

NCS partners with LANSA to create dynamic application with portable code and versatile Web access

Overview

■ Solution provider profile

Numeric Computing Systems (NCS), Inc.

- Headquarters: Hauppauge, New York, offices in Los Angeles, Sydney, Auckland, & San Juan; affiliates in South Africa, Hong Kong, Indonesia, Malaysia, & the Philippines
- Founded in 1967, solutions for direct store delivery & route accounting
- Listed in "100 Technology Solution Providers of 2004" (Food Logistics Magazine)
- 100+ customers worldwide

■ Challenge

Modernize a proven application

- 40 million lines of RPG code
- Significant skills investment in System i platform
- No Web or object programming experience
- Support for existing customers
- Reach new market segments

Needed development tools

- Support for multiple platforms
- Connectivity with many clients
- Transparent use of new technologies
- Transition plan

■ Solution

- Use 4GL tools from LANSA
- Leverage RPG and database skills
- Hire LANSA expertise
- Reuse & extend proven business logic

Key components

- Visual LANSA
- LANSA for the Web

■ Benefits to solution provider

- Unsurpassed competitive advantage
- Cross-platform versatility
- Stronger sales
- Quick ROI
- Reduced deployment, training, & support costs
- Multilingual & international support
- Broader appeal to smaller prospects

■ Benefits to customers

- Best-practices application flow
- Any platform & any client
- ERP system connectivity
- NCS back-office ERP (if needed)
- Multilingual environments

■ Tool provider profile

LANSA, Inc.

- Headquarters: Downers Grove, Illinois (USA), 15 international offices
- 20-year heritage
- 7,000+ customers in 67 countries
- 300 business partners worldwide
- IBM PartnerWorld® Beacon Awards 2005 winner (Best Industry-optimized Solution)

Numeric Computer Systems claims its LANSA-generated eRMS offering is virtually unstoppable against the competition.

New York City is well known for its fast-paced, multicultural style. But, the Big Apple is not considered a hotbed for evangelistic preachers. However, that is an apt description for Wayne Hochberg when he talks about using the LANSA development environment to build solutions that are graphically driven, Internet-accessible, platform-independent, multilingual, and ready for wireless hand-held devices. Not only is Mr. Hochberg a dynamic communicator, he is the executive VP and CFO of Numeric Computer Systems (NCS), an award-winning solution provider for the perishable food industry. He is quick to point out that the highly competitive environment in which NCS offers niche software is an application developer's nightmare. The direct store delivery (DSD) industry is characterized by large numbers of customers, an even larger quantity of SKUs (stock-keeping units), lots of line items per order, route sales, fickle customer loyalty, ultra-slim profit margins, and product shelf lives that are measured in hours.

"In these situations," Hochberg explains, "there is no forgiveness for software glitches and delayed access to critical back-office pricing and availability data. Commercial food buyers will immediately go

elsewhere to find what they need. Because of this, our software has to be rock solid and more flexible than you can even imagine."

In this super fast-paced environment, LANSA helps NCS deliver e-business solutions on any platform, interacting with any client interface in multiple languages. Yet, LANSA also lets NCS maintain, support, and enhance only one set of code.

Long history with IBM and innovation

The DSD industry sector is typified by a lack of intermediary warehouses for the perishable products (baked goods, dairy, juices, and other perishable goods) that drivers typically sell off the truck, all the while handling large cash receipt volumes. This is the world in which NCS has longstanding and superior expertise. In 1967, the company literally invented computerized route accounting with its PL/1-based programs on the System/360™ platform. In the 1970s, NCS route management software ran on the IBM System 4300 platform under IBM CICS® (Customer Information Control System). During this era, NCS operated one of the IT world's early online service bureaus, keeping 50 keypunch operators and a bevy of card sorters busy to meet

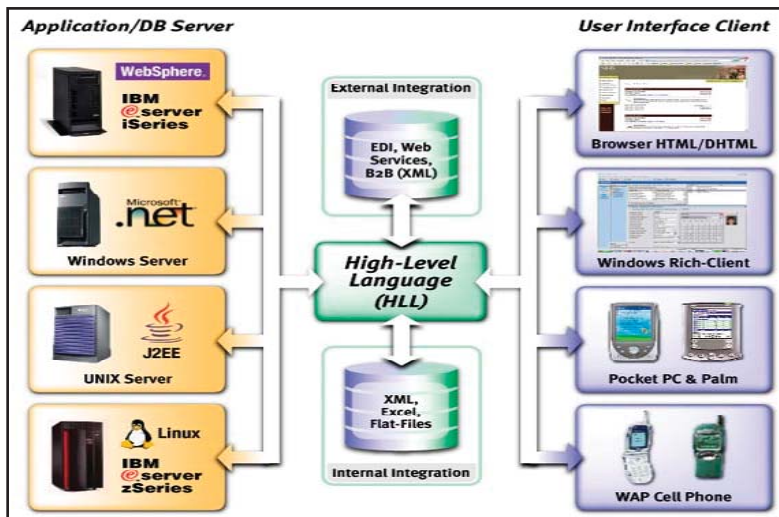


Figure 1: Deploy LANS-generated applications to any platform and any client.

its DSD clients' needs. In the 1980s, NCS ran COBOL-based route accounting applications on the IBM RS/6000® platform.

Then in the 1990s, NCS embraced the IBM AS/400® platform to take advantage of its built-in, robust database (IBM DB2 Universal Database™, or DB2® UDB). NCS rewrote its programs in RPG, embracing the database-oriented application model. In keeping with the technology of the day, all user interfaces in the NCS Route Management System (RMS) offering were green screens, though early on, the company adopted graphical, emulation technologies to provide graphical PC-based client access as a stopgap to compete with the nascent Microsoft® Windows® applications that were just beginning to enter the market.

But, like other midrange business applications of the day, RMS was strictly text-based. There was no Internet connectivity. The code was specific to the IBM iSeries™ (AS/400) platform. And, the RMS application depended on connectivity to JD Edwards® or other back-office (ERP) software for enterprise accounting and manufacturing functions.

Because of this, RMS was inherently geared to large DSD businesses that also voiced the continuing need for greater flexibility, faster delivery of information to route salespeople, and intuitive interfaces to a broader set of users.

Smaller companies in this sector (who tended to prefer the Intel® and Windows platform) also needed these functions, but might prove to be challenging prospects if NCS continued its application innovation efforts on the iSeries platform where its investment in proven code and skill sets were the strongest.

Predicting the future

As the new millennium approached, NCS again committed itself to investing in significant technology development. NCS management imagined many new demands on business applications: multiple server platforms and operating environments, a plethora of new client interfaces, a greater need to support multiple languages, and sophisticated exploitation of the Web. These predictions implied a huge development, sales, deployment, and support effort.

Fortunately, by the year 2000, Visual LANS had become well entrenched as a premier fourth-generation language (4GL) development environment for the iSeries platform. Since its founding in 1987, LANS had worked hard to build a powerful track record for supporting rapid application development that was much more productive than using RPG alone. The LANS repository-based set of tools fits hand-in-glove with NCS' desire to capitalize on its database-driven application model and to leverage its well-proven RPG business code.

The ability to support real-time Web access to ERP data and functions was also paramount for NCS, even though in those days, most organizations were struggling just to achieve a static Web presence. If the RMS software was to be redesigned, NCS wanted to be more forward-thinking. For example, commercial food consumers would demand Web access to complicated pricing and product availability information from their PC browser, and route drivers would need to access dynamic Web content via a Palm or other wireless device." LANS had already planned for these types of on-demand applications with another of its tools, LANS for the Web.

Why did the LANS decision seem so attractive? This 4GL provider had spent more than a decade studying IBM's strategic technology vision, aligning and implementing its own technical initiatives (Figure 1)

“Coupled with LANS, eRMS is a salesman’s dream product, a uniquely attractive solution with incredible flexibility. There is no need to force any sale; no matter the residual objection, we can overcome it easily. And, our large base of accounts are great references, both for the benefit they receive from the LANS Web-enabled applications and the reliability and security delivered by the System i platform.”

– Wayne Hochberg, Executive VP & CFO, NCS, Inc.

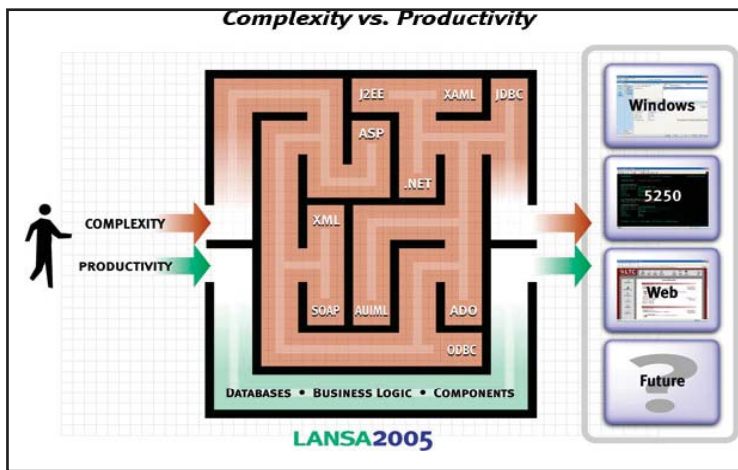


Figure 2 : Rapidly create future-proof Windows and Web applications with LANSA.

accordingly so that the code generated by LANSA products would support a solution provider's need to:

- Deploy to multiple platforms (to appeal to a broader range of enterprise volumes)
- Maintain one set of data and business rules (in a central repository)
- Support Windows, Web, and green-screen user interfaces
- Interact securely with wireless devices
- Enable multilingual support for global applications
- Learn the development environment quickly
- Deliver almost unrestrained programmer efficiencies
- Leverage existing investments in code and skills
- Embrace multiple connectivity methods
- Ensure seamless incorporation of future technologies
- Uphold scalability, robustness, and availability characteristics

Many development houses that partnered with LANSA achieved these goals by consistently exhibiting strong lifts in sales with their newly generated offerings.

The application modernization process

Hochberg says, "The stories from other software providers and IT shops were solid. So in 2000, we

started a three-year modernization process that has literally made us unstoppable!"

Half of the NCS developers continued to support the huge quantity of existing RMS lines of code. Meanwhile, the rest of the developer staff began working in the

LANSA environment. A few experienced LANSA specialists also came on board to kick-start the use of the 4GL tool to design the most forward-thinking DSD application foundation possible.

LANSA supports a phased methodology for modernizing green-screen applications. Web-based user interfaces can be instantly generated without modifying the underlying RPG code. (In fact, NCS still offers green screens for its longstanding users who prefer a slower transition to graphical interfaces.) However, NCS started right away to more aggressively improve its 5250-based programs to display additional and aggregated information by including Visual LANSA functions that enhanced or replaced existing RPG business logic.

LANSA compiles to native RPG for high performance when running on the iSeries platform. But, NCS developers no longer needed to write and maintain the rather cumbersome RPG code specifications. Instead, the LANSA Object Repository allowed them to define business rules without programming. Even debugging was accomplished more productively by specifying procedural logic at the LANSA level.

With the LANSA graphical prototyping approach, developers were able

to get quick validation and sign-off for their screen design efforts. Additionally, the Visual LANSA development language is based on industry-standard SQL, but also incorporates the best features of other database languages including, of course, DB2 UDB for iSeries. This meant that the NCS developers were highly productive, almost immediately. The NCS team liked the fact that LANSA repository triggers mimicked the familiar DB2 UDB triggers they had been writing for years. LANSA also made the existing RPG stored procedures portable to other platforms. And, the LANSA repository supported the automatic generation of reports.

Because the food industry employs workers from many cultures, and because NCS wanted to better support its international clients, the standard iSeries EBCDIC-based data encoding had proven cumbersome over the years. However, Visual LANSA provides automatic iSeries code page handling to convert native CCSID data to and from one character encoding to another, automatically, through its inherent support for the Unicode™ Standard. NCS developers used a LANSA Object Repository to store multilingual field definitions for screen and report descriptions, help text, and error messages. This would allow users to select a preferred language, even though NCS only needed to design and maintain one version.

The début of eRMS

Less than three years after NCS began rewriting and enhancing its RMS code, eRMS was announced. This open solution for DSD manufacturers runs on the company's choice of server and supports a wide variety of user interfaces. The product adapts directly into existing back-end supply chain manage-



ment (SCM) and ERP systems and provides robust order-to-cash facilities, including direct and secure e-business transactions against the manufacturer's database, even from wireless devices. This advanced design allows easy integration within an enterprise environment, regardless of the organization's business volumes. It is an open, scalable, and flexible solution.

The availability of eRMS registered an immediate and significant increase in sales for NCS, according to Hochberg.

Additionally, because smaller DSD enterprises do not already have a JD Edwards or other ERP in place, these businesses need a more complete solution. With LANSAs rapid development environment, eRMS also incorporates full accounting and manufacturing functions.

Uncomplicated, often automatic, adoption of new technologies

LANSAs products make effective use of new technologies (such as Java and XML), which reduces the risk of deploying these emerging Web methods (Figure 2). This helps NCS enjoy a rapid return on investment. LANSAs also reduces the operational costs associated with supporting these underlying technologies, and thus, continues to improve the ROI and bottom line for NCS.

And speaking of support for underlying technologies, LANSAs relieves NCS developers of the arduous task of creating documentation, by automating this process. Probably the most important point is that the documentation is never obsolete.

Salesman's dream product

Imagine giving your application sales team no limits on server hardware, client interface, or operating environment (Figure 1). At the risk of belaboring the point, consider the following spectrum of deployment choices for running eRMS:

- The IBM i5/OS® or OS/400® operating environment on the IBM System i™ (System i5™, eServer™ i5, and iSeries) platform.
- UNIX® operating environments, such as the IBM AIX 5L™ (AIX® 5L) operating system on IBM System i5™ (p5™, eServer p5, or pSeries®) hardware.
- The Linux™ operating system on any hardware server.
- Intel® and Microsoft Windows Server (.NET technologies).
- For the user interface, eRMS can deploy to a browser, Windows rich client, pocket PC (Palm operating system), or cell phone (wireless application protocol, or WAP).

The same, single set of LANSAs code runs on all of the above.

Hochberg says, "NCS industry expertise is at the core of our eRMS offering. Coupled with LANSAs, eRMS is a salesperson's dream product, a uniquely attractive solution with incredible flexibility. There is no need to force any sale; no matter the residual objection, we can overcome it easily. And, our large base of accounts are great references, both for the benefit they receive from the LANSAs Web-enabled applications and the reliability and security delivered by the iSeries platform."

A supporter as enthusiastic as Hochberg would be a gift to any company... Lucky LANSAs!

For more information

Contact your IBM sales representative, NCS, Inc. (ncssuite.com), LANSAs, Inc. (lansa.com), or visit IBM at: ibm.com/server

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