

FUJI BANK LTD

Solution Overview

Industry
Finance

Scenarios
Business Operations

Company Profile

Head Office: 5-5, Otemachi 1-Chome,
Chiyoda-ku, Tokyo, Japan

President & Chief Executive Officer:
Yoshiro Yamamoto

Established: 1880

Paid-in Capital: 529,087 million yen (As
of March 31,1998)

Offices: 290 domestic, 47 overseas (As of
March 31,1998)

Employees: 14,275 domestic 2,023
overseas (Figures are for those employees
of The Fuji Bank, Limited.)
(As of March 31,1998)

Situation

The bank expects that SQL Server will
create efficiencies throughout the
organisation. It is also counting on its
data analysis and reporting to increase in
performance and reduce overheads.

Microsoft Software Used

Microsoft Windows NT Server
Microsoft Windows NT Client
Microsoft SQL Server
Microsoft Visual Studio

Fuji Bank Ltd is using SQL Server particularly for user-productivity benefits, lower cost of ownership, data-mining and business operations capabilities across its enterprise.

PROJECT BACKGROUND:

Fuji Bank identified several potentially high risk European Monetary Union (EMU) and non-compliant year 2000 legacy systems within their London BACK OFFICE and MIDDLE OFFICE environment. These systems were mainly involved in reconciliation, verification, credit risk assessment and Bank of England Reporting. The primary data source was a large mainframe system, which produced several different daily and monthly report files, which were downloaded and originally imported into an access database. The legacy applications were based either on access or dbase and written in clipper, access or 16 Bit Visual Basic. The central data repository and many of the applications required a certain amount of Business Process Re-Engineering.

PROJECT OBJECTIVES:

- A) To create a reliable, secure, high performance data warehouse with several departmental data marts
- B) To upgrade and improve the warehouse importing facility introducing a coherent approval and publication model
- C) To upgrade and improve 10 departmental software applications from legacy 16 Bit systems to Win32 GUI applications)
- D) It was imperative to ensure that all the software was fully Y2K and EMU compliant.
- E) The creation of a development environment to support the development project
- F) The management of change control, production transfer and User Acceptance Testing



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PROJECT SOLUTION CONCEPT:

Pygmalion's consulting division undertook a comprehensive client/server software solution for Fuji Bank, based in the City of London. The on-site Pygmalion team modernized the bank's software for the Year 2000, EMU, Bank of England Reporting requirements and the Windows NT 32-bit enterprise production platform with its Unified Security Logon model. The solution incorporated a SQL Server data warehouse with regular daily and monthly data feeds from several sources and numerous departmental databases, which share the central warehouse data. Since the legacy solutions consisted of access MDB files, .DBF files, 16 Bit Visual Basic and Clipper applications the project involved a significant amount of up sizing. In one case a set of complex financial reports which previously ran for 15 hours to completion now complete in 1.5 hours using the SQL Server data warehouse.

Pygmalion's solution included bespoke DCOM server components, which provide robust, secure, flexible and efficient data stream interpretation and uploading within a three-tier application framework. Client applications focus on reporting features and enlist the use of ActiveX. The primary development tools were Visual Basic and SQL-Server. Major object components were designed using Rational Rose and UML. Pygmalion's brief included the installation and configuration of Failover-based fault-tolerance, a RAD-style development environment and user acceptance testing environments supported by Visual SourceSafe Version control software, Microsoft Project, Microsoft SQL Executive and Seagate Backup exec for Fault Tolerance.

The solution called for the design and implementation of a robust Data Warehouse and an extensible data import facility. The solution design involved a Data Import staging database, which held the data prior to approval and allowed for invalid records to be corrected and approved. The approved data was then fed into the data warehouse database and published for use by the satellite departmental reporting and reconciliation applications.

Pygmalion undertook the database upgrade solution from Microsoft Access 2.0 to Microsoft SQL Server and moving to a true client/server solution relying on Stored Procedures to encapsulate business logic.

Pygmalion identified, selected and/or developed the key reusable components and development tools for the applications. These were ActiveX components, automation DLLs, shared stored procedures that provided the following features: -

- 01) Y2K Date conversion
- 02) Euro currency conversion
- 03) OLTP Auditing Facilities
- 04) Error/Exception Management and Centralised Logging Facilities
- 05) Data Driven Application Configuration Features
- 06) Security Extensions
- 07) Database Security Auditing Facilities
- 08) Backup and Archiving Facilities (for Databases and NT EventLogs)
- 09) Integrity Verification Facilities
- 10) Common Lookup-Code Support

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- 11) Stored Procedure T-SQL Generation Facilities
- 12) Server Side Cursor T-SQL Generation

In addition to the Production Server - Pygmalion also constructed a separate Development Server running SQL Server, Visual Source Safe and providing the development team with home drive central storage and daily DLT backup. A Client Development machine image was also created based on NT Workstation 4.0 and Visual Studio with the appropriate Service Packs and Y2K Fixes.

Pygmalion supplied both SQL Server T-SQL standards (which were adapted in order to comply where applicable with existing Sybase standards in the Bank), Visual Basic coding standards and a departmental client/server design guide which incorporated the auditing policies, security access, optimisation and archiving policies (amongst others).

TECHNOLOGIES LEVERAGED:

The solution relied heavily on NT 4.0 ACL Security, SQL Server Stored Procedures, the SQL Server Task Executive (now the SQL Agent in version 7.0) for scheduling tasks, cornerstone Active X controls for common features such as date selection, COM Automation Dynamic Link Libraries for common departmental features such as EMU report configuration, Transaction Processing Auditing and Y2K sliding date import conversion. In addition the warehouse importer was built on DCOM technology to allow for Server side data importing via COM drivers whilst allowing for import tracking, control and business rule exception processing on the client side. By using generic COM interfaces for import drivers it was possible to allow for a significant amount of future driver extensibility and the addition of new drivers. The primary development language utilised was Visual Basic version 5.0 (although certain Visual Basic 6.0 custom controls were also utilised) and Crystal Reports 4.2 for reporting. The development environment ran Source Safe for software and documentation version control whilst we utilised Rational Rose for Use Cases and UML class design where required. We also utilised Microsoft Internet Information Server and Microsoft FrontPage to provide project visibility internally within the Bank on an intranet.

PROJECT TEAM:

Fuji Bank supplied the Product Manager for the project whilst Pygmalion supplied the Program Manager/Technical Architect, Developer Lead Technical Architect, five Client/Server developers (with prior Business experience), and a Database Administrator.