



Symphony helped a US-based industry leader specializing in Ground Transportation software systems to transition their legacy transportation software to .NET platform resulting in increased product performance and sustainable business growth.

The Client

The client is an industry leader in Taxi Dispatch software and Passenger Transportation Management software in the US. They develop solutions for Taxi, Limousine, Shuttle, Para-transit and Courier markets and have a wide installation base in USA and Canada.

The Challenges

The client, backed by over 20 years of domain experience, specializes in automation of the entire process of the transportation industry. Due to use of older technologies viz. DOS, VB, Dbase, and Excess, the product had limited scalability, restricted usability and required high level of customization at the client end for every deployment.

Considering the product constraints and growing market competition, they decided to invest in product modernization.

The Solution

Symphony's solution to the client included a product modernization strategy on Microsoft Technology Platform. Symphony designed 3-tier architecture on .NET platform with MS SQL server as a central database. The design catered for role-based management system. Symphony also developed new features around the product for billing, dispatching and licensing modules with major enhancements.

The 3-tier architecture of the application included - UI or Presentation Layer, Business Layer and Data Access Layer. The Presentation layer offered the User Interface to all sorts of operations such as customer data entry, order entry, dispatch, using

Product Development - Modernization

Platform

Microsoft .NET

Industry / Domain

Transportation

Engagement Key Points

- Project duration – Jan'06 – Dec'06
- Maintenance – from Jan '07
- SDLC: Agile
- Release cycle – 2-week iterations

Technology and Tools Used

- ASP.NET 2.0, C#
- SQL Server 2005
- Visual Studio 2005
- Crystal Reports
- Web Services
- Win Forms
- XML
- TestComplete
- Bugzilla

Major Product Features

- Tracking of Legs (Travel details of Source or destination)
- Assigning of Cabs
- Dashboard
- Order Management
- Manage Orders
- Manage Vehicles
- Manage Vehicle Fleet
- Cashiering (Commission charge, Driver Redemption, Driver Cashiering)
- Administration
- Reports



Windows Forms. This layer takes all the data from the user and passes it to the lower layer (Business layer) or gets data from the Business Layer and presents it to the user.

The Business Layer acts as an intermediary between the Presentation layer and the Data Access Layer. It takes data input from the Presentation Layer and wraps it in a way for use by the Data Access Layer. All database operations are performed by invoking respective stored procedures. The Business Layer wraps data passed by the Presentation layer in a format required by the Data Access Layer for calling the respective stored procedures. It also takes data from the Data Access Layer and wraps it in the correct format for use by the Presentation Layer. All business logic pertaining to order management, dispatch etc are also taken care by this layer.

The Data Access layer is the last (lowermost) layer and takes care of all databases related interactions such as insertion, retrieval, etc thus isolating the upper layers from database related tasks. The system had extensive report generation options with dynamic generation of crystal report forms. An improved licensing module helped generate automated license file.

The application underwent extensive testing both manually and by using automation tool before its market release on schedule.

The Benefits

Symphony's technical leadership driven product development achieved the following benefits for the client:

- A 3-tier product architecture helped to build a scalable, high-performing product while reducing support cost and customization efforts
- Modernization of the software product resulted in higher customer adoption in the market leading to sustainable business growth