

# Service switch: from Gupta to .NET

To replace the platform of a database application used by hundreds of users is an extremely difficult task. You're better off leaving the transportation to an expert – and instead taking care of “tidying up”



→ BY GÜNTER HOFMANN

Database applications used in the public domain – by authorities or hospitals, for example – must be constantly adapted to changing basic conditions and laws. AG Büro 70, a software firm in Bern, supports two such solutions: a pension fund software program (Peka) and a hospital software program (Pabs). However, the Gupta platform used so far for both applications was getting on in years and was making flexible changes increasingly difficult. As early as 2002 the Bern people began intensive discussions on switching technologies. In the words of Daniel Stucki, the Büro 70 managing director, “even at this early stage, Gupta no longer compares directly with Java technology, with which I had already worked.” In addition, it had become increasingly more difficult to find developers with Gupta know-how on the labor market.

## INSOLUBLE RESOURCE PROBLEM?

When Stucki and his team then took a closer look at the system environments of their customers, they found mainly Microsoft products. However, since the industry packages could be integrated on .NET much better than on Java, the decision was made for the Microsoft platform. Nevertheless, disillusionment soon followed. After an initial calculation of what it would cost in financial and personnel resources to redevelop Peka and Pabs from the ground up, it quickly became clear to Stucki that “we simply can't put off new development in parallel with the necessary maintenance and adaptation of the customer applications.” It was only some years later that the Bern people found a solution to the dilemma: a tool-based service

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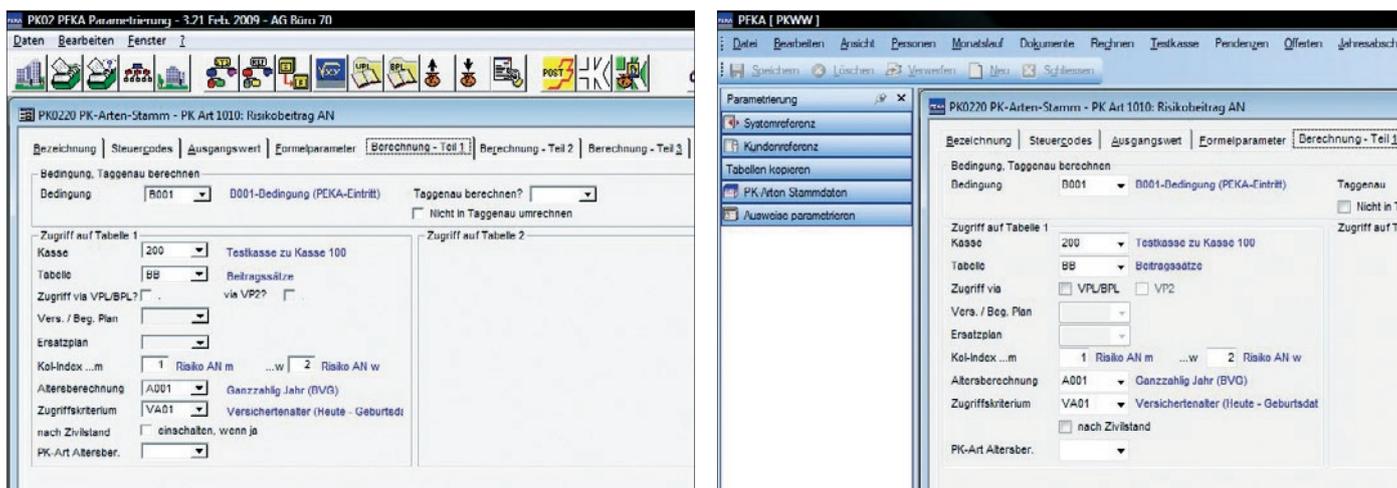
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## MORE ON THE SUBJECT

The customer: AB Büro 70 → [www.agb70.ch](http://www.agb70.ch)

The solution provider: fecher e.kfm → [www.fecher.eu](http://www.fecher.eu)

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**New platform and new user interface: the pension fund software before porting (left) and after**

known as “The Porting Project”. In the fall of 2006, a road show and reference projects convinced the software specialists that automated porting of Gupta SAL code to C# functioned in practice. In January 2007, the bidder, or in other words the fecher consulting and software firm from Germany, was allowed to undertake an analysis of the application code, in order to estimate the duration of the project. In March, the decision for porting was made.

The most important requirement of the project was that the technology switch must be completed as quickly as possible and that the work load for the in-house developers be kept to a minimum, since they were working under high pressure on new full versions of Peka and Pabs, planned for market launch in the spring of 2008.

### DEVELOPING IN PARALLEL GOES FASTER

In order to be able to meet this deadline and to deliver versions already under .NET, further development was to be continued on the Gupta platform, so that the applications amounting to 150 modules each could be ported item by item later on. In the meantime, fecher would port five modules per application in a pilot project, in order to detect and eliminate problems at an early stage. In May, the experts began to transfer the code of the selected modules.

Since unusually many errors occurred in the converted code during the pilot project, while new snippets of code that also had to be subsequently fitted in were added several times due to the parallel further development, the manual effort was considerable at first for both parties. Nevertheless, it was sufficient on the customer's side to assign three to four developers to this task. “Even in this phase it was calming to see that the automated code conversion was basically functioning,” recalled Stucki. Three months later the Gupta code had been con-

structed to thoroughly that it would run without problems through the “Ice Porter” porting tool specialized for the Gupta code. Because of the enormous number of modules, fecher had further provided this tool with an add-on program for batch activation.

### PORTING IN THE ACCELERATED METHOD

From July to September 2007, and then from September to November 2007, fecher ported first Pabs and then Peka. In the process, in total around one million lines of code and thousands

of windows, classes, functions and even reports had to be translated or converted. Besides the complexity of the two applications, support for the different databases such as Oracle, DB2, UDB and SQL Server represented a challenge for porting. In the subsequent tests, AG Büro 70 brought in not only the developers

but also in-house users, although they found only little to criticize. “The effort of the pilot project paid off absolutely in the test phase,” summarized Stucki. Only minor errors had to be eliminated.

### RELEASE PLANNING MET

After three days of in-house training by fecher and some colleagues experienced in .NET, the team around Stucki was even able to take advantage of the remaining time until the release to modernize the user interface of the

two applications. Under Gupta, a consistent presentation was lacking, and the users still had to deal with numerous exe files. In contrast, the interface in the new versions ap-

pears in the known Outlook view. It shows a navigation bar and an overview window with all individual applications for which access authorization exists.

After the Bern software firm had accepted the C# code 2008 and had completed the development work under .NET, it became possible to begin delivery of the new versions. Twelve customers have already switched to them in the past few months. “Looking back, we took the right path,” summarized Stucki. “The application structure of our industrial packages has become simpler, and our developers now have a modern technology available to them.” Next goal: To integrate the Office products into the industrial software even more than ever, to provide a smooth workflow for the customers.

According to Stucki, the project also had a clear bonus effect: “Our developers have experienced a large push in motivation by virtue of the switch and the associated thanks of the community.” ←

«By no means could we have put off new development»

Daniel Stucki, AG Büro AG

## The project data

### Original platform:

Gupta Team Developer

### Destination platform:

Microsoft .NET / C#

### Supported databases:

Oracle, DB2, UDB, SQL Server

### Scope:

→ one million lines of code

→ 1200 windows

→ 3000 classes

→ 30,000 functions

→ 250 reports

**Project duration:** 12 months