



SCIENCESoft  
PROFESSIONAL SOFTWARE DEVELOPMENT

# MIGRATION Selected Projects

## Customer

One of the largest inland transportation companies in the USA.

## Challenge

Customer has obsolete command line utility that calculates ships demurrage. The application was written on C++ using RogueWave API that is currently not supported and it is hard to modify and difficult to maintain. Client wants to convert this utility into Oracle PL/SQL according to internal code requirements and naming conventions.

## Solution

ScienceSoft developed tool for automatic code conversion from C++ to Oracle PL/SQL. All customer requirements to target code were successfully implemented by our developers. ScienceSoft delivered automatically converted code before the deadline and within the budget.

## Results

Customer successfully deployed the provided utility into their Oracle system and stopped using legacy C++ utility.

## Technologies and Tools

C++, RogueWave libraries, Oracle PL/SQL, ScienceSoft own tools and techniques

## Customer

Global provider of ERP, CRM, and SCM software solutions to mid-market companies.

## Challenge

The Customer's flagship product, which drives significant company revenues, is ERP, manufacturing, and financials application suite. The product was written using development tools provided by Progress Software some years ago. The Customer's application was re-written 3 years ago on .NET framework. The server application code was written using Progress Application Business Code (ABL, also called 4GL). There were about 2 million lines of code contained in about 5,500 files.

The Customer required an automated solution to convert the product source code to C#.

It's important to emphasize that the product was not an internal application, but a commercial enterprise solution. It was required to develop solutions for strategic customers' migration with possible customization, to handle product support, and to maintain multiple product releases in the medium term. This fact made the migration process considerably more complicated.

## Solution

To handle smooth migration ScienceSoft offered a special tool that can automate conversion of Progress 4GL files to C# .NET 3.5. ScienceSoft implemented that migration tool to meet specific Customer's requirements for software coding guidelines and use of specific .NET APIs.

As a result, migrated application widely utilizes database access logic and tool with the latest features of .NET 3.5 for conversion, LINQ technology. LINQ is extension to .NET Framework, which enhances C# with native language syntax for SQL queries and provides various class libraries to take advantages of these capabilities.

## Technologies and Tools

**Databases:** Microsoft SQL Server 2005 and 2008

**Programming languages and platforms:** Progress 4GL, Microsoft C# .NET, LINQ

## Customer

One of the premier commercial television network in Europe.

## Challenge

Customer required a solution to convert the business application from Informix 4GL to .NET platform. The company used 4GL application containing more than 100 forms and reports and Informix database containing more than 300 tables and stored procedures. Application to be migrated was used for daily operations as well as for strategic decision-making about improvement of the company's services.

## Solution

ScienceSoft applied established process to manage the entire migration project from assessment and analysis to development and quality assurance procedures. To minimize conversion cost and risk we used our know-how, reliable software for automated migration. We carried out automated conversion of data, database structure, server-side business logic (stored procedures and triggers). The tool also converted UI forms and controls, business logic and reports. The migration was realized in following sequence. The tool converted SQL procedures from Informix to Transact-SQL procedures in SQL Server 2005. Informix 4GL user interface and business logic code were converted to equivalent code in C# .NET. Built-in Informix 4GL Reports were automatically converted to SQL Server Reporting Services RDL files, XML files containing report definitions. Customization of automated tools allowed us to meet specific customer's requirements for software coding guidelines and utilization of specific .NET APIs.

## Technologies and Tools

Informix IDS 9.4 and Microsoft SQL Server 2005, Informix 4GL, Microsoft C# .NET, Informix 4GL Reports and Microsoft SQL Server Reporting Services 2005



## Customer

One of the largest parcel tanker operators in the world.

## Challenge

The Customer required a solution to convert its business application from Visual Basic 3.0 to Visual Basic .NET platform. That application was used to maintain personnel and payroll data of the ship's crew. It was a large VB application containing more than 300 forms and Sybase Adaptive Server Anywhere database with more than 2000 tables and stored procedures.

## Solution

ScienceSoft offered industry best practices to assess, implement, deploy and test the migration project. ScienceSoft's know-how, tool for automated conversion, was applied to convert data, database structure, stored procedures, triggers, UI forms & controls, and business logic. The tool converted Watcom-SQL stored procedures and triggers from Sybase to Transact-SQL procedures in SQL Server 2005. VB form definitions and event handlers (.frm files) were converted to the equivalent VB.NET code compatible with Visual Studio Designer. The customization of automated tools enabled us to meet customer's requirements for 3rd party user interface components.

## Technologies and Tools

Sybase Adaptive Server Anywhere 6.0 and Microsoft SQL Server 2005, Visual Basic 3.0, Microsoft Visual Basic .NET