Accenture Web Site Accents the Future with XML
Microsoft Tools, Support Power Mammoth HTML Conversion Project

By Aaron Halabe

Developers love a challenge. So when management at Accenture—formerly Andersen Consulting—asked its staff to scrap the company's old Web platform and to design a new one based on Microsoft technologies, the team jumped at the opportunity.

Accenture faced a legally binding requirement to completely re-brand the content and visual identity. The project also involved replacing the site's old hardware and software platform with Microsoft technologies. The catch: they had only three months to accomplish these Herculean tasks—a hugely compressed timeframe for such a large undertaking.

Armed with powerful Microsoft technologies—and fueled by many ordered in dinners—a dedicated group of Accenture developers and Microsoft consultants re-architected the site and positioned it for future development enhancements, including new Microsoft.NET Web services.

A major challenge was to convert Accenture's 5,500 Web pages from HTML to XML in order to lay the groundwork for future personalization, localization, and content access via Personal Digital Assistants, cellular phones, Pocket PCs, and other devices.

Eighty Accenture developers used XMetaL to convert the site's HTML content to XML—a key milestone in the project. Developers found that the tool consistently integrated well with the standard Microsoft product interfaces such as FrontPage, making it easy for those who were formerly involved in HTML development to convert content to XML. Developers easily wrote scripts to customize the tool, and then simply performed drag and drop and point and click operations to speed the conversion process.

"Microsoft products integrate well with XML," said Accenture project manager Kristen Lorenzen. "The platform, along with XML-based content, is going to enable us to more quickly deploy a lot of the capabilities we're looking to build out, because we've separated the content from the design."

Accenture developers say that making that separation using XML and Extensible Style Language Transformations (XSLT) makes it much easier to update and distribute Web site content. This is particularly important to Accenture, which—in future releases—will offer personalized content based on profiles that users complete.

From a developer perspective, the site's architecture also makes it easy to reuse and share XSLTs with others. For example, Accenture's employee newsletter, called *Dialogue Online*, used the majority of the XSLTs developed for the Web site in its intranet environment. Accenture staffers say the XSLTs, which were designed using Microsoft-compliant tools, decreased development time on *Dialogue Online* by approximately 70 percent.

Standardizing Around XSLT, DTD
One of the first tasks Accenture addressed was the need to reduce the number of different content layouts and to architect the XSLT content style sheets. It was an opportunity for the company to standardize the site's templates. Accenture boiled the new site down to 30 layouts, including 19 home page layouts and 11 content page layouts—for white papers, articles, and other online deliverables.

Another milestone required Accenture to define the document type definitions (DTD) that the company was using in the data structure. Because all of its XML pages validate against that structure, one of the firm's key goals was to use an industry-standard DTD that was free of any Accenture.com-specific elements. This approach makes it easy for Accenture to:

- Use content from other sites.
- Allow other sites to use their content.
- Allow other Accenture site developers to easily reuse the existing DTD, XSLTs, and XML structure they devised.

Accenture developers leveraged MSXML 3.0 DOM object hierarchy and type libraries in designing XSLT templates, and in architecting and implementing the site. The firm's Web site incorporates close to a gigabyte of content that is driven off of one rendering page out of XML and XSLT.

Accenture uses SQL Server to store this content on the back end.

Tool Time
The firm made liberal use of the free tools available on the Microsoft platform for testing the site. Developers say the Application Center test tools and the Web Application Stress Tools were extraordinarily useful during stress testing.

Microsoft Web Application Stress, for example, is a simulation tool that is designed to realistically reproduce multiple browsers requesting pages from a Web application. Developed by Web testers, the tool offers features for

stress testing three-tier, personalized ASP Web sites running on Microsoft Windows NT server 4.0 and Windows 2000.

The testing tools helped Accenture with performance testing and ensured that XML and XSLTs were cached correctly and that page load performance goals were met.

"Our primary emphasis was on speed—the ability to deploy our solution quickly," Lorenzen noted.

Developers also used the free-threaded DOM document in MSXML to perform application level caching of their XSLT. They noted that this was an extremely useful caching strategy because they were able to leverage IIS by default; caching and capturing a document was as easy as putting the application scope in an ASP page.

Accenture has high praise for these developer tools and for the support they received from Microsoft Consulting Services and Product Support Services. That backing, Lorenzen said, allowed them to seamlessly convert the site's content in 90 days, and enabled them to proceed following a critical "go-no-go" decision that was made midway through the conversion project.

"It was a great technological and people partnership," Lorenzen added. "Together, we accomplished something monumental. Microsoft tools and people made the difference. We're very pleased with the result."