

Abstract

Introduction/Objective

Distributed computing has become quintessential in the business world for its ability to connect people with information and resources. Two available technologies that provide distributed computing are Microsoft's .NET and Sun's J2EE. The objective of this Interprofessional Project is threefold:

- 1) to study both technologies,
- 2) to develop and analyze a list of criteria that are important to Bank One and how they develop software, and
- 3) to rate each criteria, which will help Bank One make an informed technology choice between .NET and J2EE, when reengineering legacy systems.

Background

At a high level, there are significant differences between these technologies. The .NET environment offers a host of programming languages and an integrated development environment. However, applications developed in .NET are limited to running on a Microsoft Operating System. J2EE offers one language, Java, but a wide selection of development tools. Applications developed in J2EE may run on several different operating systems. Bank One will have both .NET and J2EE available for development and by using Web Services they will be able to have separate modules communicate with each other.

Process

We analyzed the J2EE and .NET approaches by developing the same application in both of them. The application was a phone book system, intended to reside on a private Intranet. It was modeled after an existing phone book application, which is currently used by over 70,000 Bank One employees each day. The phone book allows Bank One employees to search for information on other employees. Further, the application allows users to update their profiles with personalized information that may also be used in the search.

Result

For each technology, our team rated each criterion:

	.NET/C#	J2EE
Ease of Use		
Exception Handling -- Application	5	4
Program Effort	5 (480LOC)	3 (730LOC)
Database Transaction	5	5
Web Service Development	5	4
Ease of Deployment		
Application	2	4
Web service	5	5
User Interface Design Issue: Framing		
IDE	1	N/A
HTML pages	N/A	5

Scale: NA-Not Applicable 1-VeryDifficult 2-Difficult 3-Moderate Effort 4-Convenient 5-Very Convenient

Conclusion

We discovered through our IPRO experience that the choice between J2EE and .NET is dependent on the task at hand. After developing the Bank One phone book system using both technologies, we determined that J2EE is the technology that is better suited for the need by a small margin. The primary factor that influenced our decision was that the UI required the use of framing and with the .NET that was not as easily accomplished as with the J2EE. Our criteria matrix is designed to help the application developer pick the right tool for the task while our documented observations provide him/her insight into the strengths/weaknesses of the two technologies.