R&P Datakonsulter Ignites Car Import Industry

By Amy Petré Hill

In today's fast-moving software industry, inspiration and opportunity for great new software can come from anywhere. A television show, an article in a newspaper, or an offhand remark by a customer can all create the spark that successful developers transform into a revolutionary new product or important application enhancement.

For Risto Paloneva of R&P Datakonsulter AB, a Swedish software developer of car import and leasing software packages, the spark was a phone call from a Chrysler car importer. The importer needed an inventory/distribution application to handle real-time orders from dealerships across the country. Four years and a complete product rewrite later, R&P is premiering an Internet-enabled, PRO/5® software package now in demand by large car importers throughout Europe.

The Initial Spark From Chrysler

The story begins in the never-ending days of the 1987 Swedish winter with the creation of R&P Datakonsulter AB by Paloneva, his wife Krystyana, and partner Patrick Hollgren. Working together, the three combined their knowledge of BBxProgression/3® and the complex car import/renting/leasing industry to develop Car Import, a comprehensive car import and distribution turnkey application.

Although Sweden was in the middle of an economic depression, the trio's hard work and in-depth understanding of car importers' inventory and accounting needs led to the sale of Car Import to Swedish importers of Mitsubishi and Hyundai cars. According to Paloneva, "During hard times, only specialists survive, and we were specialists in the car import business. We proved ourselves with our Mitsubishi system and then developed a whole new system for Hyundai. These two customers were very pleased with their systems and started talking about us at their regular car importer association meetings."

R&P's reputation continued to grow, and in 1994, an eventful call from Ulf Lokrantz, manager of Harry Karlsson Bilimport AB, struck the spark. Karlsson, a distributor of Chrysler and Jeep cars in Sweden, needed a complete turnkey inventory/distribution system

that could track all the cars and parts coming from overseas, accept orders from car dealerships on a daily basis, and handle the extensive tax and reporting requirements for imported cars.

Adding to the complexity of the project was the requirement that the system work with a large number of dealerships, all having their own hardware and operating systems. And Karlsson needed the entire system to work in "real time" so dealerships could order products and have twenty-four-hour access to their order's status.

The First Phase: Starting From Scratch...Again

R&P's then-current version of Car Import was a very powerful application. But after looking at Karlsson's needs and goals, it was decided that if Paloneva and his partners wanted to take on this project, Car Import would have to evolve. "After studying the requirements from Karlsson, we quickly realized that the best solution was to throw away *all* the Car Import code and start from the very beginning. Our current application did not have multikeyed files, and to complete this job, we knew we had to have them," says Paloneva. "Building Car Import over from scratch gave us the opportunity to do things in a better way and take advantage of the new capabilities in a later version of BBx. For us, trying to rework existing code wouldn't have saved us time and would only have added complexity. I would suggest to other developers in the same situation that they try and salvage their file layouts and let the rest of the code just go."

Because the Karlsson project was so large, R&P divided up the work into two phases. The company would first concentrate on rewriting the current application in PRO/5, integrating a system administration package into the software, and then installing the system at Karlsson and all its dealers. Then the R&P team would make a major leap in its software's functionality and tackle the issue of real-time ordering by making the software Internet-aware.

Before writing a single new piece of code, R&P carefully mapped out a program specification using PRO/5 as the development environment. The team decided to try and salvage only file layouts and launched into a flurry of file system work, creating string templates and transforming all files into MKEYED files with secondary keys. These initial steps took a significant amount of time but created a firm foundation on which R&P could successfully build a quality application. "We also saved ourselves lots of future maintenance time when we do updates," says Paloneva.

Then they turned to building the code. One major rule on which the team insisted was that none of the code in the application could be "smart." "It is much better to write stupid code that is easy to

understand and modify," Paloneva says, "than to write slick, smart code. A good example can be found in military gun technology: the Russian Kalashnikov versus the American M16. The Kalashnikov is like dumb code. It doesn't have the 'smart' features the M16 does, but it ends up being a better weapon out in the field because it's simple. More standard equipment makes it easy to support and it can shoot in any weather condition. We write Kalashnikov code."

In May 1995, the team had finished the application and integrated START--a well-known system administration package from distributor Basic Systems AB--into the system. By the end of 1995, Car Import was installed at Karlsson's Gothenburg headquarters on thirty PCs and ten printers running Novell 3.l and in all of Sweden's Chrysler dealerships.

The new Car Import application allowed dealers to send purchase orders as string files to the file system in Gothenburg. These files would be stored within the file system and then picked up by a sweeper program twice a day. Dealers would receive either an email or a facsimile order confirmation that same day. In only the first few months of operation, the success of the new application became clear when the number of full-time staff required to maintain the system fell from six to two.

The Second Phase: Web-Enabling The Application

After taking a few months off to catch a breath, R&P faced the real challenge--enabling the entire system on the Internet. R&P joined forces with its Authorized BASIS Distributor, Sven Nützmann of Basic Systems AB, and started brainstorming on possible solutions.

The first task was to make the established PRO/5 program accessible to an Internet browser. R&P created a website for Karlsson that contained a static order form. Dealers could point any Internet browser to this homepage, enter their password, and place their order into an online form. When finished, the dealers submitted the order to an FTP server at Karlsson.

Once the order was in the FTP server, a special Common Gateway Interface (CGI) script creation program, BBWeb from Synergetic Data Systems, automatically translated the orders into a form readable to the PRO/5 system. A continuously looping PRO/5 program then entered the order into the inventory system instantly.

Once the order was in the PRO/5 Car Import file system, a dealer could check its status by pointing his or her browser to another page on the Karlsson site offering an order status search form. When the search form was submitted by a dealer, it would go directly to a Windows NT webserver. BBWeb would again use CGI scripts to translate and pass the information to the PRO/5 file system. The file

system would perform essential processing on a separate server and send the information back to the Windows NT webserver, which would generate an "on-the-fly" web page with all the information for the user. The end result was a complete order entry system that offered a GUI interface through an Internet browser, processed all orders instantly, and allowed dealers to check the status of their orders in real time.

From A Spark To A Flame

When the new Internet system went online just this year, Karlsson and its dealers were ecstatic. They had the sophisticated ordering system they needed running twenty-four hours a day. News of the new system--the first Internet-enabled application of its kind in Sweden--traveled through the car import industry very quickly, and R&P has since installed the system at forty different sites, including Fiat, Hyundai, Alfa-Romeo, and Peugeot in Sweden.

Other car importers throughout Europe have also heard of the new program, and R&P is now receiving calls from countries as far away as Poland and Hungary. "We are talking with Hyundai dealerships throughout Europe and see some real potential in Eastern Europe," confirms Paloneva. "For example, Poland has a market of forty million people and lots of dealerships that want software and Western business know-how. Fiat in Hungary is also interested in us and is talking to the Peugeot and Honda dealerships about us. We're very excited."

Now that the launch of the web-enabled Car Import package is complete, R&P is focused on incorporating GUI into its text-based applications. "We're very pleased that we were able to make an application that serves the needs of our customers, but we know we can't stop," says Paloneva. "That's why we are now migrating our current applications over to the Windows environment using Visual PRO/5® 2.0. We want to make our product even better."