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# BT e-Probe: e-business intelligence case study

## Overview

BT needed a new system to help it manage the company's entire financial data and enable accurate financial, management and regulatory reporting. BT's incumbent system was very expensive, in cost and time, to maintain. In addition, the system did not have the flexibility or scalability to manage BT's future accounting requirements.

The finance department also needed to improve customer satisfaction and give approximately 400 people within BT access to the financial information via the company intranet. This functionality needed to be built into the new system.

Borland Delphi was chosen as its support of Object Oriented programming, i.e. re-use of components and inheritance of component characteristics, was crucial to speed up and enhance the design of the financial system and enable the swift execution of future program changes.

With the new financial system, which is called probe, BT has saved up to 20 days per month by automating the preparation of data and the process of uploading it to the mainframe.

## Client Comment

*"The development of probe, using Borland's Delphi, has proven a significant step forward in BT's financial operations. Probe is the gel binding several distinct financial process and has delivered real benefits in more accurate and timely financial information in an easy-to-understand format. The capability to share this information over the intranet is a huge breakthrough, and has allowed us to dramatically improve our levels of customer services."*

**Jay Naik**, BT Corporate Finance Control

*"Delphi provided the best of breed development tool in supporting Object-Oriented programming, and in terms of performance, leading to better customer satisfaction. Delphi, like other Borland products, supports open standards, as a result we are not locked into any one base technology."*

**Christopher Read**, Chairman, Dunstan Thomas

The re-use and inheritance characteristics Borland Delphi meant that BT and Dunstan Thomas were able to dramatically improve development time and performance through only having to build components once and easily re-using the code.

BT has saved up to 20 days of the finance department's time per month using the financial system, Probe, allowing them to concentrate on delivering customer satisfaction to internal users of BT's financial information.

Probe is now more flexible and scalable, enabling changes to the financial reporting to be accommodated more quickly and easily with a vast reduction in programming time.

The Borland Delphi product supports open standards, which means BT isn't locked into any one platform and can choose technology in the future which best meets their needs rather than on the basis of compatibility with existing systems.



## Company Backgrounds

British Telecommunications plc is one of the world's leading providers of telecommunications services and one of the largest private sector companies in Europe. Its principal activities include local, long distance and international telecommunications services, mobile communications, internet services and IT solutions. In the UK, BT serves 28 million exchange lines and more than seven million mobile customers, as well as providing network services to other licensed operators. BT has operations worldwide, with ventures, for example, in the Republic of Ireland, France, Spain, development and training organisation that provides e-business solutions and services, utilising the latest in cutting edge technologies and recognised "Best Practices." Established in 1986, the company helps its clients transition their businesses to harness the power of knowledge management, business intelligence, CRM business operations, e-commerce and related enterprise and wireless technologies.

## The Situation

As a large diverse organisation, BT has a very complex financial model, with a great many codes against which expenses and income have to be apportioned to calculate profit and loss accounts and the company balance sheet.

This information is required for financial management accounting, as well as to fulfil Oftel's regulatory requirements.

BT currently has around 34,000 general ledger codes that it needs to reconcile, and with digitalisation of the company networks and the ability to offer new and enhanced products and services, BT's corporate finance department is seeing an increase of five to six thousand a year. Using its incumbent system and with no additional resource, BT would not have been able to process all the information and its financial reports accurately and on time.

The new system has been designed to manage the process of reconciling all the financial data against the relevant codes and cutting the information for different report standards. Once reconciled, the data is then automatically uploaded onto the company mainframe. Many of the relationships between data and general ledger codes were previously held in the heads of the financial department employees, with much data loading being done manually. The new system incorporates these functions and was designed to immediately make dramatic time savings in BT's corporate finance department. The aim was to make financial data more accurate, and as a consequence improve the reliability of BT's financial reporting.

To improve customer satisfaction and give relevant people throughout BT access to this financial information, a second stage to the system development was necessary. This was to develop a web version of the application, and make financial information available over BT's intranet.

BT worked with its development partner to build and deploy this new financial system. Together the companies accessed both Microsoft's Visual Basic and Borland Delphi as the tools to develop the new application. Delphi was selected as it more closely supports Object-Oriented programming, specifically inheritance, which is not supported, by Visual Basic. Inheritance was crucial to the development as it enables the reusability of code, resulting in application components only needing to be written once, with re-usability built in. Performance was another important factor, in head comparisons on compilation and data access, Delphi performed better than visual basic

## The Solution

Using the new financial reporting system developed in Delphi, BT's corporate finance department is now able to automatically process financial information from the entire organisation and transform inert data into meaningful information to meet the needs of all its customers. This information can now be displayed more logically, giving a pictorial view of hierarchy of data and relationships which is easier to understand.

By automating the data reconciliation process and automatically uploading the information twice a month onto the company mainframe, the new system has saved BT's corporate finance department up to 20 days per month. This process previously took the department a week to ten days to complete, and is a function that must be performed twice a month.

The new system now makes the financial information available in real-time to customers over the Intranet. This frees up the time of the financial department, who, in the past, had to deal with individual information requests personally. With this time, the finance department can concentrate on better serving the needs of their internal customers, and respond very quickly to requirements.

One of the great advantages of the system's Object-Orientated architecture that Delphi provides is that any changes to the company accounting structure can be easily accommodated with minimal additional development and disruption to the system. This is of vital importance as BT's product portfolio is growing and general ledger codes are increasing by five to six thousand a year. As a result the system must be both flexible and scalable enough to cope with this growth. Had the previous system remained in place, this would not have been possible, and the financial, management and regulatory reporting requirements could not have been fulfilled

## Technology

- Database Server – Microsoft SQL server 7
- Platform – Microsoft Windows NT
- Other Technology – Microsoft Transaction Server (MTS), COM
- Size of Database – 60 tables, 100 000 rows, 60 MB
- Number of Users – 400 via BT's intranet

## Development

- Tool Used – Borland Delphi 4
- Other Tools evaluated – Microsoft Visual Basic
- Team Size – 2 developers
- Development Time – 6 months
- Deployment Date – 1<sup>st</sup> September 1999



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