

Fusing the Windows and IBM i worlds

Heterogeneous IT environments are a fact of life and numerous organizations run mixed hardware and software systems. While many IT managers may feel pressured to make a decision to go either in the .NET and Windows direction, or the Java and IBM direction, LANSA customers have been at ease with this perceived duopoly since the early nineties, as they can deploy applications to IBM i servers, Microsoft Windows servers or blend the resources of both platforms together.

This article showcases examples of LANSA customers who have combined and integrated the IBM i and Windows platforms, deployed to both or transferred between the two, using a variety of methods.

Integrated and Composite Applications

LANSA's first product to simplify IBM i and Windows integration, was a middleware product called LANSA Open. It was released in the early nineties and allowed Windows-based applications, such as Visual Basic, Delphi, Excel and our own Visual LANSA, to safely access DB2/400. Safely, because LANSA Open didn't just provide ODBC-like database access, it also protected the referential integrity and validity of data by enforcing repository defined business rules used by both IBM i and Windows applications.

Both LANSA Open and Visual LANSA have progressed over the years into a family of LANSA products that allow for faster database access, a more productive interface, tighter program-to-program connection using Web

services or direct calls, and a wider variety of business rules, triggers and other reusable components in its Repository. Today, many LANSA customers are deploying composite applications which include a mixture of .NET, LANSA and RPG/COBOL applications, that safely access data on Windows or IBM i and can integrate data from both in a single application.

Chantiers Chibougamau, based in Québec, Canada, has been manufacturing highly competitive wood products for over 40 years, custom engineered for consumers increasingly concerned about sustainable development.

Chantiers Chibougamau uses ScoopSoft, a solution for the wood products industry from LANSA Partner GFI Business Solutions. To enhance the efficiency of the interactions



INDUSTRY SHOWCASE
by Marjanna Frank

between PC applications and the IBM i server with the ScoopSoft implementation, Chantiers Chibougamau purchased LANSA Open for .NET. This allows client applications developed in Visual Studio 2008 to access IBM i data much faster than before by using the server's functions.

Applications that use LANSA Open for .NET include a fuel distribution and a mass weighing solution. Further development will provide critical sales and accounting information to the company's management with in-house developed Web-based dashboards.

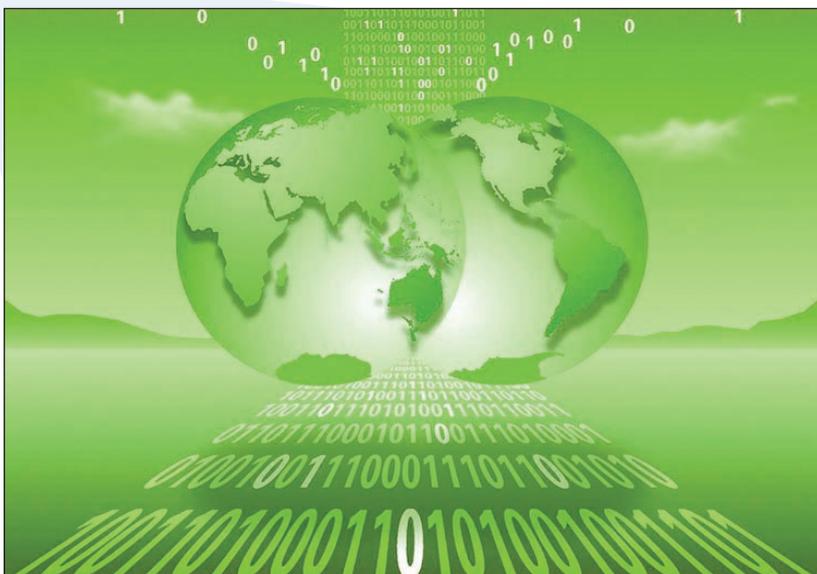
"We are impressed with the LANSA Open for .NET response time, specifically to access the ScoopSoft solution," says a representative from the Chantiers Chibougamau IT team.

The Federated Group, based in Mississauga, Ontario, Canada, provides a complete range of customs and logistics services across North America and around the world. Federated used Visual LANSA Framework to deliver a Windows rich-client Customer Management System (CMS) that integrates directly using LANSA's middleware with multiple IBM i back-end systems. The CMS is distributed to hundreds of users in over 50 locations using LANSA Just-in-Time deployment.

Nancy Riddell, IT Director at Federated, says, "Using LANSA triggers to update the existing databases saved us from having to customize over 400 programs and let us continue to use the existing customs, finance and freight systems without major modification. This approach lets us modernize and redevelop these systems at our own pace, with minimal disruption to the business."

"LANSA was the easiest route for our first Windows project. We specifically like the LANSA Repository and reusable components. You develop something once and reuse it in different areas of the application. Even business users can access repository defined descriptions, formulas and help text in their queries and reports."

Hayhurst Elias Dudek Inc. (HED), one of the largest independently owned insurance brokers in Canada, specializes in providing unique and cost-effective insurance and risk management solutions. HED has a mixture



With LANSA you can combine and integrate or blend the resources of both the IBM i and Windows platforms into an integrated resource.

of LANSAs and .NET systems and Web sites, as well as legacy RPG applications, running on multiple Windows and IBM i servers. HED uses LANSAs to fuse these heterogeneous systems and move towards an SOA environment.

After having successfully redeveloped the front-end processing for several of its IBM i-based Insurance systems with Visual LANSAs, HED used the Visual LANSAs Framework to develop a Windows rich-client Customer Relationship Management (CRM) solution to keep track of prospect and customer activity.

The CRM solution lets users create and edit letters using Word templates and LANSAs functions that pull in DB2/400 data. It integrates with MS Outlook using ActiveX controls to automatically create email and calendar entries and trigger fax messages. The CRM also integrates with several third-party Web sites, for example for address validation and mapping. Integration with HED's .NET/SQL server-based Web site and TotalGuard quoting engine is handled with LANSAs Integrator developed Web services.

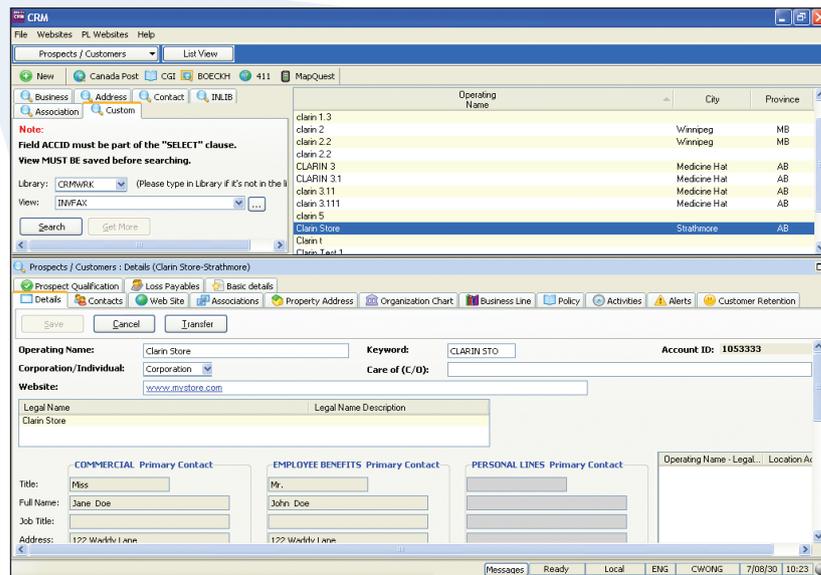
Brian Hynes, Vice President Information Technology and Business Systems at HED, says, "Tight integration between our IBM i systems, Microsoft Office and our .NET-based Web site helps to eliminate many redundant tasks, increase productivity and improve system performance."

"We are now looking at our systems from a holistic perspective. Our RPG and .NET developers are integrated with my LANSAs team and we are all moving towards an object-oriented mindset."

Metropolitan Associates is a residential real estate firm managing over 4,500 apartment homes in Southeast Wisconsin, USA. Metropolitan has redeveloped its 20-year old property management system with Visual LANSAs. The new system offers far more functionality, integration with Microsoft Office and other Windows applications using ActiveX, as well as a more attractive and productive GUI for their business users. All Visual LANSAs applications run from integrated Citrix servers on the company's IBM i, so there is no software to install or maintain on individual client PCs.

Jeff Dremel, Vice President Technology at Metropolitan Associates, says, "We make extensive use of Visual LANSAs's integration with ActiveX to talk to Word and Excel, allowing us to produce professional looking graphical statements, letters and reports on very affordable laser printers."

"I can now consider IBM i and Windows applications. The only caveat is we want to keep the data on the IBM i server, where we know it is safe. At the same time, LANSAs's ability to use ActiveX opens up hundreds of thousands



HED used the Visual LANSAs Framework to develop a CRM solution to keep track of prospect and customer activity.

of very affordable and very functional widgets and programs to pick from."

National Envelope Corporation, based in Uniondale, New York, is the largest envelope manufacturer in the world. The company operates facilities across the US and produces more than 180 million envelopes per day. National Envelope used Visual LANSAs Web Access Modules (WAMs) and LANSAs Integrator to create a system that provides browser-based access to order, production, inventory and shipment data gathered from four ERP applications (JD Edwards, Baan and two homegrown systems) and three databases (DB2/400, Informix and SQL Server).

Scott Steinacher, Web/Data Architect at National Envelope, says, "Users can request spreadsheets with a wide variety of selection criteria. Thanks to LANSAs Integrator's Excel services, columns contain true dates, numbers and so forth, and are professionally formatted with multiple fonts and colors. LANSAs Integrator's SMTP service then delivers the spreadsheets to the recipients via email. In addition, we use Integrator's SQL Server services to give users access to millions of PDF documents, including invoices and statements, that are in a Windows-based archive."

"Overall, LANSAs exploits the IBM i and Windows beautifully. It's really the best of both worlds – the ease-of-use of Windows coupled with the reliability, security, scalability and performance of the IBM i."

The Principality of Andorra, located in the eastern Pyrenees, between France and Spain is a small landlocked country with a population of 75,000. The Department of IT of the Government of Andorra (DIGA) is responsible for the data processing projects

of all government ministries and public organizations. DIGA's IT team of 34 people manages 20 IBM i servers and 50 Windows servers and supports 1,000 PC users. DIGA uses LANSAs for all of its critical applications, including finance, customs, economy, education and elections.

Miquel Haro, Manager IT Services at DIGA, says, "We first developed Visual Basic applications that used LANSAs Open to access the iSeries data. However, since 1998 we use Visual LANSAs for all Windows development, delivering a highly graphical user interface and exploiting ActiveX components to provide new capabilities, such as scanning drivers licenses and managing credit card payments."

"We also increasingly use LANSAs to provide the public with online Web access to government services and information."

"We improved developer productivity through the reuse of components defined in the LANSAs Repository. LANSAs's single language skill set, shared repository, support for multiple platforms and constant evolution are its main qualities."

Truvo Belgium is the market leader in local search and advertising and publishes the printed and online Golden and White Pages phone directories. Truvo uses LANSAs for its core IBM i Golden Pages information system and also to integrate a .NET sales application, used by over 400 sales representatives, via Web services. With the help of LANSAs Integrator, sales reps can download customer portfolios and, with input from the customer, build a number of new advertising scenarios. When the customer selects a scenario, the sales contract and advertisement specifications are created in the .NET application and uploaded

to the IBM i via a LANSA Web service, which parses it into the DB2 database for further processing by the back office systems. The graphics department then works on the advertisement based on the specifications and instructions that are kept on the IBM i. The actual graphical design is done on Macintosh computers and the resulting advertisement is stored on Truvo's UNIX server.

Gunter Gheysens, IT Development Manager at Truvo Belgium, says, "Using LANSA Integrator and Web services we can use best-of-breed systems in the back office, in the graphics department and on the sales rep's laptop and integrate them all seamlessly. The quick exchange of the sales contract and advertisement specifications has sped up fulfillment and helps support our customer-focused approach. LANSA's stability and performance are crucial in our demanding environment with massive databases and complex processes."

Mashups with RAMP

A business mashup is a composite application where LANSA's RAMP (Rapid Application Modernization Process) can be used to assemble the mashup components. RAMP can isolate specific parts of a green-screen (5250) application, wrap and reface them, and then snap them into the mashup framework. RAMP mashups are particularly useful as a technique for modernizing legacy applications and integrating them with rich .NET, MS Office and Web applications. Mashups have the potential to cut across silos of applications to better support the way users actually work, increase productivity and reduce the support and training burden.

The ultimate destination is a platform independent solution where all legacy programs have been redeveloped. But most companies don't go all the way and apply the 80-20 rule, at least for their first project.

Cinram Logistics UK, a division of the world's largest manufacturer and distributor of pre-recorded entertainment media, holds exclusive agreements with major movie studios, software and music publishers, including Warner Home Video, 20th Century Fox, MGM and EMI. Cinram uses RAMP from LANSA to gradually redevelop and modernize its Global Distribution System (GDS). The new composite application offers the underlying strength of the existing core system, in combination with intuitive graphical front-end applications and tight Microsoft Office integration.

For example, users can export any instance list of data from the GDS to Excel and they can populate a RAMP filter in the GDS with data from Excel.

Tony Collins, European Systems Development Manager at Cinram, says, "Functionally, our core distribution system successfully supports our business. Being able to bond with LANSA means we don't have to throw away the work that we've done over the past 10 years. LANSA provides a very neat and cost-effective solution, allowing us to build further on the system we already had in place and improve on it with better navigation, a productive Windows user interface, new functionality and Microsoft Office integration."

The Office of the Board of Studies New South Wales (OBOS) is responsible for the content, distribution and logistics of syllabus

materials and the School Certificate and Higher School Certificate (HSC) examinations for New South Wales, the most populous state in Australia. LANSA has been at the heart of the OBOS' IT infrastructure since 1989. Now, still using LANSA, OBOS delivers many online services to schools, teachers, students and parents. These include the delivery of HSC results over the Web and the collection of over 1.2 million grades and assessments per year.

OBOS is using RAMP with Visual LANSA Framework for .NET (VLF.NET) to modernize their Marker Appointment System which manages the scheduling of examinations for over 140,000 students and appointments for 4,000 supervisors at 700 examination centers. It also manages the marking process, which involves over 8,000 teachers and 800 clerical assistants in 20 marking centers for a period of four weeks. The system is comprised of both green-screen and Web applications. RAMP has allowed OBOS to combine these two styles of applications into a seamless whole.

Mitra Bhar, Manager of IT at OBOS, says, "Over the last 10 years we developed all new functionality with LANSA for the Web. However, about 50 percent of our applications were built prior to that and are still green-screen. It never seemed economical to redevelop those. Now with RAMP and VLF.NET we can economically combine the legacy and Web developed applications in a single mashup framework with easy navigation and a productive browser interface."

For more examples of RAMP assembled composite applications visit: www.lansa.com/builtwithlansa/modernization.htm

A Choice of Platforms

LANSA's cross platform capabilities allow companies to develop IBM i and Windows applications (and Linux/UNIX as well) using a single set of skills. Not having to hire specialist .NET and IBM i developers is a major plus, as it helps organizations to keep their development team lean and benefit from better team communication. Moreover, not being locked into a platform provides peace of mind.

Geodis Wilson in Australia and New Zealand belong to the Geodis Wilson group, one of the world's largest freight management companies, employing 5,500 people worldwide from a global network of offices and air/ocean hubs in over 50 countries.

After having used Visual LANSA to extend its COBOL and IBM i-based Freight Management System, Geodis Wilson used the same tool and development team to develop



Preparation of the printed guides is done on Truvo's System i. The directory data is pre-paginated with LANSA and delivered in XML format by LANSA Integrator to the printer.

its Warehouse Management System (WMS) from scratch. The Australian operation runs the WMS on Windows clients with an IBM i database, while the New Zealand operation runs the same WMS solution on a Windows NT server with a Microsoft SQL server database.

More recently Geodis developed a Visual LANSA application that provides customers with quotes based on CRM and shipment information kept on the IBM i server and, using LANSA Integrator, rating information from CargoWise, a packaged .NET application. Combining information from two different packages on two different platforms provides for a seamless experience for the user.

Geodis also makes extensive use of Visual LANSA and ActiveX to populate Excel spreadsheets, as part of its corporate reporting solution.

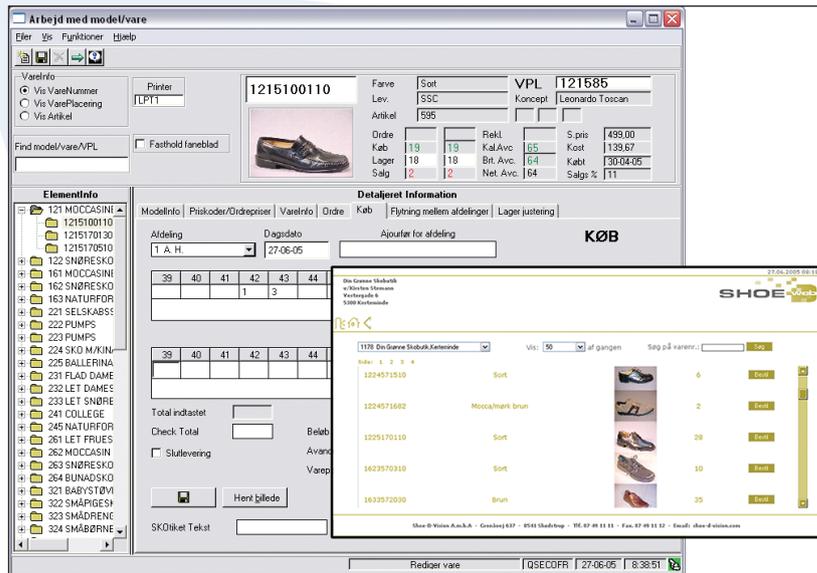
Trevor Gall, IT Manager Australia/New Zealand for Geodis Wilson, says, "We have a very small and productive team of developers who know our business and IT system inside out. We want to keep that knowledge in-house and don't want to introduce separate Windows, Web and integration technologies."

The Royal Wagenborg group, a global logistics provider based in the Netherlands, provides a wide range of services, including shipping, offshore supplies, passenger transport, stevedoring, warehousing and dispatch, crane rental, and international road transport.

Wagenborg Shipping uses LANSA to deliver solutions for Windows clients with a SQL Server database on board of its ships; Windows clients with central IBM i database access for its offices onshore; Web access for third parties; and XML data exchange with suppliers.

Kees Bonthond, IT Manager at the Royal Wagenborg group, says, "With a small team of seven developers we can deliver software in a short time frame. We started using LANSA several years ago and the transition to LANSA was smooth both for the older RPG/COBOL developers as well as for the younger Visual Basic developers. We now all have the same interchangeable LANSA skills."

PGI Nonwovens BV (PGI) in the Netherlands is part of Polymer Group Inc., a global supplier of engineered materials and one of the world's leading producers of nonwoven materials for medical, hygiene, wiping, industrial and specialty uses. PGI used Visual LANSA to automate over 30 production lines in its converting and manufacturing plants. The applications integrate in real time with PGI's PRMS ERP system and drive barcode scanners, printers and robotic devices for counting, packing and labelling products.



Shoe-D-Vision shop keepers don't have to re-enter any information as the SHOEit retail back-office and SHOEweb online ordering systems both integrate with the central ERP system.

Enrico van Dinten, IT Coordinator at PGI says, "We want to maintain a small IT team and use our skills for both Windows and IBM i development. After evaluating several development tools, LANSA came out on top because it offered Windows and IBM i deployment, as well as supporting client/server configurations."

"With the same small team we maintain our core IBM i RPG ERP system and have delivered a Windows-based workshop-floor solution that cost us far less money than if we had purchased a packaged solution, or outsourced development. Plus, we now have a 100 percent fit."

Shoe-D-Vision, with its head office in Århus, Denmark, is a cooperative of the Skoringen, Feet Me and Zjoos shoe retailers, with over 320 stores in Denmark and Norway.

Shoe-D-Vision used LANSA to build a Windows-based retail back office system called SHOEit, installed at almost 100 retail groups. Most SHOEit sites run on Windows 2003 servers with a SQL Server database, each with several point-of-sale systems connecting to it, as shop owners typically have between one to twenty stores in their group.

Asgar Simonsen, IT Manager at Shoe-D-Vision, explains, "Currently we are installing Web servers at the shop owners, giving retail staff wireless PDA access to LANSA-managed inventory information in their group of stores and allowing them to register sales and special price offerings."

"Our central ERP system, also developed in LANSA, runs on an IBM i server and provides LANSA-based Web access to retailers

for stock inquiry, placing of orders and polling of interest for new shoe lines. The ERP integrates tightly with our archive systems, where we add over 100,000 digitally scanned purchase invoices every year. Shoe retailers have Web access to all accounts receivable information, including invoices and payment advice in PDF format."

"With a small team of two developers, including myself, plus five network support staff, LANSA lets us deliver and maintain a Windows system used by 320 shops, a central ERP system and a dynamic Web solution, all with a single tool set."

LANSA Solution Partners enjoy the fact that from a single set of LANSA source code, they can deploy their solution to several platforms and increase their market share. Some partners, especially the ones selling to small organizations, have seen their customer base change from 90 percent IBM i to 90 percent Windows. Advance computing, Sundata and Capitol Appraisal are examples of this. Our partners who sell to large companies often have a customer mix in which IBM i dominates.

Conclusion

LANSA provides a choice in how companies can develop, deploy and blend applications on IBM i and Windows, without having to hire platform specific development or integration specialists. Using LANSA, developers can mix-and-match .NET languages and solutions with RPG and COBOL. Solutions can be deployed to the most suitable platform, integrated in a single composite application and supported by a lean IT team. ■