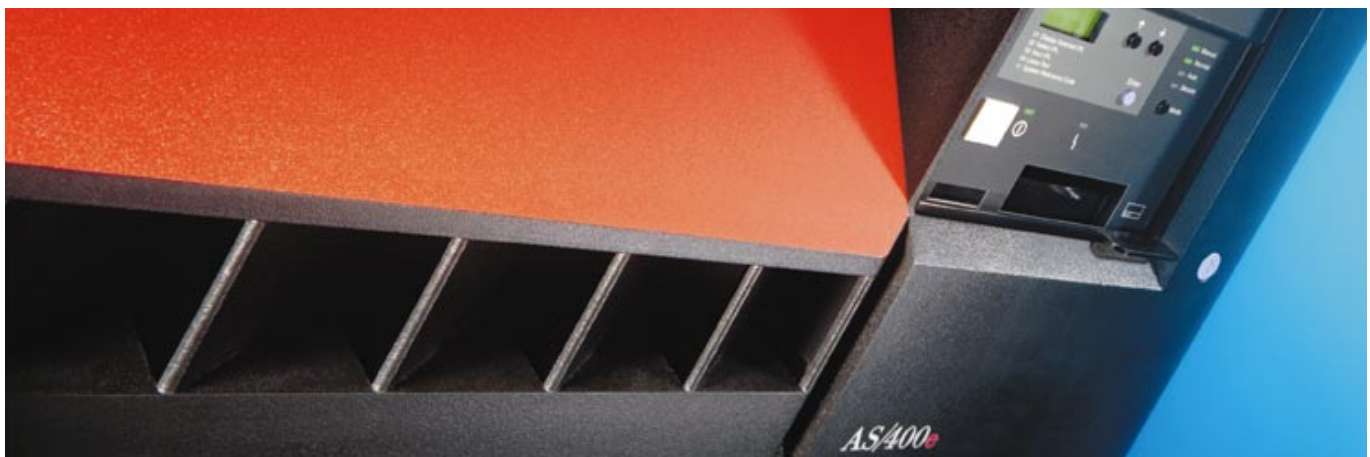
The AS/400 keeps its promises and more. It is designed to accommodate technology changes while protecting your investments in the applications and data. It fully integrates all the hardware and software components that a business needs.

Customers love the AS/400 because it is simple to learn, easy to use and

quick to implement. It has the industry's lowest total cost of ownership as it requires much fewer personnel to run. And it's equipped with the e-business and datawarehousing features that a modern business like yours must have in today's networked and intelligent world.

The AS/400 indeed delivers a 'Perfect 10' performance. Consider these other ten points:

- It is the world's most popular multi-user, commercial business server with more than 500,000 systems installed around the world. AS/400s are installed in 98 per cent of Fortune 100 Industrial companies, 95 per cent of Fortune 500 and 85 per cent of Fortune 1000 companies.
- AS/400 is sold in more than 150 countries worldwide and is capable of accepting and displaying information in 51 national languages.
- 52 per cent of AS/400 customers own four or more AS/400s and IBM delivers a server somewhere in the world every 10 minutes of each workday.
- AS/400 customers are the world's most loyal with a nearly 95 per cent customer satisfaction rating. A 1997 *US Computerworld* Buyers survey names AS/400 No. 1 in customer satisfaction. In addition, the AS/400 has won the *Computerworld* Readers' Choice Award for Best Midrange Server four years in a row, ever since the award was introduced in 1995.
- An AS/400 almost never goes down. According to a 1998 Gartner Group Report, AS/400 has the highest availability of any general business server with 99.94 per cent uptime.
- The AS/400 has the industry's only complete 64-bit computing environment, including operating system, database and applications.
- Currently there are approximately 30,000 AS/400 applications written by over 8,000 business partners and independent software vendors. These include the popular ERP solutions from Acacia, Baan, JBA, JD Edwards, Infinium, Intentia, MAPICS, Peoplesoft, Progress, SAP, SSA and Symix.
- Its e-business capabilities allow AS/400 to automatically and instantaneously transform any AS/400 application for the Internet. Plus its built-in airtight security makes the AS/400 virtually hacker-proof.
- It is among the industry's fastest-growing Business Intelligence platforms. Last year more than 3,000 businesses installed AS/400s specifically for business intelligence.
- Runs Windows NT via an integrated Netfinity Server (formerly the Integrated PC Server), making it capable of running NT applications in a more stable, secure and reliable environment. ■





# IBM innovates and simplifies its AS/400

- increased performance
- faster processors
- greater flexibility

On February 9, 1999 IBM announced a powerful new line of AS/400e servers offering customers increased performance, faster processors and greater flexibility to customise and fit their specific business requirements.

Whether running traditional back-office applications, newer e-business applications or both, the new AS/400e can handle multiple business application workloads on a single server.

The versatile new AS/400e server line consolidates multiple server models into a simpler, more powerful family. Extending IBM's fourth-generation 64-bit RISC processor technology across the AS/400 product line, these new models deliver customers a range of growth that scales 170 times from top to bottom.

For small and medium businesses, the new AS/400e server (Model 170) now provides up to 21 times the performance from the entry model to the top of the 170 Model line.

"This is a major step in the transformation of AS/400," said Mr David Russell, Manager, Business Servers, IBM Australia and New Zealand. "We have turned another page in the 10-year history of AS/400 by offering a totally modern, highly versatile business computer leveraging traditional values of reliability, scalability, security and service with new e-business technologies."

## Multiple workloads

The new AS/400e server has the ability to conduct e-business while running mission-critical applications. For instance, it can simultaneously host Internet sites, mine databases, run enterprise Java and native Lotus Domino, host NT servers and process payroll, human resources and other operations securely and reliably without compromising performance.

## Logical partitioning

IBM has introduced new "logical partitioning" (LPAR) technology on the AS/400, enabling a single server to do the work of 12 separate servers. Pioneered by IBM's S/390 mainframe servers, logical partitioning reduces software licensing fees, increases performance, accelerates distribution of new software and eases system management tasks.

## Clustering

AS/400 clustering services and technologies will be integrated into the new operating system, making it easier to install and manage an AS/400 high-availability cluster. Customers gain a much higher level of flexibility, and the ability to switch users to alternative nodes in AS/400 clusters with minimum disruptions.

## Built for your business

With AS/400e you simply choose the level of performance you need for the mix of applications you want to run, and a server can be customised to provide it. If your performance requirements increase, the server can be fine-tuned to match.

And, of course, every AS/400e is backed by IBM's unbeatable service and support.

## Other major AS/400 announcements include Operating System (OS/400 Version 4, Release 4) enhancements available later this year, including:

**Internet-based Communication and Electronic Commerce:** Operating system enhancements will bring improved performance including:

- better caching
- improved security, authentication and encryption through integrated virtual private networks (VPN)
- secured socket layer technology
- anti-spamming devices
- improved ease of use through easier configuration, better logging and digital certificate management
- simpler e-business with access to IBM WebSphere, Net.Commerce Version 3 and Net.Data.

**Universal Database:** DB2 for AS/400 offers the industry's broadest range of functionality including:

- classical character-based data
- ability to store large complete objects such as voice, image and video
- indexing function and performance – vastly reducing query times to deliver business intelligence at faster speeds.

**Java:** AS/400 will now have improved Java performance for e-business solutions and Enterprise JavaBeans, a programming model that supports scalable, distributed, transaction-oriented, three-tier business applications.

Enhanced features include:

- improvements in the Java Virtual Machine, AS/400 Developer Kit for Java and AS/400 Toolbox for Java
- preview support for Enterprise JavaBeans via WebSphere, while supporting Java Servlets.

# range into *multi-purpose, e-business engines*

**Domino:** The new Domino for AS/400 release will include:

- Support available for Lotus Domino 5.0 on OS/400 within seven days of general availability from Lotus
- Java editor and class browser for creating Java applications without the need for third-party development tools.

**Integrated Netfinity Server:**

The Integrated Netfinity Server (formerly the Integrated PC Server) runs Windows NT personal productivity applications under the covers of AS/400 including:

- faster Pentium II processor
- additional memory.

**Product availability**

AS/400 will be available in Australia and New Zealand from February 26, 1999. Operating system software (V4R4) will be available from May 21, 1999. All AS/400 products are Year 2000 certified and Euro currency ready. ■

PLET Numbers	Description
AA99 - 3009	AS/400 Operating System V4R4
AA99 - 3011	AS/400 V4R4 Overview
AA99 - 3012	AS/400 Client Access Express
AP99 - 1032	V4R4 for 9401 - 150
AP99 - 1028	AS/400 Terms and ordering for V4R4
AP99 - 1029	AS/400 V4R4 Licensed Programs
AG99 - 0038	AS/400 7XX E-Servers
AG99 - 0040	AS/400e server 170 enhancements
AG99 - 0039	Hardware withdrawal - Selected models / features
AP99 - 1033	Software withdrawal - Selected programs
AP99 - 1026	AS/400 Programming languages

*Details available from IBM Link at [www.ibmink.ibm.com](http://www.ibmink.ibm.com)*



# Editor's column

Welcome to the first edition of NEWS/4 YOU in 1999.

With the focus now on 1999 business, we in IBM believe we have created a winning formula with the newly consolidated line of AS/400e servers.

This issue of NEWS/4 YOU features an overview of the latest AS/400 announcements designed to help your business be fast and flexible.

AS/400 has always been designed for business. By tightly integrating hardware, software, middleware and the operating system, AS/400 provides a combination of power and flexibility you can rely on to help you run your business.

That design also makes it possible for AS/400 to help ensure that you never get left behind as technology changes. The latest AS/400e

hardware enhancements and the newest version of the AS/400 operating system, OS/400 V4R4 have been engineered to provide you with the performance and the tools you need to help you get a quicker return on your investment in such critical areas as e-business, enterprise resource planning, business intelligence and server consolidation.

In addition to the new AS/400 announcements, this issue of NEWS/4 YOU also contains a selection of e-business articles. For example, note the article on Domino Release 5 for AS/400 and the article on Java Server-side programming solutions. Both articles demonstrate the latest IBM e-business technologies currently available to assist you in harnessing the power of the Internet. And be sure to check out the article on "All Hours" and discover how this auction house became one of the first online auction sites in Australia.

Once again we encourage you to tell us if we are on target in providing concise, topical and timely information you need to run your business. Please email any comments or feedback you have to me at the address below.

Finally, I'd like to take this opportunity to wish you all every success in 1999.

Cameron Bayfield  
AS/400 Brand Marketing  
bayfield@au1.ibm.com



## AS/400e Announcements

### Key Features and Benefits – Hardware

#### Simplify

- Product line simplification
- Simplification of initial hardware selection

#### Server consolidation

- Consolidates the current product lines of system, server, custom server and Advanced 36 into the 7XX series
- Good fit for customers looking to consolidate dispersed workloads
- Multiple workloads – e-business and mission-critical applications

#### Flexibility

- Easily accommodates changing application requirements
- Customers select the processor performance they need
- Can now add optional interactive performance as needs change
- New Integrated Netfinity Server for AS/400 (Pentium 333 Mhz)

#### Price performance

- Faster processors – Northstar 64-bit RISC across the line
- Lower entry price point
- Investment protection
- Existing memory, disks and Input/Output processors can be reused – thus reducing the cost and time needed to upgrade
- 7XX models have the same physical attributes as the 6XX (i.e. 720 looks like 620, 730 looks like 640, 740 looks like 650)

#### Scalability

- Non-disruptive growth (vertically and horizontally)
- From top-to-bottom, new 7XX series offers scalability of 18 times the commercial processing workload (CPW) performance (240 CPW to 4550 CPW)
- Expanded breadth of 170 server family
- New low-end entry server offering
- New 2-way server model for added growth within the 170 range

### Key Features and Benefits – Software

#### New release of AS/400 operating system, Version 4 Release 4

- Improvements/enhancements in e-business, Java and Lotus Domino
- Continuous availability clustering; from two nodes to 128 node support
- Logical partitioning (LPAR) up to maximum of 12 partitions:
  - combining multiple logical machines into one physical machine (n-ways only)
  - logical independent versions of the operating system run within the same physical system
  - allows consolidation of multiple footprints on one physical machine
- DB2 Universal Database for AS/400
- Euro ready
- Year 2000 certified



# R5 products deliver on promise

Lotus Development Corporation recently launched Release 5 (R5) of Lotus Notes, Domino and Domino Designer, the latest version of the world's leading products for information management, messaging, collaboration and Web application development. The R5 products, conceived with the qualities and capabilities of the Internet in mind, will deliver on the promise of enabling users to find, act upon and share information, further improving communication among groups, organisations and people everywhere.

## Rich Internet messaging and collaborative Web applications

AS/400 with Domino R5 sets a new standard for rich Internet messaging, ease of administration, reliability, rapid Web application development and integration with enterprise information systems. The only solution built on an open, unified architecture, Domino is trusted by the world's leading companies to deliver secure communication, collaboration and business applications. Key enhancements to Domino R5 include:

- **Improved Scalability and Performance** – Domino R5 databases are architected for unlimited size with certification for 64 gigabytes, and Domino's LDAP directory now supports more than one

*“Lotus Development R5 products have delivered their promised next-generation messaging, collaboration and Web applications.”*

million registered users. Based on lab tests, the number of Notes, IMAP4, POP3 and browser users supported by a single Domino server will be up to six times greater than with Release 4.6

- **Increased Reliability** – Domino R5 provides 24x7 reliability with transactional logging, online compaction, online and incremental backup, and clustering for Notes clients and browsers
- **Easier Manageability** – the task-oriented interface provides an immediate view of multiple domains for simple administration, automates the steps associated with frequent tasks and provides built-in monitoring for proactive deployment optimisation
- **Most Secure Infrastructure** – fully integrated Public Key Infrastructure with support for X.509 certificates, S/MIME, CDSA and SSL ensures secured access and interoperability for messaging and Web applications
- **Easier Search** – Domain Search in Domino R5 increases user productivity through faster and easier knowledge discovery
- **Broad Integration with Enterprise Systems** – customers can integrate Web-based workflow and collaboration with an array of enterprise systems including ERP, relational database and

transaction processing systems through Lotus Domino Connectors.

## Rapid deployment of e-business applications

Domino Designer R5 provides customers with a robust, open and intuitive Web development environment for building e-business applications. The new enhancements to the integrated development environment and support for industry-leading content design, business logic scripting and procedural development tools, allow organisations to rapidly build applications that connect enterprise data with strategic processes. The comprehensive toolset in Domino Designer R5 includes a set of visual tools which support a range of Web-standard scripting and programming languages including Java and JavaScript.

## Lotus makes it easy to upgrade to R5

Lotus designed the R5 products with complete backward compatibility to minimise the period of co-existence required to upgrade from Release 4.x and ensure that upgrades proceed without disruptions. ■

### FOR MORE INFORMATION

Lotus has provided Web-based white papers, articles and other material on its own upgrade experience, accessible at [www.lotus.com/r5](http://www.lotus.com/r5)



# Java server-side programming

TECHNICAL

## The IBM Solution

Implementing a sophisticated Web-based e-business solution requires a robust and scalable Web server supported by powerful development tools. IBM's answer to this requirement is based on the server-side Java standards of servlets, Java Server Pages (JSP), Enterprise Java Beans (EJB) and Extensible Markup Language (XML). IBM has adopted the EJB model because of the productivity and flexibility it promises for more complex and integral Web applications.

IBM is a major contributor to the EJB specification, and has committed to delivering EJB support across all of its product lines. The IBM solution bundles servers, Web authoring tools and Java programming tools that work seamlessly with each other, and can integrate with standards-compliant tools from other vendors as well.

For more information on these standards, visit [www.javasoft.com](http://www.javasoft.com)

## IBM WebSphere

The centrepiece of the IBM solution is WebSphere Application Server. WebSphere Application Server is a high performance plug-in that works with all major Web servers and many operating systems. Complementary to WebSphere are WebSphere Studio and WebSphere Performance Pack. WebSphere Studio is a tool suite for developing applications that run on WebSphere and other standards-compliant servers. WebSphere Studio includes a workbench, wizards, NetObjects Fusion for Web site construction, and ScriptBuilder for text-based editing of HTML and scripts. WebSphere Performance Pack adds scalability by providing caching, load balancing and replication.

For full details on IBM WebSphere visit [www.software.ibm.com/webserver](http://www.software.ibm.com/webserver)

## VisualAge for Java

At the heart of WebSphere Studio is the award-winning VisualAge for Java Integrated Development Environment (IDE). VisualAge for Java seamlessly integrates code browsing, editing, execution and debugging, and includes wizards and visual builders for creating and visually editing code.

VisualAge for Java provides extensive support for developing servlets, JSPs and EJBs. This support is described briefly below.

Servlet development involves running a Java Web server and servlet engine inside the Java Virtual Machine used by the IDE.

Servlets can be coded manually, but servlets which generate HTML are best developed using the Servlet Builder feature available in VisualAge for Java Enterprise Edition. The Servlet Builder provides a framework for building servlets that enables you to drag and drop HTML JavaBeans onto a WYSIWYG composition surface. The HTML 'view elements' can then be



# solutions

## from IBM

connected to non-visual 'model'

JavaBeans to implement the logic of the application.

WebSphere supports JSPs through a page compiler that translates the JSP into a servlet. In the VisualAge for Java IDE, an Execution Monitor enables developers to step through JSP code and track its correspondence with the generated servlet.

The generated servlet can be debugged with the IDE debugger, and the developer can seamlessly step into any JavaBeans called by the JSP. If an error is detected in the JSP source, it can be modified using an editor such as NetObjects ScriptBuilder.

EJB support in VisualAge for Java is provided through integrated code browsers, a creation tool and a deployment tool. A unit-test environment is also provided. The developer simply edits the EJB and runs it in the IDE, making full use of the debugger. The IDE also includes support for container-managed persistence using the VisualAge for Java Persistence framework. When development is complete, the EJB can be exported as an EJB jar file.

Debugging servlets, JSPs and EJBs is a straightforward and productive task because the IDE supports the concurrent execution of multiple virtual machine instances.

For more information on VisualAge for Java, visit [www.software.ibm.com/ad/vajava/](http://www.software.ibm.com/ad/vajava/)

### VisualAge for Java and AS/400

OS/400 V4R3, combined with VisualAge for Java Enterprise Edition, provides a comprehensive development environment for building applications for the Web using the AS/400.

The Enterprise ToolKit for AS/400 (ET/400) is part of VisualAge for Java Enterprise Edition V2 and supports Windows 95 and NT workstations for development. ET/400 includes AS/400-specific functions such as:

- Access to AS/400 data through subfile classes in Java (new in Version 2.0). AS/400 subfiles can be used in your Java programs without writing a line of Java code.
- Convert 5250 display files to Java Abstract Windowing Toolkit (AWT) files. Take your existing Data Description Specification (DDS) display files and convert them into Java AWT files using the 'Convert Display File' SmartGuide.
- Generate Java classes/beans to remotely call AS/400 server programs. With the 'Create AS/400 Program Call' SmartGuide, calling a legacy AS/400 application is as easy as filling in the AS/400 system name, the program you want to have called, and the parameters to pass.
- Export Java files to the AS/400 Integrated File System (IFS) & Compile Java class files to RISC machine instructions on the AS/400.



Java applications can be effectively deployed on the AS/400 by exporting the Java files to the AS/400 IFS and then compiling them into AS/400 machine instructions for better performance.

- Launch and debug Java programs on the AS/400 and view program output from within the VisualAge for Java console (new in Version 2.0). The output of the Java program executing on the AS/400 can be displayed on the VisualAge for Java console. The Cooperative Debugger can be used to debug the AS/400 Java application from the workstation.
- Access classes in the AS/400 Toolbox for Java. The AS/400 Toolbox for Java classes are loaded into the VisualAge for Java IDE during installation. You can use them inside the workbench as well as in the Visual Composition Editor. ■

*“IBM has committed to delivering EJB support across all of its product lines”*

#### FOR MORE INFORMATION

For further information visit [www.as400.ibm.com/java](http://www.as400.ibm.com/java)

# Astre Automotive gears up for Year 2000 with

MODERATE

With the new millennium fast approaching, the Australian importer and distributor of Hyundai, Chrysler Jeep and Audi vehicles, Astre Automotive, the largest and most successful import and distribution group in Australia, with a 1997 turnover of approximately \$1.4 billion, took the opportunity to re-assess its information technology infrastructure to ensure its readiness with Year 2000 requirements.

*“Astre selected JBA’s System 21 Enterprise Resource Planning Software due to JBA’s flexibility and cost effectiveness”*

An additional motivator for change was the need for improved systems to continue to support the company’s impressive growth.

To facilitate this impressive growth Astre recently moved to a new purpose-built 4.49-hectare headquarters in Homebush Bay adjacent to the Olympic site. In conjunction with the office move, Project Quest 2000 was launched – an IT strategy developed to provide an advanced integrated system designed to take Astre to the Year 2000 and beyond and to provide the company with the competitive edge it needs to compete in this fast moving marketplace.

“In the past, our systems were designed purely to process data,” said Mr Darryl Hughes, Management Accounting Manager at Astre Automotive.

“The challenge with Project Quest 2000 was that we wanted to be able to easily analyse our data to obtain meaningful information, as well as ensure that our system is ready for Year 2000.”

To extend the reach and functionality of their new ERP system, JBA’s System 21, Astre uses Business Intelligence (Data Warehousing) tools from IBM.

“The mining of information will now apply to all our operations. From tracking the purchasers of our vehicles and determining the demographics of each purchaser for marketing purposes, through to having the ability to see if there are any seasonal trends in the sales of certain vehicle parts,” said Mr Hughes.

“This superior level of business intelli-

gence will provide us with a competitive advantage.”

Mr Hughes added that Astre needed to be able to store and process product, customer and dealer information as well as examine electronic commerce options for the future.

Supply chain management is vital for companies that want to grow and compete, particularly within today’s increasingly global environment. Through JBA and IBM, Astre was able to enhance its e-business solutions to enable it to integrate its business management system with its supply chain.

Astre currently imports and distributes more than 65,000 vehicles across the three brands each year. Mr Hughes said that most of the processing involved is handled electronically.

“There is a lot of communication involved in processing a vehicle and we do that all electronically. We receive details from the manufacturers and deal with customs agents, pre-delivery agents and the RTA electronically to avoid manual errors.

“We also communicate with Hyundai dealers electronically via an in-house developed system called Autonet.

“Autonet allows our dealers to order parts and process warranty claims electronically, saving time and providing answers to our customers more quickly, thereby enhancing our customer service,” added Mr Hughes.

Astre went to tender for its IT system in March 1997 to major vendors within



# JBA and IBM



the distribution industry. The tender process involved presentations, evaluation, site visits and reference checks. Astre selected JBA's System 21 Enterprise Resource Planning software due to JBA's flexibility and cost effectiveness.

The result is an advanced, integrated solution comprising JBA's System 21 Financial, Logistics, Customer Service, Vehicle system and Workshop Warranty Management applications, IBM's MQ Series software, Lotus Domino messaging and groupware all running on an AS/400, and IBM's Visual Warehouse running on an IBM Netfinity server.

"System 21 enables us to carry out our core business processes, which include the importing and distribution of the three vehicle brands, the management of parts, the processing of vehicle warranties and our financials," said Mr Hughes.

"Visual Warehouse acts as a data warehouse and data mining tool combined with JBA Objects and JBA Envisage, and will allow us to extract business intelligence instantaneously.

This is critical to our business, as we want to be able to track our customers from the purchase of their first car.

"Astre has had an IBM AS/400 since 1991, so we have great confidence in IBM products. We know that their service is second to none and that the product is highly scalable, reliable and easy to manage. We are very happy with the AS/400 platform," added Mr Hughes.

"MQ Series is a very robust and open middleware solution that will handle our e-commerce connectivity. In conjunction with the collaborative capabilities of Lotus Domino, which is native to the AS/400, we will also be able to handle a lot of different communication protocols to our customers, suppliers and dealers."

Project Quest 2000 is currently in the first phase of implementation and is expected to be fully implemented by June 1999.

"The system is only taking 18 months to implement, which is half the time you

would expect for a project of this size", said Mr Hughes.

"Once completed, the system will enable us to extract the business intelligence we need instantaneously, whenever we require it." ■



## About JBA

JBA is one of the world's leading business software providers. Its market-leading System 21 product range is an enterprise-wide applications set which provides an integrated Manufacturing, Financial and Customer Service & Logistics solution for trading in national and international marketplaces. Complemented by unique solutions for specific industries, System 21 has helped provide many of the world's leading Food, Automotive, Beverage, Apparel & Footwear and Service companies with the competitive advantage they require for the 21st century.



**Astre and JBA executives shake hands.**  
From left to right: Jerry Ng, Richard Kulkarni, CK Liew, Bill Porter, Mike Hill, Eric Tjoeng

## FOR MORE INFORMATION

For further information call JBA International Pty Ltd on 61 2 9212 5444, via e-mail at [anastasiak@jba.com.au](mailto:anastasiak@jba.com.au) or visit the JBA Web site at [www.jbaworld.com](http://www.jbaworld.com)

# SSA's recipe for the food industry

MODERATE

Of the top 100 brands sold in Australia, BPCS helps manufacture more than 30 per cent.

Retail World, November 9-22, 1998

One third of Australia's top brands are running on a BPCS-AS/400 solution, in areas as diverse as biscuits, frozen food, dog food, soups, chicken, flavourings and alcohol. And in each case SSA's BPCS has delivered the right product on time, in time, every time.

SSA has taken a corporate stand to partner with the most functional complementary software products and deliver an ideal solution portfolio for the food and beverage industry. SSA has taken a leading role in delivering food and beverage manufacturers the latest technology, including supply chain management and e-commerce. In fact, over 70 companies across Australia and New Zealand have implemented BPCS in the last 12 months. After all, 31 per cent of Australia's top food brands already enjoy the benefits of a BPCS-AS/400 solution.

## Darling Downs Bacon looks for industry-specific functionality

Leading smallgoods manufacturer Darling Downs Bacon has enjoyed dramatic gains in its business just months after going live on BPCS Client/Server V6. In addition to inventory control improvements, reductions in manual processing and integration with Darling Downs customers' supply chains,

BPCS provides functionality designed specifically for the processors of variable weight product, called Catch Weight.

According to Tom Say, Darling Downs' Information Technology Manager, "An important reason we chose SSA was its successful software development for food manufacturers."

## Paradise Foods focus on supply chain optimisation

Queensland biscuit manufacturer Paradise Foods Industries has implemented BPCS Client/Server V6 manufacturing, supply chain and financials in just six months.

"Particularly important in our decision to choose SSA was the increasing intertwining of the supply chain," said Paradise Managing Director Tim Wong. "As retailers move to vendor-managed inventories, it is critical for food manufacturers such as Paradise to have enabling technology. BPCS V6 is able to deliver on supply chain management and this was a key driver in our decision."

## United Distillers' ultimate goal is customer satisfaction

The key reason United Distillers Australia moved to BPCS Client/Server V6 was Year 2000 readiness. The end result was a total review of business processes and a vast improvement in customer response times.

This high-profile manufacturer and distributor of alcoholic beverages took

advantage of SSA's backbone strategy where best-in-industry solutions – in this case a high volume telesales, customer service product, and a stock management system provided by the company 4C – are linked to BPCS.

Information is now available throughout the business, which means faster and more informed decision making and, ultimately, happier customers. ■



### About SSA

System Software Associates is one of the world's leading ERP software and services providers, focused on providing tailored solutions for industrial sector companies. Other customers in the food and beverage industry include: Unilever, Arnott's Biscuits, Heinz Wattie's and Henry Jones Foods (IXL).

### FOR MORE INFORMATION

For further information about SSA solutions for the Food & Beverage industry, contact SSA on 61 2 9855 7100 in Australia or 64 9 358 0555 in New Zealand, or visit [www.ssax.com](http://www.ssax.com)



# Ahead of time and under budget

HMV Australia (HMV), one of the world's leading music retailers, has reached No. 1 in the charts with a global AS/400 technology solution.

Strategically, HMV has installed an AS/400 and IBM point-of-sale devices in each of its 26 stores throughout Australia. The introduction of an automated stock management system on an AS/400 platform has positive effects on the core brand values of the business while improving management reporting and profitability. The core brand values of HMV are:

- Excellence in customer service
- The best range
- Outstanding product knowledge
- The most amazing atmosphere

## The Results

A centrally maintained catalogue and the daily retrieval of sales and stock information provide the management of HMV with a regular and accurate information flow.

And that's not all. With HMV's market share growing steadily within the music retailing industry, this high level of automation brings HMV into the next century as a leader in information technology.

Tony O'Brien, Systems Director at HMV Australia, says "We chose the AS/400 platform to achieve a competitive advantage through our global IT strategy. The scalability, low cost of ownership, robust architecture and lower support costs of the AS/400 platform, will play an important role in our future growth."

## The Implementation

In support of HMV's implementation of its AS/400 technology, Aspect Computing Pty Ltd (Aspect), one of IBM's leading business partners, has supplied all 29 AS/400s installed within HMV's Australian operations.

"Aspect has been our technology partner for three and a half years, managing the supply and implementation of AS/400s in HMV stores," continues Tony O'Brien.

"The recent Australia-wide project upgrading HMV's AS/400s to RISC technology was delivered by Aspect four months ahead of schedule and well under budget."

Aspect's skills and services in the HMV AS/400 project

and other projects include:

- Project management,
- Project planning,
- System configuration,
- RISC upgrades,
- PC/LAN integration and testing,
- Skills transfer and training.



Over the last 6 years, HMV has progressed from a small LAN system to successfully implementing an AS/400 in every store.

The HMV senior management and store personnel highly value and constantly depend on the detailed information which is generated through the fully automated store stock management systems. ■

MODERATE

# ASPECT

## About Aspect

Aspect is a leading global provider of Information Technology (IT) services and products. An Australian-owned operation with computer-related revenue in excess of \$175 million, Aspect has more than 1,100 employees worldwide, servicing over 6,500 customers in 68 countries from 16 offices throughout Australia, Europe, Asia and North America.

## FOR MORE INFORMATION

For further information please contact Elissa Caldwell on 61 2 9928 1188. Information about Aspect's services and products can be found at [www.aspect.com.au](http://www.aspect.com.au)



# “Magic” Solution for All Hours online auction shopping

MODERATE

The traditional cry of going, going, gone could soon be a thing of the past if the international success of online auctions follows in Australia.

Multi-media and direct marketing company All Hours was one of the first to catch onto the trend of online auctions in Australia when it launched the Auction Shopping Australia Web site ([www.auctionshop.com](http://www.auctionshop.com)) in July 1998. Auction Shopping Australia provides consumers with the opportunity to bid for goods such as household appliances, computer equipment, software titles and digital cameras in an interactive auction format.

Recognising the success of Web-based auctions overseas and the potential interest in Australia, All Hours partnered with IBM and Business Partner Magic Group Victoria to provide the technology to support the business.

The solution, based on an IBM AS/400, DB2 database software, IBM security and Magic Software's back-end systems, provided All Hours with the confidence that its systems would be reliable and scalable to grow as its business grew.

Within 150 days of starting work on the system, Magic Group Victoria developed a Web site which has enabled All Hours to operate as an e-business, allowing buyers to bid for goods and purchase them using their credit card over the Internet.

“We could see that there was a huge trend towards online auctions overseas but the concept had not been tried in Australia before so it was like opening a can of worms,” said Mr Tony Cooper, Marketing Director, All Hours.

“We recognised the importance of having a solid IT infrastructure to support our business and made the decision to go with IBM and Magic. When we went live in July 1998 we had more than 500,000 hits over the eight days that the auction ran. Had we not had the infrastructure in place to cope with this traffic, we could have lost first-time shoppers forever,” said Mr Cooper.

### Sophisticated security

Launching itself as an e-business also brought very real concerns of security and privacy for All Hours.

Shane Brown, IT Coordinator, All Hours, said “The challenge for us was to secure our internal network as well as our Web servers to ensure that we were protected from hackers or any other security threats.

“We selected the IBM Firewall for AS/400 which gave us all the functionality we needed without any noticeable delays to the end user when the firewall was active. The IBM Firewall was also tightly integrated with the AS/400 and

Magic Enterprise Server so we could securely serve data stored in the DB2 database to the Web servers,” said Mr Brown.

The IBM Firewall that was installed for All Hours is broken into three distinct partitions, one which protects the internal network workstations, another which protects the Web servers and the third which protects the AS/400.

“The net effect is a highly secure system which protects our business. A hacker would not only have to circumvent three distinct and separate firewalls, but also the Magic Enterprise brokers and engines to finally discover an encrypted store of data,” said Mr Brown.





All Hours also needed to ensure maximum security for customers purchasing goods with their credit cards online.

"We use SSL certificates to encrypt all credit card and sensitive personal information from the customer's browser to our Web servers. All information is securely transferred to the DB2 database via the Magic brokers and engines. No credit card details or sensitive data is stored on the Web servers," said Mr Brown.

At the close of an auction, after the winning bids have been calculated, All Hours use an electronic payment system to charge the customers' credit cards. This secure system is directly linked to the bank where the transaction is completed.

*“Magic allows programmers to achieve 100% productivity for developing and maintaining applications.”*

#### **Capturing and delivering information**

All Hours recognised that the database was central to becoming an e-business since it houses information about business transactions, customer interactions, products and many other corporate assets.

"There are two main functions of our business, both of which require a highly sophisticated database to capture and deliver the information we need," said Mr Brown. "Firstly in running an auction we need to store information about our suppliers and their products as well as our customers. Secondly, we need to interact with our customers on the Internet

which means providing them instantaneously with the information they need.

"We needed a database that could store a large number of records whilst enabling customers to access this information very quickly to make bidding decisions.

"IBM's DB2 database was selected for its speed, robustness and scalability. With DB2, we have a system which is reliable and fast," he said.

#### **Integrating the network**

Apart from managing the implementation of security and the DB2 database, it was critical that desktops which run NT were tightly integrated with the AS/400.

"All users on our network run NT workstations while all our back office applications run off the AS/400.

Therefore, it was very important that we had tight integration between the NT servers, workstations and AS/400," said Mr Brown.

"The integration ran extremely smoothly and users can now access the large amount of data stored on the AS/400 through a standard Windows application. The whole process is totally seamless to the user," he said.

#### **Auctioning online**

Taking part in an online auction on the Auction Shopping Australia Web site is simple. Before consumers place a bid for a product, they must register themselves to use the site.

Once this process is complete, consumers can place bids for a wide range of merchandise up until the auction is completed, which generally takes three days. Products are then awarded to consumers with the highest bids and delivered free of charge within ten days. ■



#### **About Magic Group**

Magic Group provide fast to market solutions for companies requiring the ultimate competitive edge and best return on investment. Magic Group use the Rapid Application Development and Deployment tool 'Magic' to develop solutions for many companies from traditional client/server applications to e-commerce Web solutions. Some of Magic's customers include: All Hours Pty. Ltd., ACI Glass Packaging and the Victoria Police.

Magic software provides a single paradigm for developing Client/Server and Web applications. Magic is an open platform tool providing access to many platforms from IBM AS/400, Windows NT, DEC VAX, Oracle, RS/6000 and many others.

#### **FOR MORE INFORMATION**

For further information contact  
Magic Group Victoria  
on 61 3 9557 8577.

# Business intelligence moves Rinnai onto grand prix track

NON-TECHNICAL

Rinnai Australia, manufacturer and marketer of energy-saving home gas heaters, Infinity gas continuous-flow hot water heaters and Australian-designed barbecues, is set to move key sales data analysis onto the grand prix track.

AS/400e is delivering the power boost from the current low-gear 'vehicle' coupled with Silvon's Datatracker business intelligence software and JD Edwards, the primary business system.

Network400 Pty Ltd, Silvon's Victorian Distributor, installed DataTracker and delivered the necessary planning and training sessions.

The implementation of DataTracker is a vital step for Rinnai, a proactive sales-oriented company that relies on a range of thoroughly analysed sales data to keep up to speed in its competitive market. The company has been sitting on a treasure trove of valuable data which resisted the mining and refining process largely due to a heavily paper oriented system. "It was a protracted and labour-intensive process dredging through all the paper and when the key information came to light we had lost critical marketing opportunities," says Rinnai's Commercial Manager, David Vallance. He believes the new system will identify new market opportunities and give the company a six-figure bottom-line boost, especially as it will operate across a wide spectrum of operations and services such as sales, gross profit, rebates, debtors, inventory and warranty.

Network400 Director Neil MacLeod emphasises a fast implementation (just 25 days) due to the packaged

*"Rinnai's Commercial Manager, David Vallance, believes the new system will give the company a six-figure bottom-line boost"*

interfaces to JD Edwards software and the superior architecture of DataTracker. This helps deliver a rapid return on the initial investment by providing senior and middle management with the key performance indicators and one version of the 'truth' that will enhance management performance and company profit.

David Vallance has been directly involved in the strategic move to DataTracker and JD Edwards from day one and visited Rinnai head office in Japan as part of a successful advocacy role.

The new business intelligence system was identified in 1997 as an opportunity and a need. A project team was formed early last year and, after careful evaluation, Network400 Pty Ltd was appointed to carry out the brief. "It's a development that will affect all of our 140 staff either directly or indirectly and even the managing director now has a PC on his desk," says Mr Vallance. Although sales and gross profit analysis are the first step, other functions, such as inventory analysis, will be progressively introduced following thorough internal communication, planning and training in the near future. ■



#### About Network400

Network400 Pty Ltd is a Melbourne-based IBM Business Partner with a team of business application specialists serving diverse industries. Network400 has been selling and supporting Silvon products for the last four years and can provide implementation and training services throughout Australia.

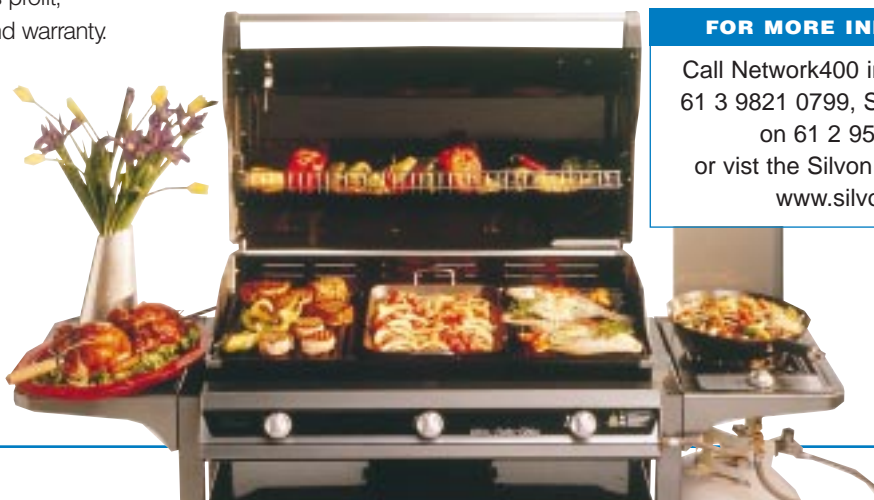
Silvon Software, which has its Asia Pacific Head Office in Sydney, has been supplying business intelligence solutions for over 10 years. It currently has over 900 installations using DataTracker worldwide and is recognised as one of the fastest-growing global suppliers of multi-platform, client/server data warehouse solutions.

#### FOR MORE INFORMATION

Call Network400 in Melbourne on 61 3 9821 0799, Silvon in Sydney on 61 2 9552 1216 or visit the Silvon home page at [www.silvon.com](http://www.silvon.com)



Business Partner



# Acacia Technologies announces Warehouse BOSS 6.0

## Who's the BOSS?

Acacia Technologies has announced a major release of its warehouse management system.

Acacia Technologies will offer enhanced radio frequency (RF) receiving capabilities, resource tracking and other enhancements in the newest version of its warehouse management product, Warehouse BOSS 6.0, to be released in April.

Designed exclusively for the IBM AS/400, Warehouse BOSS is a complete warehouse management system that can interface with any ERP system. It is easily adapted to individual business needs through its rules-based architecture and supports activity-based locating, EAN labelling, directed RF, automatic replenishment, lot tracking, wave picking and cross docking.

Warehouse BOSS 6.0 will offer a number of enhancements that were developed in conjunction with Acacia Technologies' professional services and consulting business, including:

- Enhanced RF receiving capabilities – streamlines the receiving process to reduce the time and personnel needed to quickly make goods available for shipment
- Resource reporting and activity tracking – provides detailed productivity recording and analysis

- Assembly management – allows users to transform SKUs by picking multiple SKUs from warehouse inventory, assembling them into a new SKU and either shipping to a customer or storing in warehouse inventory
- Proactive replenishment planning – generates a replenishment plan based on shipping history, inventory levels and availability of labour and transportation resources.

"Around the world, warehouse management is one of the fastest-growing software sectors in the midrange market today," said David Hobbs, Acacia Technologies' Vice President of Australia and New Zealand Operations. "Our development team worked closely with our professional services group to ensure that we incorporated the evolving requirements of our clients."

Commenting on the value that Warehouse BOSS has delivered to IBM Australia, Jack Miller, IBM's National Logistics and Transport Manager, said "BOSS has more than paid for itself in the last four years. The quick implementation and ease of management meant a quicker return on investment and that, along with the other benefits, made renewing our commitment to Warehouse BOSS an easy decision."

### Pre-installed on IBM AS/400

The release of Warehouse BOSS 6.0 is supported by a recent agreement between Acacia Technologies and IBM that enables customers to purchase its enterprise solutions pre-installed on an AS/400.

"The pre-load option offers our clients a way to compress traditional software installation time.

*"Speed is the key to our business today" – David Hobbs*

Quick implementation has always been one of Acacia Technologies' key strengths, and this program enables our clients to implement even faster now", Mr Hobbs continued. ■



### About Acacia Technologies

Acacia Technologies is a leading developer of enterprise resource planning (ERP) and warehouse management solutions designed to meet the evolving needs of manufacturers and distributors using AS/400.

The company is an independent business unit of Computer Associates International Inc. and has 3,500 customers worldwide with its Australasian headquarters in Sydney.

Key products include PRMS (comprehensive resource planning, operations and financial management); KBM (a sophisticated manufacturing system for custom manufacturers); Warehouse BOSS (an advanced warehouse management system); and Quick Response Engine (advanced planning and scheduling). All products are Year 2000 ready.

### FOR MORE INFORMATION

For further information, visit [www.acaciatech.com](http://www.acaciatech.com) or contact Acacia Technologies on 1800 800 237 in Australia and 0800 525 500 in New Zealand.





# AS/400 Education Schedule

Here is a sample of some of the many AS/400 courses scheduled from April to June 1999. Many more courses are available in Australia and New Zealand. For further information, or to enrol, please call IBM Education and Training on 1800 801 088 in Australia or 0800 801 800 in New Zealand.

NON-TECHNICAL

Australia							
Course	Course Title	Days	Vch	Fee \$A	Apr	May	June
OL06	Client Access for Microsoft Windows 95/NT	3.0	30	1,500	27 Mel		
OL62	DB2/400 Relational Database	2.0	20	1,000			28 Mel
OL88	AS/400 Advanced RPG IV Programming Topics	5.0	50	2,500		3 Mel 17 Syd	
OE41	Introduction to Integrated Language Environment	1.0	10	500	6 Mel		
OE85	Moving from RPG/400 to RPG IV	3.0	30	1,500	7 Mel		
OL24	Java for AS/400 for Programmers	5.0	60	3,000		10 Mel	
CF12	DBL Microsoft SQL Workshop	2.0	22	1,100	29 Mel	13 Syd	2 Syd
OL05	Microsoft Windows NT on the Integrated PC Server	2.0	20	1,000		3 Mel 17 Syd	
OL11	IBM Firewall for AS/400	3.0	33	1,650			16 Mel 21 Syd
OL13	Internet Connection Server for AS/400	2.0	22	1,100		24 Mel	15 Syd
OL92	Internet Access and TCP/IP	3.0	33	1,650	27 Syd	12 Mel	
OL07	Bypass/2000 for AS/400	2.0	22	1,100		6 Syd 27 Mel	
OL04	Lotus Domino for AS/400 Administration	2.0	20	1,000		18 Mel	15 Syd
OL04A	Lotus Domino for AS/400 Technical	2.0	22	1,100		20 Mel	17 Syd

New Zealand							
Course	Course Title	Days	Vch	Fee \$NZ	Apr	May	June
OE98	AS/400 for new users	1.0	10	500	📖	📖	📖
OL04	Lotus Domino for AS/400	4.0	48	2,400	📖	📖	1 Auck
OL19	AS/400 System Administration and Control	5.0	50	2,500	📖	24 Well	📖
OL24	Java for AS/400 for programmers	5.0	60	3,000		10 Auck	
OL29	AS/400 System Operators Workshop	3.5	35	1,750	13 Well 9 Auck	📖	22 Well
OL41	AS/400 Advanced System Operators Workshop	3.0	30	1,500	📖	26 Well 19 Auck	📖

\* A range of CD-Rom Self Study guides are also available in New Zealand. \*\* All New Zealand prices quoted are exclusive of GST.

Key: 📖 Courses are available on request  
Vch IBM Education Voucher

# ADSM – helping protect your company information

This article is a follow-up to one in the December 1998 NEWS/4 YOU to provide you with more detailed information on ADSM V3 for AS/400.

In today's global environment, where mission-critical data exists on multiple operating system platforms throughout the enterprise, ADSM has become a widely accepted product for backup and recovery and overall storage management. One of the main characteristics driving ADSM's widespread acceptance is that server and client functions and commands are similar, regardless of the operating system on which they are run.

The newly available ADSM AS/400 API Client merges two premier IBM solutions, ADSM and Backup and Recovery Media Services (BRMS), into one integrated storage management strategy. Although ADSM has supported the AS/400 as an ADSM server for years, many customers have wanted the ability to integrate the AS/400 into their ADSM enterprise strategy. Now, beginning with

OS/400 V4R3, the AS/400 will be able to be defined as a 'client' and back up or archive user data to ADSM servers, whether they are running on an AS/400 or one of the other ADSM server supported platforms.

## AS/400 API Client for ADSM

The AS/400 API Client, which has been implemented as a feature of BRMS, lets you use BRMS policies to save non-system OS/400 objects across a network for storage on any ADSM server. The ADSM operations are just like saves to save files or restores from save files, except the save records are stored on the ADSM server rather than on BRMS tapes.

The AS/400 API Client offers some significant advantages over the vendor ADSM AS/400 client solutions:

- Provides cross-client restore capabilities and sharing of BRMS policies among ADSM AS/400 clients;
- Sends the save data to the ADSM

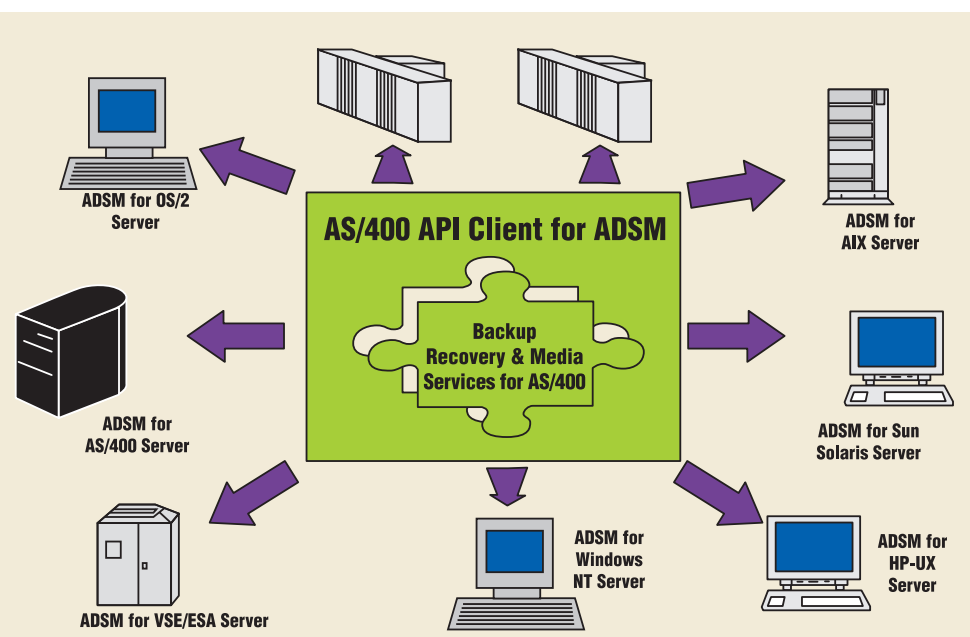
server as it is being saved without first saving to a save file, thereby minimising both AS/400 disk space and backup time;

- Allows a restore operation to be terminated after a subset of objects in a library has been restored to the system, rather than requiring the complete library to be restored from the ADSM server;
- Includes embedded checksums in the save data, so during a restore the AS/400 can detect alterations to any single byte of the saved data as well as out-of-sequence restore operations.

To enable ADSM to manage the backups of your AS/400, you would need to purchase BRMS and an additional single ADSM User Registration for your existing ADSM Server for each AS/400 you wish to backup to ADSM. For BRMS, the appropriate number of users would need to be identified, depending on the number of tapes being managed by BRMS. At minimum, a one user licence would be required to backup system data. You would also need the OS/400 feature called Media and Storage Extensions.

With support for more than 30 different platforms, and online backup and restore for many databases and applications, you'll find that ADSM will integrate easily with your systems, software and storage hardware.

Because so much depends on your company's data, make sure you help protect it with ADSM from IBM. ■



### FOR MORE INFORMATION

For more information visit  
[www.ibm.com/storage/adsm](http://www.ibm.com/storage/adsm)

# Are your printers 'EuroReady'?



MODERATE

The European Economic and Monetary Union (EMU) began on 1 January, 1999, with the introduction of a single currency for all 11 participating countries. All businesses that conduct operations in or with these countries will require changes to thousands of applications.

For your printing environment to be 'EuroReady' it must be capable of correctly viewing, processing and printing monetary data in the euro denomination with the correct format, including the euro sign.

IBM understands the potential problems that you may face if your printing environment is not EuroReady. To resolve any such printing problems, IBM is ready to assist you with printer microcode upgrades and/or a NEW EuroReady AFP Font Collection, depending on how your printing environment is set up.

### AFP Font Collection - Version 2.1.0

The AFP Font Collection - Version 2.1.0 provides a comprehensive set of fonts and utilities to enable consistent printing on AFP printers (and printers that use

AFP outline font) in any IBM system environment (such as AS/400, RS/6000 and S/390).

As part of the new AFP Font Collection, you will be able to view and print the 'euro' font/s in all type styles and point sizes that support the Latin1 language group. You will also be able to screen view the 'euro' on Windows 95, NT or OS/2 systems, or via the Netscape or Internet Explorer browsers.

There are many more new and enhanced language characters and symbols, other than the euro, that are provided in AFP Font Collection - Version 2.1.0.

### Microcode upgrade

A printer Microcode upgrade may also be a requirement to make your printing environment 'EuroReady'. This would require an on-site IBM service call.

### IBM's EuroReady Printers

IBM has a range of EuroReady printers that you can choose from for your office or factory:

#### Black & White Laser Printers

- Network Printer 12 (12 ppm)
- Network Printer 17 (17 ppm)
- Infoprint 20 (20 ppm)
- Infoprint 32 (32 ppm)
- Infoprint 40 (40 ppm)

#### Impact Printers

- 6400 Line Matrix Range (up to 1400 lpm)
- 6262 Impact Line Range (up to 2200 lpm)
- 4247 Dot Matrix Range (up to 700 cps)
- 4232 Dot Matrix Range (up to 600 cps)
- 4230 Dot Matrix Range (up to 600 cps)



**FOR MORE INFORMATION**

If you have problems viewing or printing the euro symbol contact 132 426 in Australia or 0800 426 376 in New Zealand and ask for printers/info. For further information please visit [www.printers.ibm.com](http://www.printers.ibm.com)

it's a complete solution

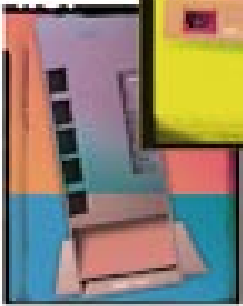
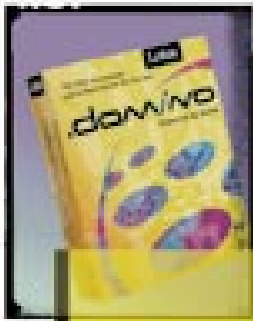


fast, dependable Internet access



# e-business, made easy

with IBM networking



## **IBM's Domino Web Server Networking Solution for AS/400e**

Now there's an easy, affordable way to launch your e-business Web site. IBM's Domino Web Server Networking Solution for AS/400e. It has everything you need to conduct interactive transactions, track shipments, manage inventory, and more. All the things that can take your business to a whole new level. It's a complete solution – combining the AS/400e server, Lotus Domino software, and the award-winning 2210 Nways Multiprotocol Router that provides up to T1 speed WAN connections for fast, dependable Internet access. Plus, it's scalable, so it can keep up when your business really takes off.

IBM's Domino Web Server Networking Solution for AS/400e. Open your Web site for business.

The IBM 2210 is perfect for linking LANs and WANs of all sizes, the IBM 2210 Nways Multiprotocol Router and Multiprotocol Routing Services (MRS) provide comprehensive routing and bridging, numerous connectivity options, and support for major industry-standard protocols. Whether your network is Token Ring or Ethernet, you can customise the 2210 to fit your company's needs in a cost-effective manner. The 2210 is easy to install, configure and use, priced from just A\$2,185 & NZ\$2,400 (list price, ex tax – including software).

For further information contact  
132 426 in Australia or 0800 426 376  
in New Zealand and ask for  
networking/info, or visit  
[www.networking.ibm.com](http://www.networking.ibm.com)

"WE DON'T  
PLAN  
ON STAYING  
THIS SIZE  
FOREVER!"



## AS/400e = Affordable Growth

Moving your business to the Web? The AS/400e server is designed for a growing e-business. It supports hot Web technologies like Lotus Domino, Netscape, Java and Windows NT. Offers superior reliability. And features leading edge security. Think big, spend less at [www.as400.ibm.com/growth16](http://www.as400.ibm.com/growth16) or call IBM on 132 426 in Australia and 0800 426 376 in New Zealand and ask for AS/400 Growth/Info.



@e-business tools