

# BCD's WebSmart Gives Formica Corporation a Competitive Counterpunch

**Improved distribution channel communications and WebSmart-enhanced order processes help Formica maintain its leadership role in the building materials industry.**

February 1913: D.J. O'Connor quit his job after being paid one dollar for his new invention. He had discovered a new way to insulate electrical wires and connections at a time when electricity was becoming a big buzz in business. The new material composed predominately of resin was a flexible and accessible replacement for mica. O'Connor left Westinghouse and with the help of partner Herbert A. Faber, formed the Formica Insulator Corporation. Today, Formica is one of the 10 most recognized brand names in the world.

## Reengineering Order Entry/Order Tracking

Recently, Formica Corporation realized the need to improve their order entry and order-tracking process. Their goal was to enable their formidable network of worldwide distributors to function as though they were all under one roof. Formica's sales channel presented the Internet as a solution for extending their inventory



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inquiry, order entry, and order tracking system. Formica Corporation's customer service department received approximately 70 telephone calls per day from their 80 distributors. The majority of calls were inquiries pertaining to the availability, quantity, and shipping status of styles and colors of Formica brand countertop and flooring materials.

Formica's existing system made this information available to internal customer service representatives. Detailed inventory data from warehouses throughout the world was consolidated on a large IBM System i computer running SSA Global Technologies, BPCS at their Cincinnati headquarters computing site. Distributors first needed to speak with Formica product installers about their material requirements, then contact Formica Corporation's customer service department. Customer service reps would begin making inquiries against inventory via the green screen BPCS order inquiry module. Finally, they would call the distributor back with the information, who then had to contact the installer.

Formica Corporation's customer service department initiated discussions within the organization on implementing a new system to enable distributors to perform their queries on-line, while remaining on the phone with the contractor. The Customer Service department developed an initial functionality wish list. In taking initial ownership of the project, they also talked to third party software/services vendors and received quotes of up to \$225,000 for "a Microsoft Windows NT based, turnkey solution."

Customer service presented their research to Phil Catlin, Formica Corporation's Application Development Manager. Catlin, having 15 years of System i experience under his belt, had some interesting ideas of his own on how to tackle this project. He immediately began researching System i-based solutions and came across several, including one from Business Computer Design, Int'l Inc. (BCD). In the System i world, BCD is a well-



known company name. Technicians in this industry associate BCD with key tools that aid in developing new applications or ensuring that their systems run optimally. Catlin had long been familiar with another product of theirs called Docu-Mint.

Catlin downloaded a free evaluation copy of ProGen WebSmart, a web/wireless application development environment with complete user documentation in PDF format from BCD's website ([www.bcdsoftware.com](http://www.bcdsoftware.com)). Shortly after calling for and applying a temporary key, Catlin realized that he had found a fast track, portable PC based development tool for developing and deploying custom, dynamically linked, browser based applications. WebSmart automatically produces dynamic HTML and CGI programs written in ILE/RPG. With 70+ inquiry, maintenance, wireless, reporting, shopping cart, online ordering, and product catalog templates available, it was all there.

### Morphing Order Inquiry Green Screens

The templates allowed the Formica development team to rapidly build the core of their application. Most WebSmart templates use native ILE record level access (RLA) for accessing the database on the System i. This method, ILE RLA is used because industry benchmark tests show it to be more than 30 times faster than Java RLA. The logic in the templates was very familiar to RPG oriented Formica Corporation programmers. The function, *get record* is like an RPG read for example. Catlin's team used the templates for record positioning, updates, changes and deletes. "The templates were very helpful for the base code," states Catlin.



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Formica Corporation developers then had a choice of several, flexible pre-configured field extensions available for application to fields at the file level. These options enabled them to easily refine output functions like date formats, field lengths, composite functions, or drop down boxes.

Once configured, storing this information in WebSmart's data repository allowed developers to easily incorporate these functions where required throughout the program, by simply referencing the associated database elements, therein dramatically reducing repetitive programming tasks.

Developers then used PML (ProGen Macro Language) extensively to customize their work. "PML looks like Visual Basic," states Catlin." Formica Corporation's programmers expressed a high level of comfort with PML, and Catlin appreciated the fact that they could extend it. "If there is a function that BCD hasn't yet thought of," states Catlin, "I can write it."

WebSmart uses interactive HTML validation to catch repetitive syntax errors immediately and increases HTML coding productivity. WebSmart looks at HTML code development in real-time. If a developer misses an end bold tag, the WebSmart syntax/validation editor immediately flags the problem. This allows the developer to correct it quickly and speed up the development process.

In only three days, Catlin had written a functional specification that mirrored the customer service wish list and then compiled a functioning proof of concept. "The primary functionality was distributor self-service," states Catlin. The new browser-based application mirrored BPCS order inquiry entry green screens field for field. "Everything that customer service came up with, we were able to make work using WebSmart," declares Catlin.

The logo for BCD, consisting of the letters 'BCD' in a bold, blue, sans-serif font.

At Formica Corporation, the WebSmart solution will provide value for the long haul. "As our requirements change," notes Catlin, "we can easily make changes to the application. It's very supportable. If contractors come

in and do all the work, as with the other solutions that we looked at, when they leave, it will be more difficult to internally support the system.” By comparison, the fees for ProGen WebSmart’s Interactive Development Environment, (IDE) for unlimited developers, and the Web Application Server (WAS) for unlimited users were \$19,000. Catlin comments, “This was a no-brainer.”

Customer Service quickly approved of the solution. Catlin and his team visited a few distributors and performed demonstrations over a 28.8 dial up line to their host. “Even with the slow modem,” Catlin states, “the application ran very well and the distributors that we showed it to were thrilled.” In WebSmart, persistent CGI, maintains a bookmark between the server and the client after the server has passed the client data and the conversation stops. By issuing a unique conversation ID there is increased continuity and speed between the server and client. WebSmart users get the benefits of “state” conversations in a CGI script format without the exorbitant overhead typically represented by Java.

Formica Corporation developers are only scratching the surface of WebSmart’s vast functionality. One of Catlin’s technicians is using WebSmart to develop applications that will replace all of their existing Visual Basic programs. As an example, Catlin noted one system that allows customer service reps to view past invoices on line. They capture all spool files related to invoices and store them in a database. When a rep needs to review an invoice at a customer’s request, visual basic is used to overlay the invoice template. Catlin says this can all be done on the System i using WebSmart. “The database on the machine that was serving this application was getting too large and the System i seemed like the appropriate alternative,” states Catlin.

### Ready for Business on the Web

Jeffrey Strasser is Formica Corporation's Marketing Director for all surfacing business lines offered in North America, accounting for over 250 million dollars in annual revenue. Strasser comments, "Formica is proceeding to leverage the Web as a marketing channel to drive incremental sales and reduce Overall costs. The redeployment of our company's Website will improve distributor and consumer accessibility to the company and establish a common aesthetic format for future applications.”

Stasser perceives the use of ProGen WebSmart as a strategic tool to advance a greater initiative. He comments, “This effort will also let us establish a common technology strategy and infrastructure to build upon. Our first major application will be taking some of our key customer service processes and put them online in a self-service format. From there we will look at other processes in our company and determine if it is appropriate to put them online to increase overall customer satisfaction and reduce costs. Additionally, we will consider how the Web can be leveraged to compliment the direct sales teams.”



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WebSmart is included on IBM’s iSeries Developer Roadmap and is IBM ServerProven