



Dynamic Web Content Management System

THE CHALLENGE

CSCI partnered with a commercial client whose existing Web presence was outdated in design and functionality. The goal of this partnership was to provide a fresh front-end, and completely redesign the back-end, content-management system to feature a simplified interface and vastly improve user experience. The new site would be comprised of a dynamic content structure, an event calendar, a filterable member database, and various functional content areas including advertisements, sponsor highlights, and member testimonials.

Adding to the challenge was the requirement to develop a product whose content was entirely administered by the client via the Web—requiring a solution with a simple and intuitive content administration interface that was both robust and cross-browser compatible.

In the interest of the client's fixed marketing schedule, the technical team had less than two months to build and implement the new system as defined by the client's requirements.

THE STRATEGY

In response to this challenge, CSCI selected IBM's Lotus Domino Web application server to host the new system. As an open, standards-compliant application server, Domino provided CSCI with a platform on which a fully-functional content management system could be quickly and securely implemented. The Rapid Application Development capabilities of Domino meant CSCI would be able to develop a robust content management application within the tight timeline. Domino's built-in security model released the development staff to use the available schedule to focus on improving the interface and meeting use case requirements instead of building their own custom security wrappers for the back-end data and business processes.

The complex user interfaces planned by the CSCI development team (including drag-and-drop and edit-in-place functionality, and cross-browser stability) led them to select the Yahoo! User Interface (YUI) JavaScript library as the

foundation of the custom interface. By selecting YUI, CSCI was able to further reduce the implementation time and increase the product's stability and cross-browser compatibility.

Once the application platform and JavaScript toolkit were selected, CSCI focused on building custom interfaces necessary to meet the client's requirements. Custom JavaScript libraries were designed to leverage the YUI platform and tie them together with the back-end data and business logic via Asynchronous JavaScript and XML (AJAX). A completely custom, AJAX-based event calendar provided a solution that was both simple to update by the client and easy to access by their users via any modern Web browser. Customized content-management widgets were developed to provide the client with drag-and-drop and edit-in-place capabilities for maintaining site navigation, publishing draft content, and administering the site's additional content areas.

The client's Web-based, searchable member database relied on a non-intuitive, text-based query interface. Improving the user experience, a custom Dynamic HTML solution was built that allowed the user to quickly and easily filter member listings by point-and-click selection of criteria and search order. The functionality was optimized by storing all application data in the Document Object Model, reducing server load, client-server network traffic and allowing high performance and responsiveness despite the large amount of data being filtered and sorted.

THE RESULTS

CSCI delivered the new site and content management system on time, enabling the client to meet their marketing schedule. The completely redesigned administrative interface impressed the customer in its ease of use and reduced training requirements.

The use of XML and Web services to transmit application data meant the new site was well-positioned for future expansion, enabling the client to share data with their internal applications and syndicate content to external applications and sites owned by the client's strategic partners.