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An On-RAMP for SOA

by John Ghrist and Erin Bradford

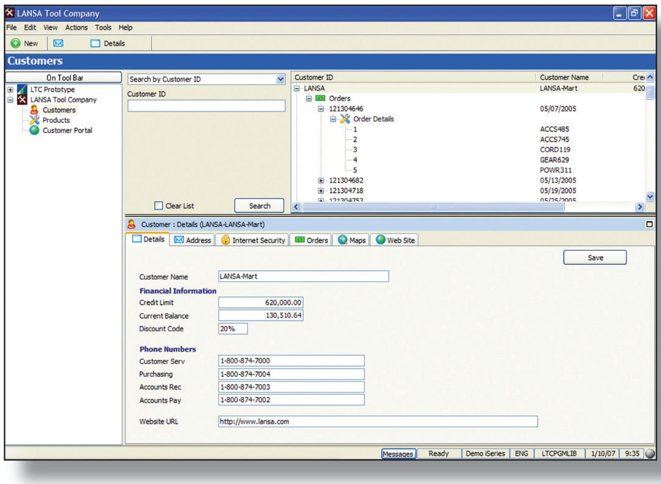
Maintaining existing software, troubleshooting, and managing overlapping IT functions can make it difficult for developers to find time to improve existing software programs. Also, converting green-screen applications to run on the web while working under the pressure of a ticking clock can contribute to too much short-term thinking. It's easy to adopt a tool that facilitates application webfacing, for example, without taking the time to consider whether webfacing an old application is really the best long-term solution.

LANSA's Rapid Application Modernization Process (RAMP from LANSA) is a relatively new approach to this conundrum and a conceptual step forward in resolving what's becoming almost a classic dilemma: Is it better to put lipstick on the pig you know — or switch to another kind of livestock altogether?

The Three-Step Program

RAMP from LANSA is a development tool that enables users to rapidly prototype a new System i browser or rich-client business application without coding — and then plug in portions of existing applications or add new functionality in self-paced stages spanning whatever amount of time suits their needs, whether that be weeks, months, or years. RAMP uses the LANSA Application Framework of LANSA 2005, LANSA's suite of application development and integration products. The framework lets enterprises approach application modernization in a three-step format.

First, develop a prototype that end users can view and even play with to make hands-on decisions about what features would be better. Second, isolate and repurpose 5250 screens and application parts to web or GUI compatibility in a way that lets developers mix and match old and new components and lets the new software interact with other applications within the framework. Third, replace 5250 application parts with new repository-based modules that support modern technologies such as



Customer ID	Customer Name	Cre
LANSA	LANSA-Mart	620
Orders		
121304646	05/07/2005	
Order Details		
1	ACCS485	
2	ACCS745	
3	CORD119	
4	GEAR629	
5	POWR311	
121304682	05/13/2005	
121304718	05/19/2005	
121304753	05/25/2005	

Customer : Details (LANSA-LANSA-Mart)

Customer Name: LANSA-Mart

Financial Information
Credit Limit: 620,000.00
Current Balance: 130,510.64
Discount Code: 20%

Phone Numbers
Customer Serv: 1-800-874-7000
Purchasing: 1-800-874-7004
Accounts Rec: 1-800-874-7003
Accounts Pay: 1-800-874-7002

Website URL: http://www.lansa.com

FIGURE 1 A completed RAMP application shows multiple panels for different functions

VENDOR CONTACT INFORMATION

LANSA, Inc.
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lansa.com

Rapid Application Modernization Process (RAMP from LANSA)
Server requirements: Apache server, V5R3, and 200 MB of disk space for installation

Client requirements: Windows 2000 or later and a minimum of 256 MB of memory (512 MB recommended)

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service-oriented architecture (SOA) and web services.

The first step calls on RAMP's Instant Prototype Assistant to model the behavior of the new business application. This model can replicate the green-screen app's functionality, add a few minor twists, or incorporate some major additional capabilities. Because the prototyping step requires no coding to produce a sample application, RAMP lets power users or business analysts perform it without developer help. The prototype carries out all the major functions of the new application against databases with sample or test data so end users can more readily evaluate proposed functions and suggest changes early in the modernization process.

Once users are happy, the second step is to have a developer begin converting, or "reanimating," the 5250 screens from the original application into reusable components. RAMP records a script of every menu option, function key, and keystroke as a user moves through the application carrying out normal work, from sign-on to the final destination screen. As the developer replays this recording and navigates each screen, he or she labels them by type (destination, junction, or special form). Once the application navigation process has been captured and scripted and the screens identified, RAMP creates a script to reach the desired screen. These scripts are reusable and can also be read or edited manually. Based on how users actually carry out application functions, the developer may be able to identify some screens that might be left out of the new version to see what additional lookup or other capabilities would be useful. The developer simply changes the property names and descriptions of the chosen screens or fields in RAMP and saves the changes to the appropriate new destination. RAMP can then immediately display the "new" GUIfied or web-friendly screen in execution mode.

The next phase in reanimating the screens is to choreograph them, which ultimately provides the developer with something like an alternate ending on a DVD. Similar to the way a movie viewer wouldn't watch the entire film over again just to see a different ending, the developer can reuse the recorded navigation script to start the application at any given point, which lets the end user bounce between destination screens without having to maneuver or see the underlying 5250 navigation screens.

Additionally, the Visual LANSA Framework provides the application with new navigation and search capabilities, as well as extra functionality that may have not been available before, such as incorporating Google maps to provide a lookup screen that shows customers' locations from their addresses.

At this point, the developer can deploy the newly modernized application to execute with a Windows rich-client or web-browser interface. The new version example (Figure 1) includes a new menu panel on the left, a search component in the top panel, and a combination of new and repurposed components in the bottom panel. The third modernization step of application enrichment and reengineering can start immediately, be phased in gradually, or be postponed indefinitely.

But Wait, There's More

The reengineering process lets developers use RAMP to extend and replace portions of the legacy application at any pace, from months to years. RAMP's features give enterprises the option of delivering these changes to users incrementally to minimize training and deployment time. But rather than being held prisoner by the original application's functionality, as is the case with webfacing, enterprises can also give the modernized version additional capabilities at any point and evolve the application until it supersedes the original completely. RAMP's features enable this reengineering process to incorporate the modernized application into an SOA that uses web services, XML, and other new technologies. And because RAMP automatically generates modernized versions of applications in JavaScript, in the long run it can also help an enterprise move away from a dependency on legacy RPG, Cobol, and CL coding. Another bonus is that RAMP uses batch cycles, so it won't require any CPW upgrade.

If your enterprise wants to modernize its applications but is wary of being locked into a short-term strategy of screen-scraping or webfacing, RAMP may be the answer. ■

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