New Atlanta Communications

# J#-Based Component Marries CFML with the .NET Framework

**New Atlanta COMMUNICATIONS**

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*New Atlanta originally developed BlueDragon, a CFML-server engine, in Java. They found that many organizations were looking to move their CFML applications to the .NET Framework. New Atlanta used Visual J# .NET to recompile and partially rewrite the Java-based BlueDragon code, delivering a version of the BlueDragon CFML server built on the .NET Framework.*

As technology changes, organizations either adapt or die. Many organizations that adopted Allaire ColdFusion in the past now need to integrate their ColdFusion Markup Language (CFML) applications with newer technologies.

New Atlanta originally developed BlueDragon in Java to help organizations run CFML directly in Java or Java 2 Platform Enterprise Edition (J2EE) application servers, without the need for an Allaire or Macromedia ColdFusion server. "What we later realized," says Vince Bonfanti, President of New Atlanta, "was that many organizations were looking to move their CFML applications to the Microsoft® .NET Framework. In many respects, the .NET Framework is better suited as a deployment platform for their CFML programmers and applications than J2EE. We needed a strategy to better support the needs of our target market, which is corporations with an invested CFML infrastructure. We envisioned a new version of BlueDragon that would allow CFML to natively run on the .NET Framework, in addition to directly inte-grating with .NET Framework languages and constructs."

New Atlanta used the Microsoft Visual J#® .NET development tool to recompile the Java-based BlueDragon code, and delivered a native .NET Framework-based version of BlueDragon. "BlueDragon for the Microsoft .NET Framework is implemented as an HTTPHandler," explains Bonfanti. "That's the ASP.NET equivalent of a Java servlet. We deliver BlueDragon for the Microsoft .NET Framework in an assembly (BlueDragon.dll) that we install into the Global Assembly Cache.

"We began porting by taking the existing Java source files for the core portions of the application and attempting to recompile them using Visual J#. Based on the errors that resulted, we were able to identify a few key areas where changes were going to have to be made. In some cases, we needed to write

separate versions of existing Java classes for J#; we gave the J# versions the same names as the existing Java classes, renamed the source files with the .jsl extension, and then removed the Java source files from the [Microsoft] Visual Studio .NET® project."

BlueDragon leverages the underlying ASP.NET mechanisms for storing application, request, and session variables, and can automatically map between the CFML and ASP.NET equivalents. BlueDragon uses ADO.NET as its data access mechanism. Supported ADO.NET data providers include Microsoft SQL Server™, Oracle, and ODBC. BlueDragon enhances the CFOBJECT tag to allow CFML programmers to invoke .NET Framework objects written in any supported programming language, including C#, Visual Basic .NET, and J#. In addition, developers can write ColdFusion Extensions (CFX) tags in any .NET Framework programming language.

"Deploying CFML on the .NET Framework will be of interest to two categories of CFML developers," says Daniel Ganter, Vice President of Sales and Marketing at New Atlanta. "The first includes those working in an organization (or who have clients) moving to the .NET Framework. Such CFML developers will be faced with the prospect of rewriting all of their CFML applications in ASP.NET. Now they don't have to: They can keep their CFML and simply redeploy it onto the .NET Framework.

"The second category includes those who don't have a pressing need to move to the .NET Framework, but who could find advantages in moving to the .NET Framework, or in moving to BlueDragon. There are advantages that BlueDragon gives you over CFMX (Macromedia's newest ColdFusion technology), and there are additional advantages to running CFML on the .NET Framework that you can't get with ColdFusion."

## Solution Overview

### Customer Profile
New Atlanta Communications, LLC, develops software products and technology and provides support services needed to deploy and administer dynamic Internet Web sites and Web-enabled applications.

### Business Situation
BlueDragon is a CFML-server engine that was originally developed in Java. Many organizations were looking to move their CFML applications to the .NET Framework.

### Solution
New Atlanta used Visual J# to recompile the Java-based BlueDragon code, delivering a .NET Framework version of the BlueDragon CFML server.

### Benefits
- Existing CFML runs on IIS as is.
- CFML code can share variables with ASP.NET.
- CFML code can call .NET-based components.
- CFML code can include ASP.NET templates.
- CFML code can use ADO.NET data.

#### Software and Services
- Microsoft® Windows Server System™
  - Microsoft Windows Server™ 2003
  - Microsoft SQL Server™ 2000
  - Microsoft Windows 2000 Server
- Microsoft Windows® XP
- Microsoft Visual Studio® .NET 2003
  - Visual C#® .NET
  - Visual J#® .NET
- Microsoft .NET Framework 1.1
- Web Services

## Benefits

According to Ganter, the most important aspect of being able to deploy CFML on the .NET Framework is that organizations can avoid a rewrite of the CFML code into ASP.NET. Additional benefits for CFML developers deploying their applications on the .NET Framework include the following:

- CFML and ASP.NET applications can share session, application, and request scope variables.

- CFML applications can include and forward to ASP.NET templates.

- CFML applications can use CFOBJECT and createObject to call upon components based on the .NET Framework.

Additionally, CFML pages deployed on the .NET Framework can benefit from several features enabled by the .NET Framework or by Microsoft Internet Information Services:

- Options for *persisting sessions* across server restarts and throughout server farms. Sessions can persist to a database, a state server, or local server memory.

- *Authentication* using a database, an XML file, or through the Windows® operating system.

- *Clustering, load-balancing, and fail-over*, including options such as session replication across multiple servers.

- The ability to deploy *multiple independent instances,* where each independently deployed Web application is isolated from others—even on the same machine—with its own administrative settings, site configuration, and more.

- *Management controls* provide the ability to stop, start, redeploy, and otherwise configure and manage Web applications.

- *Reporting mechanisms* enable the ability to track requests, sessions, and more.

- ADO.NET *data sources* provide enhanced pooling, clustering, configuration, management, and more.

## IntraLearn

One of the first customers for BlueDragon for the Microsoft .NET Framework is IntraLearn Software, a Microsoft Gold Certified Partner that produces a family of e-learning applications. "When we first starting coding, over seven years ago, we were an early adopter of Allaire ColdFusion," says Jerry Goguen, President and CEO of IntraLearn. "We've grown up through six revisions of ColdFusion.

"When Java came along, we evaluated it and tried building Java-based products, but at the time Java was unstable and had no security. Our customers' IT departments didn't want to open up holes in their firewalls for Java, so we dropped our Java development efforts and never looked back.

Goguen continues, "Shortly after Java appeared, Microsoft let us know about ASP and its future ASP.NET strategy. ASP wasn't compelling enough to make us switch from ColdFusion, but when ASP.NET and Visual Studio .NET came out, we were sold, and we made the commitment to switch over to Microsoft tools and servers.

"Because we had hundreds of man-years invested in CFML code, rebuilding our application was out of the question. We wanted an easy way to move our existing functionality to the .NET Framework so that we could concentrate our efforts on adding new functionality. The combination of BlueDragon with Visual Studio .NET development system will give us that.

"We've built an enormous amount of new functionality with Visual Studio .NET including Web services–for example, to conform to the Sharable Content Object Reference Model and the IMS Content Packaging Specification, as an application programming interface for connectivity to other applications, and to support Active Directory. Our entire reporting system now uses SQL Server Reporting Services. In addition we now have ASPX-based modules for Microsoft CRM and Web Parts for Microsoft SharePoint® Services.

"Many of our newer behind-the-firewall customers are either using or switching to Active Directory® for the security and the single sign-on. We believe this will increase as we deliver additional applications that are integrated into Microsoft applications.

"We have a significant number of customers running on Windows Server™ 2003. We have seen significant improvements in performance, security, scalability, and reliability in Windows Server 2003.

"Our application has already been awarded the .NET Connected Logo. BlueDragon for the Microsoft .NET Framework will allow us to eliminate the Macromedia server, and have our entire application running under the .NET Framework."