Portal Links Jobs with Job Seekers Across Italian, French Borders

Overview

Country or Region: Italy
Industry: Internet services

Customer Profile

DueMetri is an Italian Internet services provider located near the French–Italian border. The company gives people and companies on both sides of the border access to information vital to their livelihoods.

Business Situation

Tourism is the main source of jobs for people on both sides of the border, but labor market regulations made it difficult for residents of one country to find jobs in the other country.

Solution

In order to promote economic development and help support job hunters and companies searching for job candidates, DueMetri created an Internet-based job portal.

Benefits

- Faster development with fewer lines of code
- Dramatically faster searches using XML
- Consistent user interface

> "This feature, [ObjectDataSource] alone, saved developers from writing several hundred lines of code."
>
> Emmanuele De Andreis, Project Manager, DueMetri

DueMetri is an Italian Internet services provider in Arma di Taggia, (Imperia), a province near the French-Italian border in a region with a very limited job market and few resources to support job hunters or companies seeking new employees. A five-month-long tourist season is the main source of jobs, but labor market regulations make it difficult for residents of one country to find jobs in the other. To promote economic development and help make it possible for Italians to find jobs in France and for French workers to find jobs in Italy, DueMetri turned to Microsoft® Visual Studio® 2005. With the development system's tools, developers built a job portal that now links French and Italian employment forms (following European specifications) and data and creates a single source—accessible on the Internet—that allows job hunters from both countries to search for work more efficiently.

Microsoft
SQL Server 2005
Microsoft
Visual Studio 2005

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Situation

The Imperia province in Italy sits on the French border and is home to about 200,000 people. About 1,000,000 people live on the French side of the border in the Côte d'Azur region.

Tourism and agriculture are the mainstays of the local economy, and the tourist season lasts primarily five months a year. Many Italians want to work across the border in France, especially in tourist-related jobs near Monte Carlo, the center of the region's economy. French people also want to search the job market in nearby Italy.

Italian labor market regulations, however, limit the number of agencies that can offer employment services and limit the services that these agencies can provide. Commercial services that offer job matching are not allowed. Nor can schools or professional associations, which frequently offer job boards to students or members in North America, offer such services in Italy.

As a result, there are only three job agencies in Imperia province. Because the three offices do not automatically share listings, job seekers need to visit each office to gain access to all the potential jobs in the area.

There are national services in Italy that offer job searching, but they're not focused on cross-border regions such as Imperia. And the specifications, software, and tools these services use cannot be used in other countries.

In addition to improving its own offerings, the company believes its solution can help to strengthen the integration of the European Union (EU) economy by making life easier for residents and companies of border regions to fulfill employment needs.

Solution

The goal of Opus More is to give potential employees and hiring companies a tool to help them manage and simplify the task of matching workers and jobs. Job seekers and companies seeking workers from both Italy and France can now enter their information directly into the system. "Having a single data bank for all job offers throughout the region is a unique service that had been missing before," says Graziano Poretti, Business Analyst and Business Development Manager at DueMetri.

The biggest challenge in creating a job portal that serves a border area between two nations was not working in two languages, but rather, finding a way to combine the forms and data used by two different national labor market systems. The methods for collecting and distributing job vacancy information and job application information are significantly different for each country. For example, Italy and France have different standards for describing academic work in resumes.

Poretti did the business analysis and development work, gathering and defining requirements in meetings with the staff of EURES, the network of EU public employment agencies.

The solution depends on the XML data exchange standard to bridge the gap between the two countries' employment systems.

Because the EU is still developing a set of XML schemas, elements, and attributes for human resources, DueMetri started with schemas from the HR-XML Consortium and worked on those schemas to meet the solution needs, while maintaining compatibility with the original schemas.

"The first requirement was to create XML schemas based on existing paper forms for

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>
> Emmanuele De Andreis, Project Manager, DueMetri

jobs and resumes in both France and Italy," says Emmanuele De Andreis, the Chief Architect and Project Manager for Opus More. Then, a way had to be found to map the four components to each other. That is, an attribute of a job description from France had to have a common definition or be mapped to an attribute of a resume of a worker in Italy.

The resulting schemas for the Opus More project are very complex, and the result is a file that contains more than 100 kilobytes (KB) of ASCII text. However, the savings in code development is very significant.

Five main developers from different EU countries worked on the project, none full time, De Andreis reports. The work began using beta versions of the Microsoft® Visual Studio® 2005 development system. "Using beta software may have slowed the project down at first, but as the new version of Visual Studio was finalized, the advantages of the new tool more than made up for extra efforts of installing new versions and synchronizing them with SQL Server," reports De Andreis.

Because the site is sponsored by Province of Imperia government offices, the Opus More portal cannot require users to use any proprietary software, such as the Microsoft InfoPath® information gathering program.

In such a setting, however, InfoPath offers some significant advantages, such as the ability to validate entries by users, according to De Andreis. The DueMetri team created two versions of the site, one specifically for people who have InfoPath. Those people who don't have InfoPath are automatically taken to a version of the portal that uses Microsoft ASP.NET, available to anyone with an Internet browser.

Benefits

"Using Visual Studio 2005 gave the development team several advantages over using other coding methods, including previous versions of Visual Studio," comments De Andreis.

Faster Development with Fewer Lines of Code

In earlier versions of Visual Studio, the data layer and the user interface (UI) were linked, component by component, using data source binding, a method that requires a lot of coding. As explained by De Andreis, by using Visual Studio 2005, two different developers were able to develop the data layer and the UI completely separately. At the end of the project, they linked the data layer and the UI by using ObjectDataSource, a Visual Studio 2005 feature using Microsoft .NET version 2.0 software for connecting people, information, systems, and devices.

A developer using Visual Studio 2005 can drop an object data source to a page and choose or create a business object; then, a wizard offers choices of methods to go with that class of object. The wizard will link the UI with the data layer component automatically.

"This feature [ObjectDataSource], alone, saved developers from writing several hundred lines of code," says De Andreis.

Dramatically Faster Searches by Using XML

Another major benefit Opus More gained from new technology is dramatically faster performance, thanks to the ability of Microsoft SQL Server™ 2005 to save data in native XML formats.

In a standard relational database, the data on a resume might take up 50 different tables, De Andreis estimates. On a test sample of 30,000 resumes stored in a standard relational database, a query to scan

the test data looking for a particular set of characteristics might take 45 seconds.

When the data from the 30,000 resumes has been converted to XML, with the fields and tables converted to XML attributes and elements stored as ASCII text, SQL Server 2005 can use an XML schema to search this text file for the desired combination of attributes in less than one second.

"In addition to being so much faster, the data collected for Opus More will be much easier to maintain," De Andreis says. As the European version of HR-XML evolves, it will be vastly easier to modify the appropriate XML schema, compared with the administrative effort needed to modify or maintain a database with 50 or more tables.

Consistent User Interface with Themes and Master Pages

The experience for users is strongly enhanced by the consistent UI, which was easy to create and is easy to maintain, thanks to another feature of Visual Studio 2005, Themes and Master Pages. "Anne, our graphic designer was able to move an idea from (Adobe) PhotoShop to the final design in almost no time," says De Andreis.

"One of our goals was a great user experience, and Visual Studio made it possible to create that experience quickly and easily," says De Andreis.

There are more than 20 areas in the EU (including Switzerland) where cross-border labor markets might benefit from applications like Opus More, and DueMetri hopes that other EU employment agencies will adopt its portal as a model.

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