Fit for the Future?

By Denise Schmitz

In 1964, Bob Dylan wrote, *"The times they are a-changing."* Change is inevitable. To remain competitive it is imperative that organizations change with the times, incorporate new technologies, and meet customer's needs. Considering today's economic climate, productivity is particularly important in the automotive industry. Specifically, this means providing an intuitive application that is easy-to-use, cost-efficient, and automatically performs routine tasks to improve employee productivity. Midata Service GmbH understood this industry and developed an application to satisfy their needs and deliver productivity advantages to the Mitsubishi car dealers in Germany. Midata built their new dealer management application using BBj®, the latest generation of BBX®.

Midata Service GmbH, located in Flörsheim, Germany, and founded in 1992, set their goal to provide a complete business solution for German Mitsubishi car dealerships, which includes application software, maintenance, hotline support, and onsite assistance and consultancy.

Where the First Journey Began

Auto dealers depend on Midata to provide a business solution, which extends new technology to their dealerships and keeps them competitive in their market space. Dealerships require stable operating systems, and a robust, dependable, and platform independent development environment because they do not employ significant IT staff members. These requirements led Midata to choose UNIX operating systems and the BB^X development language, both well-established choices in the German marketplace.

Over the years, Midata expanded their deployment options and now deliver UNIX and Linux systems (servers) and continue to develop the current solution in the PRO/5® version of BB^X. The use of this platform independent language enables them to migrate their customers from one platform to the next without any changes in the application. Midata's customer base ranges in size from a single desktop to networked installations with over 90 workstations. Therefore, the solution must provide wide scalability for the large installations. Fortunately, the continuing improvement in size and speed of computer hardware allows Midata to install their software on a single server, which simplifies installation and reduces maintenance requirements for their customer base.

Midata designed their solution in software modules. Each module processes and manages all major aspects of the daily work for each individual department. The Midata application handles different car manufacturers, so that existing Mitsubishi dealers can sell more than just the Mitsubishi brand of car. The basic modules include:

Stock Control - controls all stock movements including order recommendations and price adjustments, allowing several stock depots, and ordering via file transfer.

Repair Shop - consists of order processing, spare parts, work timing, cost estimates, service packages and workshop planning along with the necessary warranty processing, reports, and statistics, which interface with the accounting module.

New and Used Car Sales - manages all functionality needed for the dealer's sales people including access to information such as sales codes, accessories, and current pricing. The software records and allocates all car entries according to their pricing, whether new or used, giving sales representatives the ability to automatically create proposals, process orders, and transfer necessary data to the Vehicle Registration Office.

Additional application modules include a **Cash Desk** with interfaces to the **Accounting Package**, and **Work Time Control**.

Midata developed their original solution as a CUI application, shown in **Figure 1**. Midata knew they had to move their
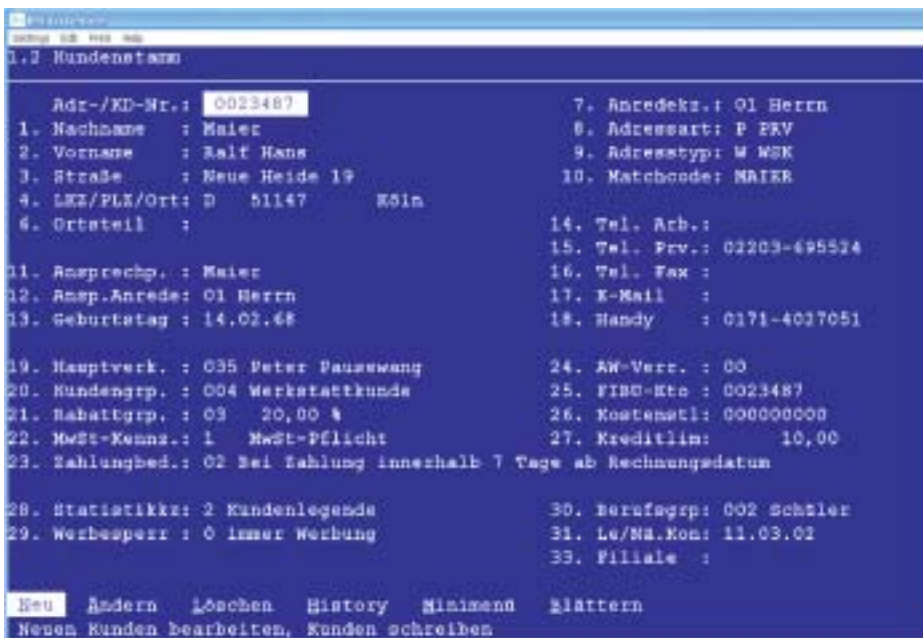

Figure 1. The legacy CUI customer maintenance screen

application to a graphical user interface to remain competitive. The industry was content with the robust functionality of the CUI application, but the changing needs of the sales force demanded GUI. This new technology offers tremendous advantages. Sales people could show the available cars through video images on the screen, and the look and feel of the application would match what users expect a modern application to look like.

Where the Journey Resumes

In the fall of 2001, the Midata development team wrote the requirements for their move to GUI. They understood the marketplace, which provided the knowledge and expertise to design a new solution. The major goals were to:

- move the dealers to a graphical interface, gradually
- set a reasonable upgrade price
- maintain ALL DATA structures without time-wasting file conversion or re-keying

In which language would they write this new application? The main goal was a soft rollover, meaning a gradual change from the existing solution to the new software, improving the customer's acceptance of the new modules. A low cost solution was important to Midata as well as their customers. There was a great reliability advantage in maintaining their legacy business rules and data structures. There is also a great financial advantage if Midata minimized the costs associated with the software upgrades. One of the greatest advantages to the Midata strategy is their ability to upgrade their customers incrementally, to minimize business disruptions during the migration process.

In preparation for their new development effort, the Midata development team investigated the various generations of BB^x available from BASIS. While Visual PRO/5® was the most mature GUI option; they also investigated BBj, then available at revision 1.0. The team recognized the immense potential of BBj, even at its initial release. With Java rapidly becoming the new standard, BBj was truly the choice for their future. This advanced BB^x solution preserved the value of their data structures, gave them a jump-start on their new application because they could reuse existing code from their CUI application, and assured them of same robust foundation offered by a time-tested development platform. Midata concluded that the BBj development environment gave them the lowest risk with the highest rate of return.

To accomplish these goals, the team began defining their network architecture and deployment options. First, they decided to use a peer-to-peer network for installations of 1-5 workstations with the clients running Windows XP. For installations with six or more workstations, they decided to use a client-server network with Windows XP clients and Linux servers, a reliable operating system easily capable of supporting their largest customers.

The team first designed the user interface on paper and then communicated it to existing customers, making sure the look and feel was intuitive and met their customer's requirements. Far too often, developers add the user interface after writing the programs or they recycle existing user interfaces. Aware

Midata Service GmbH

Midata Service GmbH and the MKG Bank GmbH are independent companies within the Mitsubishi Corporation. Together, they supply all services to German Mitsubishi automotive dealers - hardware and operating systems, application solutions, installation, hotline, field service, and all banking services such as leasing, credit approval, and financing.

Midata Service GmbH was founded in 1992 with the goal of supplying all-round business services to the Mitsubishi dealers in Germany. The company has approximately 50 employees with estimated sales of • 5 million. Midata is located in the small town of Flörsheim between Frankfurt and Wiesbaden on the banks of the River Main. This region, known as the "Gateway to the Rheingau," is the world-famous wine-growing area of Germany. The proximity of the Frankfurt airport and major autobahn routes make Flörsheim an attractive base.

The Midata customers value the extensive service they receive. Of the 850 Mitsubishi dealers in Germany, 800 are Midata customers – proof they value this service. The customers only have one company to call, for IT questions or problems, training, and documentation. The hotline is available throughout the day and engineers are on call for field service.

of these potential design problems, Midata assigned two programmers from their development team to first design the user interface (see **Figure 2**), and then program the logic behind the screens. Using the BASIS language and development tools, they began the crucial programming phase. They had 10 months to complete this solution and present it at a national users meeting in November of 2002.

On target and ten months later, they presented the updated **Salesman's Workplace** to the users and received rave reviews. All attendees expressed enthusiasm and excitement about the module. Though not entirely complete, the new application showed the dealers the added features and tremendous ease of use possible in the new application. Impressed sales people immediately saw the easy availability of detailed information. Delighted dealers confirmed the validity of the decisions made by the development team during their design phase. With this encouragement from the dealer community, the development team focused all their energy on completing the module as quickly as possible.

Midata Service GmbH has eight developers, split between two different cities (Flörsheim and Flensburg), all working on the same development server housed in their headquarters. They maintain their source code control through Concurrent Versions System (CVS). The three developers in Flensburg are Java programmers, who reluctantly entered the "Business BASIC" development community. However, following BBj training from the Flörsheim group, the Java programmers embraced the advantages of BBj with overwhelming enthusiasm. Their greatest excitement stemmed from the increased development speed they achieved by using the BBj environment. Another great benefit was that the BBj development environment allowed them to incorporate Java programming, which created a synergistic programming paradigm. They truly had the best of both worlds…ease of development using BBj, with the ability to take advantage of some innovative Java features. The ability to utilize the best features of two different languages greatly reduced the learning curve and the risk of their choice of development language.

BBj provided many powerful new language features that Midata utilized in their application. The Multiple Document Interface (MDI) provides the ability to multitask with more than one relevant application window open at a time. Through InterProcess Communication (IPC), the modules exchange data between programs/windows to provide real-time information, monitor events, and check variable values.
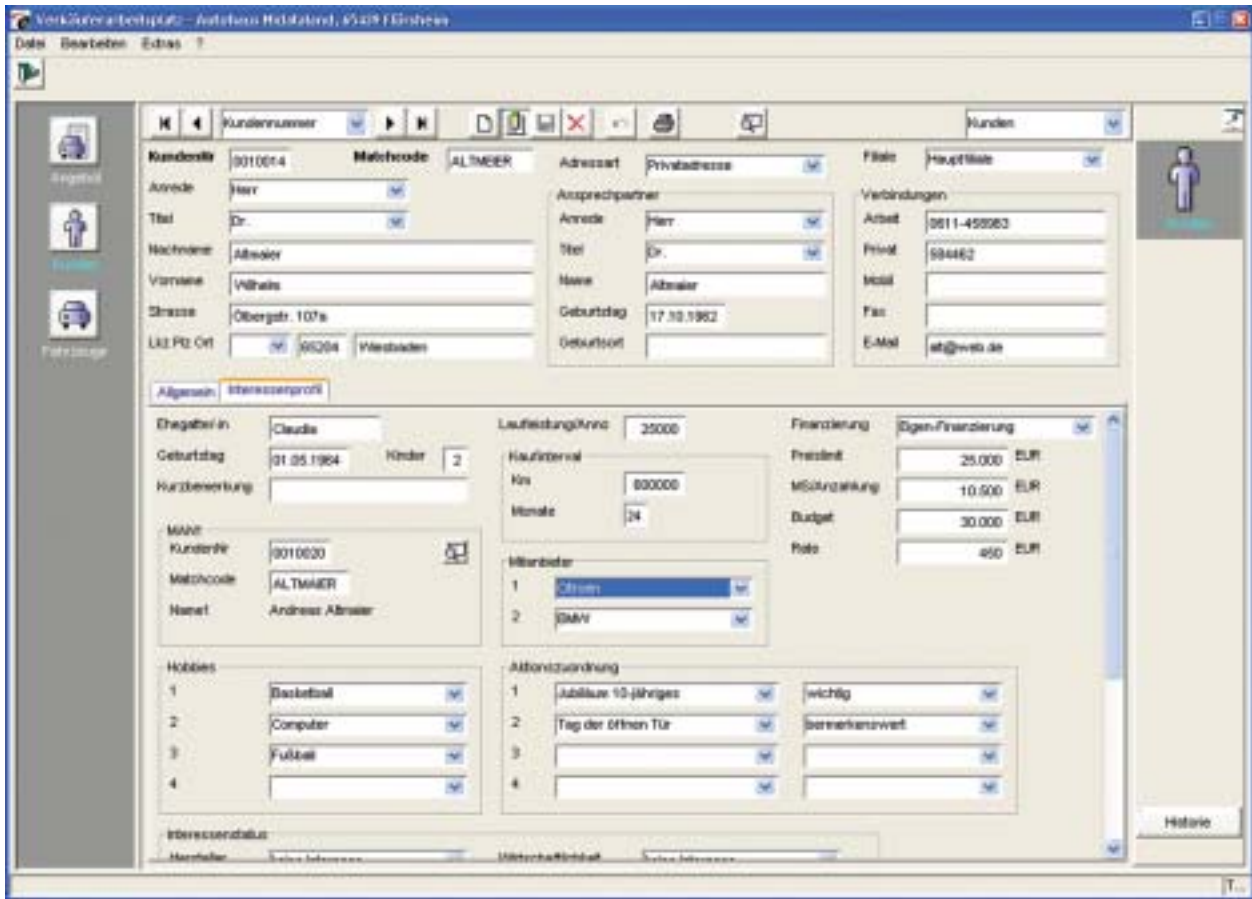
Figure 2. The prototype GUI customer maintenance screen

Using Tree controls, Midata gives users a familiar interface with which to navigate large quantities of information on easy-to-read screens. Trees provide a graphical interface to folders and files with the intelligence that "marks" items with a yellow question mark (?) that require attention, and a red exclamation point (!) on items that require urgent attention. The screenshot in **Figure 3** is an example of these markings. The salesperson can easily select the desired icon on the Tree and access the relevant information instantly. Now available from a single screen, a salesperson accesses a full catalogue of available cars, with photos, a detailed description of the standard features and options, the exact breakdown of repayments depending on the financing model selected, and automatic proposals. After online credit or leasing approval through the MKG Bank GmbH, a salesperson can reserve the car and complete the transaction with just a few clicks of the mouse. The salesperson can create bulk mailings, check on insurance, remind customers when their car needs servicing, etc.

Peter Pausewang

This interview is with Peter Pausewang Dipl.-Ing. Informatik, Sales Manager of Midata Service GmbH. After obtaining his degree in 1989, Peter joined a software company developing a business solution for the automotive industry. Having obtained valuable experience in this field, he moved to Midata in 1995. As well as being responsible for the sales side of the business, Peter is an integral part of the development team. He is married and has two children.

BBj enabled so many new features and high-performing functionality that comparing the graphical version of this BBj application with the CUI version is like comparing driving on the autobahn with commuting in rush hour traffic.

Is Midata Service ready for the future? You bet!

For more information on CVS, visit the BASIS Web site at http://www.basis.com/advantage/mag-v8n1/inside.html to read the related article in this issue of the **BASIS International Advantage**.
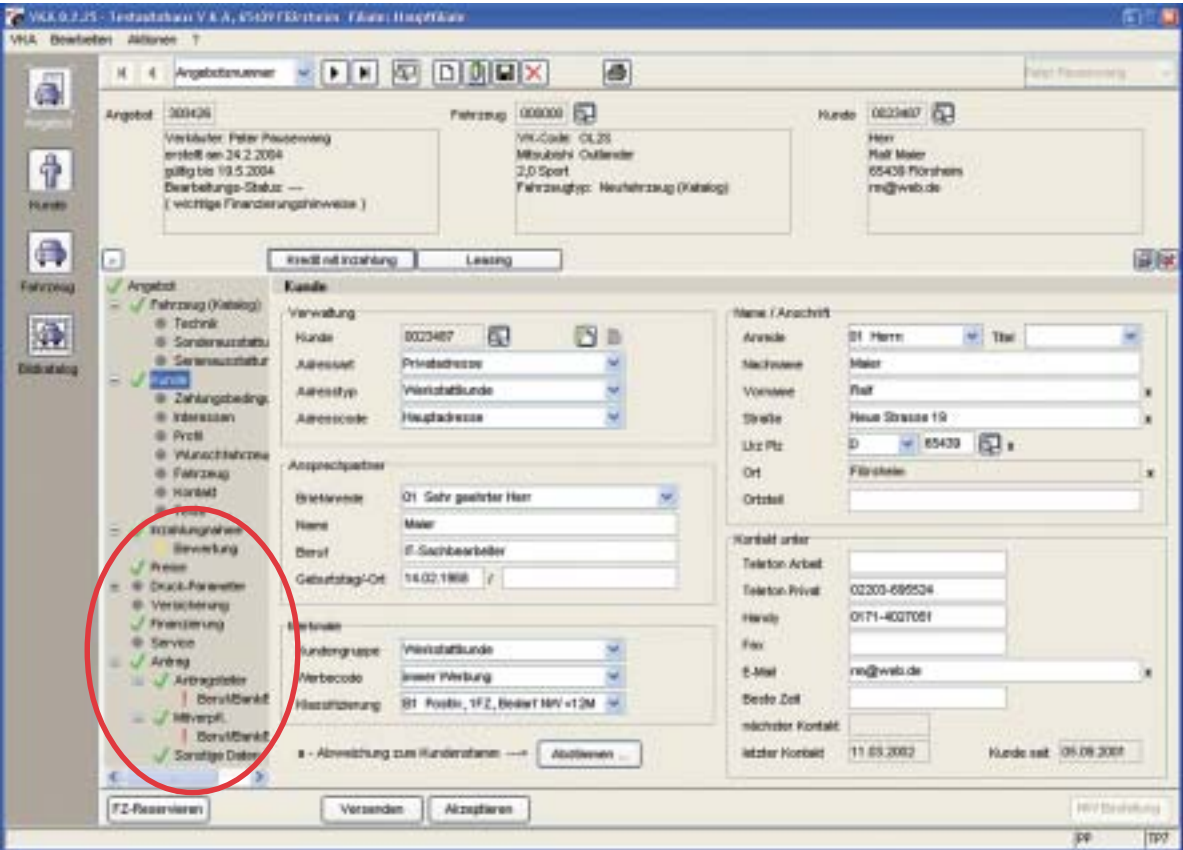

Figure 3. GUI screen displaying MDI and Tree capabilities