

Armed Forces Insurance

Kansas based Property and Casualty Insurer offers Online Auto Web Quoting

Armed Forces Insurance has been in the business of providing property insurance to its customers in the military for over 120 years. In order to provide the best service to their client base they realized that they needed to be able to provide Auto Insurance quotes via their web site. This would allow them to handle customers on a 24/7 basis, anywhere in the world.

By optimizing the architecture of the quoting system, the system has the ability to handle large numbers of requests and also has the ability to grow with the company's needs. As the business is ready, the system allows for the addition of other states and lines of business. Because the system is flexible, AFI can provide rate quotes for other products that they offer in relatively quick timeframe. This capability will allow Armed Forces Insurance to provide a high level of customer service to their perspective and current members.

Situation

For more than 120 years Armed Forces Insurance (AFI) has been offering property insurance for members of the United States military. They are a national carrier of six lines of business.

The existing legacy technology framework did not support providing a rate quote to the web. Although they are in the process of replacing their existing infrastructure with an updated system, they had a need to be able to provide quotes via their web site to prospective and current members.

The hosting of the AFI websites is contracted with an external hosting provider so accessing internal data was not an option. This would require the system to support handling its own rating factors and data along with the ability to provide rating calculations for the rate quotes. Because AFI provides insurance in multiple states and multiple lines of business, the potential for future expansion of the systems into other states and lines of business would need to be taken into account.

AFI also had a couple of resources that would be utilized and trained during this project. The resources that were provided were an analyst/developer and a web designer who would create the analysis documentation and the web front end. Neither resource had utilized the .Net 2.0-3.5 framework before this project so the solution must allow for the resources to utilize the framework structures in a simple format. During the project, the resources would be brought up to speed on framework's abilities in order to allow them to maintain the application going forward with minimal outside assistance.

Solution

After reviewing the requirements and the existing technologies available, the decision was made to utilize Microsoft ASP.Net 3.5 platform for the application and SQL Server 2005 to support the data.

In order to support this, AFI made the decision to upgrade their hosting server platform from a single server to a multiple server structure which would support a web/application server and a separate database server. This design will allow for larger future growth by segregating the system processes.

The application architecture would need to be designed to support calculating quotes while allowing the underlying factors to change and allowing new factors to be added. Also, it would need to support the ability to add new products (states/lines of business) that may use completely different factors and calculation algorithms than the existing products were using.

The database architecture was designed to support the storage of questions and answers. Associated with each question/answer combination would be a value or set of values. This would allow the system to make the calculations based on the set of questions and answers that the person requesting had provided. The architecture would, upon request, calculate the rate quote based on the selected state and line of business and the questions and answers provided. Each state has the ability to utilize a custom calculation in order to allow for calculation of different state and line of business rates.

The data access layer utilizes an open source solution named SubSonic project. This solution was chosen due to speed to implement, flexibility, and extensibility. SubSonic project is designed to provide the basic framework components to interact with a SQL Server database. It is also fully extensible to allow for customization. For the AFI implementation there have been numerous customizations in order to support the front end development effort.

The front end utilized a standard ASP.Net design model, the ASP.Net AJAX extensions, and ASP.Net AJAX toolkit. By utilizing this model, the GUI is able to provide a rich user-friendly interface for the users to interact with the backend systems.

Benefits

By utilizing the outlined architecture, the project team was able to put together a reusable and extensible quoting mechanism that will support the needs of Armed Forces Insurance well into the future.

Once the base framework was outlined and created, the data access layer was quickly created using the SubSonic toolset. This allowed for the front-end screens to be able to be developed simultaneously to the back-end rating calculation algorithms. By doing this, it shortened the delivery time of the overall application.

The data structure will allow for additional states and lines of business to be brought into a production environment very quickly. After the initial development was completed for the Virginia auto product, the development cycle was significantly reduced for the second state of auto. AFI is intending to have up to 8 to 10 states of auto available in the next 6 to 12 months. Much of the work that has been required for the additional states has merely been entering new questions and factor values. This significantly reduces the need for development time and cost.

By utilizing the SubSonic project framework, AFI has been able to interact with the database without having to know the specific details of how the database is structured. The framework allows for simple object based access to the data structures. This significantly reduces the amount of time necessary for a developer to interact with the database.

The AJAX extensions and toolkit provide a rich user interface on the web application. This makes the front end seem very user friendly and responsive. By reducing screen flicker and making the user interface provide messages in a very friendly manner it makes the system easier to use while interacting with a complex architecture.

Armed Forces Insurance has been able to achieve a close rate of 13%. According to a J.D. Powers and Associates study this places Armed Forces Insurance in a very competitive range with other auto insurers.

For More Information

For more information about this project or the services that Borea Systems, Inc. can provide, call Borea Systems at (913) 638-5362 or email at info@boreasystems.com.

To access information about Borea Systems using the World Wide Web, go to: <http://www.boreasystems.com>.

To access information about Armed Forces Insurance using the World Wide Web, go to: <http://www.afi.org>.

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SubSonic Project is an open source framework available at: <http://www.subsonicproject.com>