A Tab(let) a Day...Makes the Doctor's Day

Heimbas, a leader in the German nursing-home software market, services more than 700 customers. Development of the Heimbas solution began in 1988 followed by its first Windows release in 1995, based on Visual PRO/5®. The third generation, written in BBj® (see **Figure 1**), saw the light of day ten years later in 2005. Read on for the rest of their story.

Just What the Doctor Ordered

Founded in 1973, Heimbas was one of the first ISVs to offer integrated ERP software for nursing homes, including modules for administration, invoicing, accounting, costing, nursing documentation and duty roster management, all developed by the same development team. Today, they still hold firm to their original philosophy, "to offer a complete solution for the nursing business – integrated and fully-featured, yet particularly easy to use." The product, called "Heimbas" (*Heim*=home; *bas* from data'bas'e), was so successful that managing director Armin Kehler decided to name the whole company after it.

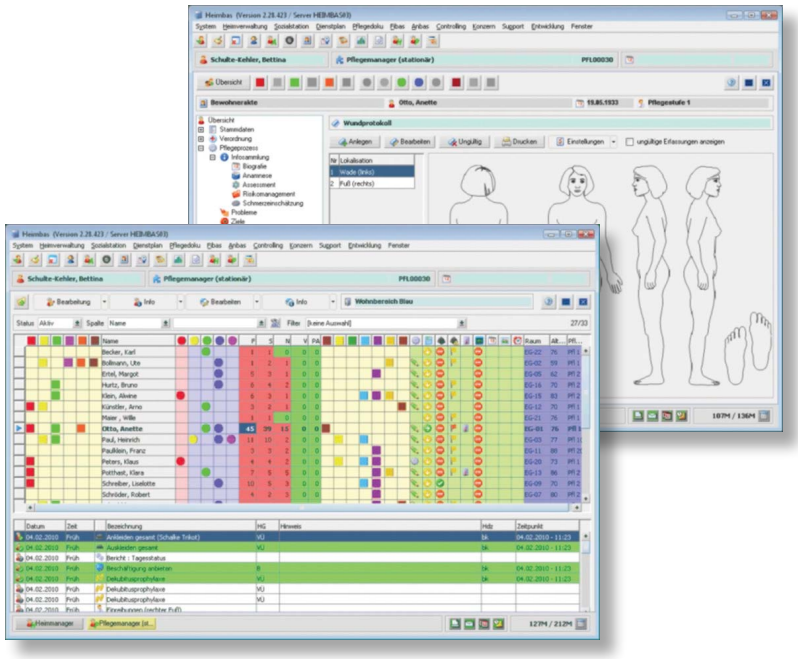

Figure 1. Third generation Heimbas Windows written in BBj

Electronic Patient Files

As everywhere else in the world, the German health industry is facing enormous cost problems. Heimbas understood at an early stage that mobile computing could offer nursing homes and home nursing services huge cost saving benefits, and acted accordingly.

Nursing homes are under pressure from two sides: a host of statutory regulations, and rising costs in the sector force all providers of health care services to become efficient without sacrificing quality of care. One way out from under this pressure is the concept of the electronic patient file, which stores all relevant data about a patient electronically, saving redundancies in data entry as well as read and transmission errors and allowing for easy data retrieval. As nursing homes are under close scrutiny from the public health insurance system, it is an important point that electronic patient files are more audit-proof than paperwork.

Touchscreen Nursing Monitors

A few years ago in a first attempt to complete the data chain, Heimbas implemented touchscreen monitors in nursing homes at the door of every patient's room for easy access to the nursing documentation module of Heimbas software. When nurses come in to a room, they simply activate the monitor and authenticate with a connector pin that they carry on a cord to see the patients' needs in an instant. As they leave the room, they can document the work with just a few clicks – no need to look for a pen, or specifically one that works; no need for legible handwriting, no need for forms that can be lost or damaged, no risk of forgetting to record the data or remembering it accurately when called upon to record it at a later date. When completing the entry, they simply pull out the connector pin to sign out automatically and conceal the patient data from unauthorized view.

Heimbas Anywhere

The monitors were a huge success for Heimbas because it saved nursing homes a lot of time and work while dramatically improving their care documentation. Several homes asked Heimbas to take the next step: to enable head nurses to access the patient data not only from their desktop, but from anywhere, to improve internal patient-centered communications. Application for such a solution is wide and varied throughout nursing homes and hospitals, alike. For example,

- **At the bedside**. On the ward rounds, all information about patients would be available at their bedside. The head nurse could retrieve the latest temperature charts entries for the doctor who could then decide any medication changes on the spot – all information/data would be stored in real-time in the patient file. Media discontinuity only occurs for legal reasons: The prescriptions have to be printed out, because the doctor needs to sign them.
- **In admissions.** When admitting acutely ill patients, the staff could collect the most important data on the spot – not just their name and address, but vital information such as known medication allergies or pre-existing conditions, and so on. This information would then be immediately available to all doctors and nurses. > >

By Patrick Schnur
European Marketing and Public Relations

Hardware

Hospitals and software companies had been experimenting with mobile patient documentation for quite some time but the best option had only been keyboard-equipped laptops, clumsily rolled from room to room on mobile cabinets, hardly a workable solution. The time was not yet ripe for mobile options...until now. Today, with modern touchscreen tablets, devices are smaller, lighter, and much more comfortable and easier to handle, the solution seemed to be at hand.

Software

The software side of technology has developed just as remarkably. Heimbas opted to use BASIS' revolutionary BUI technology for the new solution. "*All alternatives, such as native iPhone or Android apps, were out of the question,*" explains Armin Kehler. "*The reason is that not only did we know BBj inside out after having worked with BASIS tools for more than 20 years, but our customers are used to running our software on their hardware and OS, and we wanted to keep it that way. With BBj and BUI, we remain platform-independent and operating system-agnostic, without the need to re-develop the same solution several times over.*" With their BUI solution ported from the existing software package, it took Heimbas only 30 project days to complete the transformation, "*...just as we had planned!*" says Kehler.

One of Heimbas' main competitors uses .NET. "*We certainly have an edge over them. Using BBj,*" Kehler explains, "*we are operating system independent, and we don't need to worry about any release changes around the products we use."* And then there is easier deployment. *"We don't have to update at every single desktop terminal, but just once on the customer's server, and that's it.*"

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Summary

The value of the flexibility of BASIS' interpretive language, which can execute code in a JVM or in a JavaScript/HTML 5 capable device without a JVM, such as an iPad, is the technological secret enabler behind the Heimbas success story. Existing GUI code can run on a mobile device without modification through the magic of the interpreter. BASIS, helping you deliver tomorrow's solutions today!

For source code and a sample of incorporating legacy business logic in a mobile application, see the BUI Mortgage Amortization application at links.basis.com/buidemos. ■

More Miles per SQL Gallon

BBj® 11.0 now supports SELECTs from nested SELECTs as well as SELECTs from stored procedures. These enhancements provide developers with additional leverage on those finely-tuned SQL statements and adds functionality to previously written stored procedures. Getting more out of those SQL statements and stored procedures is now more efficient and even easier than ever before, thereby unlocking access to all your production data to modern SQL-based report writing tools such as iReports. >>

By Robert Del Prete
Quality Assurance Engineer

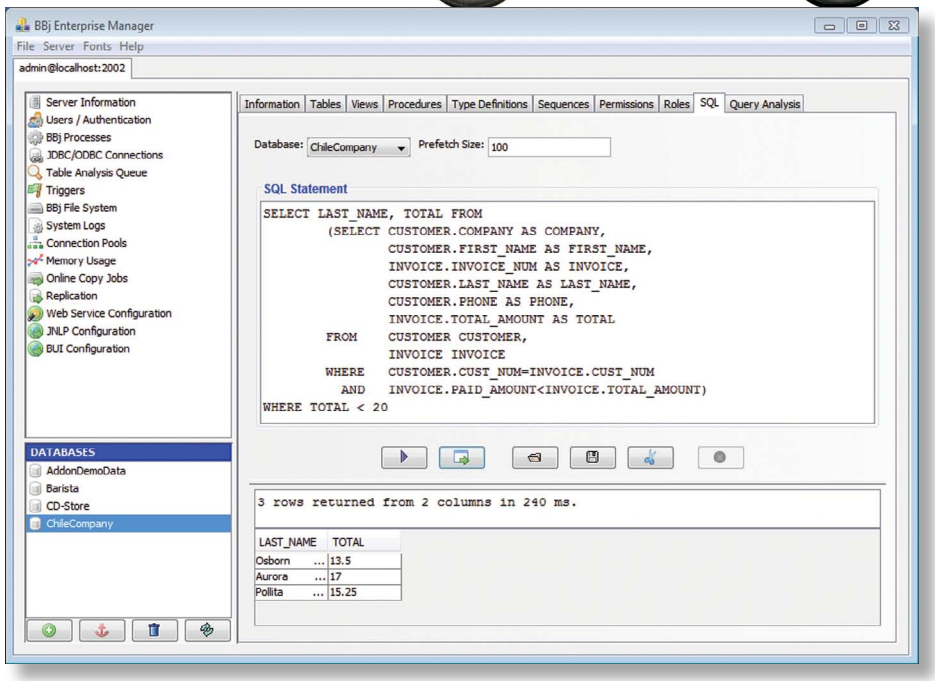

Figure 1. Using the result of a nested SELECT statement as though it were a table