

db4o | The Open Source Object Database | Java and .NET

# Eastern Data's Mobile Solutions Get a Competitive Boost with db4o

By Amy Tenderich

Eastern Data is one of the UK's leading suppliers of mobile computing systems. Data from hand-held devices is collected and collated by Eastern Data's tailored software, which can be linked to accounting, stock control or management information systems according to customers' business needs.

The company's successful "LoanMaster" software designed for the home credit industry, and "Mobilise Van" route accounting distribution management system were recently redeveloped using db4o to store objects – making them more powerful and more competitive.

Eastern Data also wanted to expand into new markets, which called for a modular development environment to facilitate code sharing between systems.

"Our volume was growing quickly, but not the product capabilities, so we realized that we needed to be more visionary. Working with db4o has allowed us to upgrade our products from a pre-graphical OS to Windows and Windows CE, while keeping the price down – for a major competitive advantage," said David Angier, Group Technology Director at Eastern Data Group, Ltd. in London.

## Assessing Value and Power

Previous products were based on an older, pre-graphical interface, and the hardware was becoming increasingly difficult to find and support. Also, new prospects in particular tended to expect the applications to have a more "modern" look and feel, so there was pressure to redevelop with Windows, Angier says.

Meanwhile, the company had its eye on expanding into new markets such as debt collection and field service. In order to leverage existing product lines, Eastern Data's IT team realized it would require an extremely flexible, modular environment in which it could configure almost every aspect of each target application.



Eastern Data Group, Ltd. ([www.easterndata.co.uk](http://www.easterndata.co.uk)) is one of the UK's leading suppliers of mobile computing systems, with more than 10,000 hand-held terminals in daily use in many businesses, focusing on "doorstep delivery and service" for items like dairy products, newspapers, and itemized bills.

Eastern Data is a pioneer for mobile computing, supplying hand-held solutions since 1988.

An Eastern Data mobile system brings modern business methods to important customer relationships. Building on a range of standardized solutions, the systems are at the heart of the services of many of the U.K.'s leaders in doorstep delivery and service.



Before settling on db4o, Eastern Data had actually evaluated six different SQL databases. But db4o offered several major advantages: it allowed objects to be directly stored in a database without requiring a translation layer to store and retrieve those objects, and the performance outstripped all SQL databases the company had tried.

“We actually found db4o via a Web search, looked at it, ran benchmarks, and were impressed,” says Eastern Data CEO Andy French. “db4o proved faster and significantly easier to use. We were up and running with it in seconds.”

What impressed the team of 14 developers most was that db4o offered competitive performance without the need for object-relational wrappers, tables, mapping, or other “bridging” tools. Other database engines that used flat files also proved to be too complicated for Eastern Data’s needs. “Complex queries would have been a nightmare,” French says.

The company began implementing db4o in April 2004, using the “extreme programming” approach espoused by developer industry icon Kent Beck.

“The resultant environment is tightly coupled, so field misspellings, etc., are no longer an issue. Also, schema changes are fully automatic, no longer requiring maintenance scripts. And there is no embedded string chopping to make up queries, as is the case in SQL,” Angier says.

## The Redevelopment Challenge

The biggest challenge for the team was switching from C++ to C#, i.e. teaching development staff object-orientated programming paradigms and design patterns. They had to learn to deal with various issues using a rich development environment, a departure from the “bare metal” development environments they were used to.

Still, once the team became more familiar with object-oriented development rules, it found the changes in work method actually made things easier. Above all, db4o eliminates the difficult and time-consuming layer between the OO technology and existing SQL databases, so that writing persistence code became nearly effortless and seamless. Also, db4o offers typesafe coding with the IDE, which is a major productivity boost over runtime SQL-statement checking, according to Angier.

“db4o offers a small footprint database for our mobile computer solutions, with greater functionality than mere flat file structure, yet at a competitive price compared to other mobile database license fees,” Angier says.

*«db4o proved faster and significantly easier to use. We were up and running with it in seconds.»*

Andy French, CEO





## Results and Impact

With db4o, Eastern Data was essentially able to recreate its products for modern handheld devices, with a carry over of enhanced functionality that was originally developed on tablet PCs.

The main achievement in the Mobilise product range, for example, was producing a “totally pluggable architecture,” in which every aspect of the software is implemented as a plugin – from the database interface and communications to on-screen view elements such as tabs and whole page layouts.

### db4o Key Benefits:

- Pluggable software architecture
- Performance
- Affordable Price

These changes translate into clear, tangible benefits for Eastern Data’s customers. The Mobilise suite of products, for instance, now features:

- Faster collection and data entry
- Improved accuracy
- Instant management reporting
- Reduction in clerical time
- Instant debtors reporting
- More professional image

db4o proved to be the most economical and most powerful platform for achieving these redevelopment goals.

*“With db4o, we now have the ability to offer greater functionality and expandability to our customers – where db4o meets the needs of size, performance, and price.”*

David Angier, CTO at Eastern Data

### About db4objects

db4objects, Inc. develops, commercially licenses and supports db4o, the world's leading open source object database. With more than 250,000 downloads and many more deployments, db4o offers Java and .NET developers one of the easiest and fastest ways to store objects natively. Development managers at companies such as Boeing, BMW, Hertz, and Bosch rely on db4o to cut development costs and deliver new products to market faster.