



CASE STUDY

Employee Incentives Company eCommerce Application

Phase 1

business situation

An Employee Incentives Company (EIC) wanted to create a gift redemption application that utilized e-commerce functionality and created a 'dynamic gift catalog'.

At the time EIC requested this solution, they had a static website that, while functional, required a high level of maintenance and did not leverage the company's existing technology infrastructure. The company therefore requested a web-based solution that utilized their existing investment in IBM's AS400 platform while reducing maintenance costs and improving customer service.

technical solution overview

The following table highlights the requested solution components and the benefits of each component:

Component/Feature	Benefit
Network "bridge" linking dynamic web application to access data residing in a DB2 database on an IBM AS400 server.	Leverage existing investment in server hardware and software while consolidating catalog and order data in a single information store.
Dual mode on-line catalog: one mode for browsing and ordering items, the other for browsing catalog items by level and category.	Enable customers to view all available gift items and order from a subset of items through a unified interface.
Secure, password-protected, web-based catalog maintenance enabling the addition, deletion and modification of catalog entries, as well as complete management of item groups with support for multiple administrators.	Reduce costs by enabling secure, online maintenance of dynamic web data. Reduce risk by enabling multiple administrators to maintain catalog application with minimal training.
Enable gift booklet redemption on-line.	Provide value for customers by increasing speed of order processing while reducing administration costs associated with manually entered orders.
Check order status on-line.	Reduce customer support costs by enabling customers to check order status on-line.
Enable on-line administration for distributors.	Improve customer retention and reduce customer support costs by enabling distributors to check gift program status on-line.

application architecture

Falkor Group implemented a Microsoft-based solution and architecture for this project.

>> Microsoft .Net Web Application Solution Coded in C#

The 'dynamic catalog' web component was based in Microsoft's .Net Framework and built in the C# language. The solution provided dynamic page construction from data contained in three data stores:

- A new Intel-based Microsoft IIS web server located in the client's technology core
- DB2 database located on the client's IBM AS400, which was subsequently located in the client's technology core
- Image data pulled from a server located at the client's current web host

>> Microsoft HIS-based AS400/DB2 Bridge

The solution included a bridge from an Intel-based Microsoft web server to the client's existing AS400 server to facilitate a data connection to the AS400's DB2 database, where catalog and order data were stored. The bridge was based on Microsoft's HIS (Host Integration Server), which provided three services for accessing AS400 data: network support services, data services (via ODBC drivers and OLEDB objects) and message queuing services.

Phase 2

business situation

Leveraging the 'dynamic catalog' solution Falkor Group implemented in Phase 1, the company wished to enhance their gift redemption web application, which was now being utilized online by EIC customers.

technical solution overview

The following table highlights the enhanced functionality the client requested for the site and an explanation of each component implemented:

Component / Functionality	Explanation
Program-Style Management	The appearance of the site (menu-colors, font style, etc.) is editable at the Program level.
Shopping Cart	Added shopping cart functionality to the site that allows: <ul style="list-style-type: none">• The user to select multiple items for redemption.• The user to save selected items for a period of time without redemption.• The user to save multiple shopping carts.• Saved carts to monitor item availability.• The user to create a "wishlist" shopping cart.• The user to transfer items between "wishlist" and a saved or current shopping cart.• The user to redeem carts against available points.
User Management	User identification and tracking was added to: <ul style="list-style-type: none">• Allow users to log in and shop against accrued points.• Allow anonymous users to shop and create shopping carts (no wishlist or saved carts are available to anonymous users).• Allow a "Demo" user to shop and redeem using "demo starter points" associated with a Program level.• Maintain running information as a user navigates the site, and manage points based on items in a current cart/ items redeemed/ and items transferred to a wishlist cart.
Program Management Additions	Each Program has controls (DB tables, logic variables, and interface controls) added to: <ul style="list-style-type: none">• Allow a program to override point values of items in the program's corresponding catalog.• Allow a program to filter items from its catalog based on the presence of items in its "program-points" table.• Manage Category, Subcategory, Ordinal, and SubOrdinal for items (static table for all catalogs).• Manage Category alias (Name and Ordinal of Categories and Subcategories).• Manage Program email addresses: a list of e-mail addresses that will receive notification when redemption transaction is completed.• Exclude Categories/Subcategories (notes: exclusion of a top level Category excludes all Subcategories from listing).• Provide options for viewing catalog items by: Level, Category, Featured Items, Search and Item Number.• Choose whether or not to filter items by program-points table.

	<ul style="list-style-type: none"> • Choose to use/not use the new shopping cart functionality. • Require login or not. • Allow for forgot password functionality. • Manage Shopping cart functionality: <ul style="list-style-type: none"> ○ Use cart with no login or point limit ○ Use AS400 to login users and limit points ○ Use external login and points ○ Notify external process on redemption ○ Limit total item count allowed in each cart • Choose to submit cart redemptions to program e-mail list. • Choose to send a confirmation e-mail on order submission. • Manage confirmation e-mail contents. • Choose to allow shopping cart “wishlists”. • Choose lifetime for saved shopping carts and wishlists. • Choose to allow custom order fields (up to five) on the shipping information page. • Manage shipping to allow: <ul style="list-style-type: none"> ○ US only ○ US and Canada ○ Worldwide • Manage a “Ship_Info_Heading” field. • Add the trackable/manageable Program variables.
BrowseCatalogView Additions	<p>BrowseCatalogView included the following additions/changes:</p> <ul style="list-style-type: none"> • View By Level • View By Category • View By Featured Products • Search • View By entered Catalog ID <p>Within each view we provided options on how each item is presented:</p> <ul style="list-style-type: none"> • Show points with thumb/detail • Append currency word if show points “on”
Item Pricing	<p>Functionality was provided to manage how items are priced by either catalog level, or item price depending on program variables.</p>

application architecture

Falkor Group utilized the application architecture implemented in Phase 1 of the project.

business outcome

Since adding the online channel to their gift redemption process (in 2003), EIC has moved 40% of their gift redemption traffic from their call center to the online application. This process automation has allowed the client to streamline their call center operations at a huge savings in operating expenses. Furthermore, EIC forecasts that the online channel will make up 60% of their redemption transactions by 2005.

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