



Global Tools

FRAGOMEN

Overview

KMG has supplied multiple systems under the common umbrella of Global Tools.

The contract & vendor fee management system is used by the employees of Fragomen. Fragomen provides various services to its clients across the world. These services are normally procured from the various vendors or service providers. The objective of this system is to maintain a database of the vendors and the rates / terms of the services provided by them. These services are then clubbed into saleable services and included in the contracts.

The critical element here is to monitor the exchange rate fluctuations. The service may have been procured in the local currency and sold to the client at the prevailing exchange rates. Any fluctuation may cause the contract to become a losing proposition. The system is required to raise appropriate alerts for revising the contracts.

The visa requirements assessment system is used directly by the employees of the clients. These employees enter their trip details in the system. The system tracks their overall travel history and provides the details of the visa required for the particular visit. The system also provides alerts based on the permanent residency rules of the destination country.

An XML-based data transformation & import utility, built as a windows service, allows these global tools to exchange bulk data with the systems used by the clients. The service comprises of two parts. The first one is a data transformation tool that takes the files received from the clients, transforms them into the required format & places them in the required FTP locations. The second part picks the files placed in an FTP folder, validates the XML schema, validates the data and imports the valid data. A similar process is in place for exporting the required data. The exported XML files are placed in a FTP location at the preset frequency.

Project Title

Global Tools

Client

Fragomen, Del Rey, Bernsen & Loewy, LLP, NJ, U.S.A. (Immigration lawyers & consultants with a global presence)

Technologies

.NET using ASP.NET & C#. SQL Server used as RDBMS. Browser based

Architecture

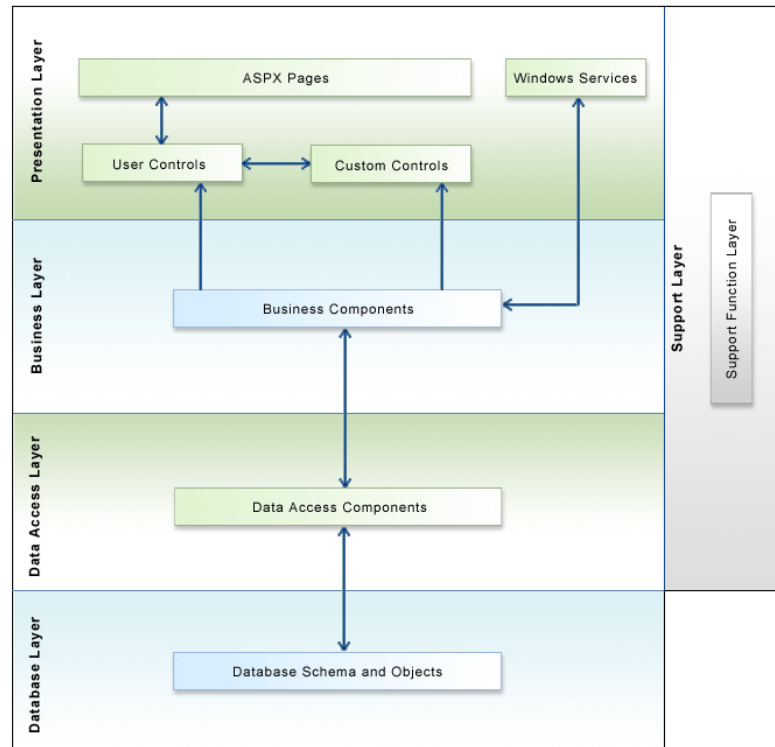
n-tier with separate layers for presentation, business logic, data access & database API



Architecture

The tools use a comprehensive n-tier framework for the tools with presentation, business logic & data access logic encapsulated into objects. The tools are based on service architecture to completely isolate the business logic from the UI. In addition, windows / web services have been built for exposing required functionality to external systems.

All the applications under the gambit of Global Tools share the framework outlined below,



Presentation Layer

The presentation layer comprises of ASPX pages, the user and custom controls used to construct the pages. This layer also consist a non visible interface built using .Net windows services. Presentation layer provides a clear abstraction of user interface from validation and appropriate business logic with calls to the business components from the business layer. The client side validation, however, happens in this layer itself.

Application Layer

The application layer contains business classes. The entire server side validations, business logic and XML manipulation is encapsulated in these components making a lighter presentation layer. This layer provides security from exposing critical and sensitive business rules and is extensible.

Data Access Layer

The data access layer components which in turn interact with data provider separating the business logic from database related activities. This approach is a level further in modularization.

Support Layer

The support layer consists of functions like date formatting, custom type conversions and other utility functions. This layer is shared by presentation layer, application layer and data access layer.

Database Layer

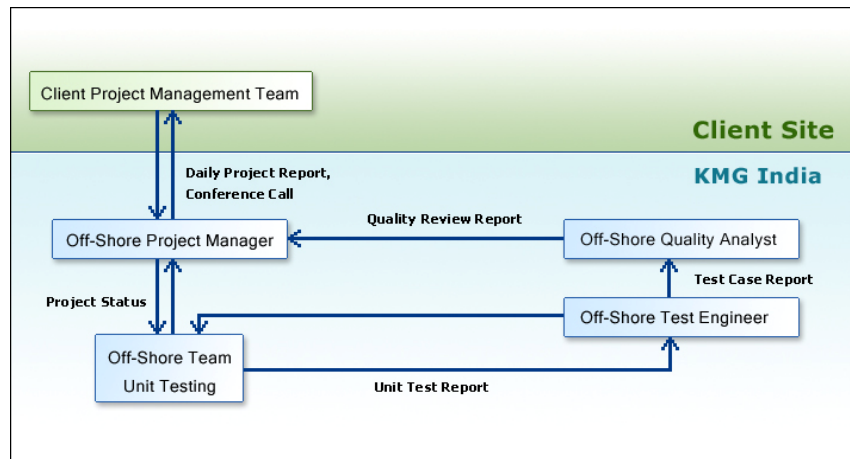
The database layer serves as a database server and performs actual DML activities. Extensive use of stored procedures, user defined functions has been made so as separate the data access logic from the main application. Proper normalization techniques have been employed to enhance the schema.



KMG Role

KMG has developed these applications from scratch and continues to play a very important role in the successful enhancement, customization and implementation of the application. The following summarizes KMG roles:

- **Project Management:** The Global Tools project is managed by an Offshore Project Manager with experience in handling projects based on the Onsite - Offshore model.
- **Coding Standards & Conventions:** KMG has developed a set of detailed coding standards after discussions with the Fragomen team. All development & support work is based on these. This ensures that any changes in the development team do not hamper the continuity or affect the quality of work
- **Coordination:** Proven communication processes ensure that both the onsite (Client's own) as well as the offshore (KMG) teams work in tandem to meet the deadlines.
- **Off-shore Development:** The offshore development & support team consists of eight programmers led by a senior team leader. Each member is an expert professional adept in the appropriate development tools.
- **Quality Audit:** Regular audits and code reviews are done by the Offshore Quality Analyst to ensure the quality and standards of the project. Peer & project manager reviews are also undertaken to ensure adherence to coding standards. The focus of the quality audit is to deliver code that is elegant as well as efficient.



Change Management Process: A web-based issue-cum-change management tool is used for communicating the changes to the off-shore team. The change requests are analyzed by the KMG business analysts and an effort estimate sent to Fragomen. Once the effort has been approved, the changes are assigned to the team.

Status Reporting and Communication: KMG Project Management ensures that accurate weekly status reports reach the Fragomen Project Management team. This helps keep both the teams updated on the current status of the project.

KMG Value Addition

The successful and smooth development of these tools has proven the feasibility of the out-sourcing model to Fragomen & has enabled Fragomen to focus on expanding their client base, while improving the service levels of the existing customers.

KMG is now a preferred vendor for Fragomen and has been assigned the support for other systems developed by other US based companies. Thus the KMG setup has become a virtual 'Fragomen' offshore unit.

Using the KMG team has also freed their internal IT resources from the coding work. They are now more involved in the client interactions & planning for future enhancements.

Substantial reduction in cost has been another major benefit for Fragomen.



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