IBM

IBM and Safeway Create Enjoyable Grocery Shopping Experience

"It's a godsend."

"It makes my whole existence so much easier."

"It has completely changed my lifestyle."

These are just a few of the rave customer comments about Easi-Order, a new, innovative way to shop for groceries. Developed by IBM and Safeway Stores plc, Easi-Order is a personalised remote shopping service pilot. No more waiting on lines and no more lugging heavy items in and out of the shopping cart. Customers use a handheld device to build and submit a grocery order, which is then assembled for pick up at a predetermined time. As one customer says, "I just go in and collect it." Easi-Order is enjoying remarkable success. However, there is much more to this system than just ordering groceries.

Safeway's IT director, Mike Winch, demonstrates Easi-Order, IBM's Pervasive Computing project in the UK.

Deep and Powerful Computing

Easi-Order exploits pervasive computing technologies, and is IBM's first project of this kind in the UK. Primary attributes of pervasive computing are convenience and ease of use — two big benefits of Easi-Order. Pervasive computing is all about enabling people to get relevant, personalised information wherever and whenever they want, and to act on this information immediately.

Customers use Easi-Order to place grocery orders and interact with Safeway virtually anytime, from any place, via a modem connection, portable device and customised software. Easi-Order uses a PalmPilot specially designed for Safeway. These units have been fitted with bar code readers which, in the future, will allow customers to scan products at home or in the store, including those sold by competitors. The PalmPilot also doubles as a fully-functional personal organiser.

Steve Smith, IBM's account executive for Safeway Stores, says, "A PalmPilot may be what the customer sees, but it is just the linkage to the deep and powerful computing going on in the background." The system uses IBM's data mining technology, Intelligent Miner* (with new sophisticated algorithms), to analyse the customer's three-month shopping history and provide a suggested shopping list. It also recommends new products based upon prior purchases and those by other customers with similar profiles. It knows not to offer meat to vegetarians, nor dog food to people without pets. However, it will offer baby products to new parents.

Application	Personalised Remote Grocery Shopping Service
Software	IBM Intelligent Miner IBM DB2*
Hardware	IBM System/390*
Services	Professional Services Research and Development

Environment Security

Although Easi-Order does not conduct monetary transactions, the customer's device interacts directly with Safeway's host system. Safeway rules out any unauthorised access to its server with special security precautions. Each PalmPilot is encrypted with the customer's identification as part of the initial setup. This way, Safeway controls who has access, and any tampering is immediately flagged and the owner identified. Additionally, if the device is lost or stolen, there is no need to be concerned about a threat or risk; the worst scenario would be an order placed but not collected.

Although Safeway (one of the UK's largest food retailers with some six million customers a week shopping in its 400-plus stores) has been a longtime IBM client, they knew little about the Watson Research Center. From the very moment Mike Winch, Safeway's IT director, toured the lab in Hawthorne, New York, the relationship took a new direction.

Safeway brought the business issues, customer understanding and retail expertise, and IBM applied its innovative thinking to create a solution that not only defines a new level of customer service, but delivers tangible business value.

Leverage Existing S/390 Advantage

Safeway stores information about 10 million Loyalty Card holders in its data warehouse, maintained on a System/390 G5. Every transaction is recorded and maintained. "We took a lot of time to fit a solution to their existing architecture," Smith explains. "We developed a new way of leveraging the product and customer knowledge that Safeway already had to change the way shopping is done."

Here's how Easi-Order works: Customers attach a simple modem device to the PalmPilot, plug the phone cord in, press a button to log on and download a personalised shopping list. They then indicate what items and quantities they want to purchase. According to Winch, 80 percent of customers accept this list. However they also have easy access to the store's full catalogue of products. Safeway also makes personalised suggestions. By using Intelligent Miner, Easi-Order compiles and recommends products the customer has never purchased before, but may be interested in trying. About 15 percent of customers typically go for these new ideas.

What about unusual items? Customers can write in special requests. For example, Winch says, "One customer wanted green bananas. Before Easi-Order, if she went into the store and we didn't have any green bananas, she would have walked out. Now, we find customers communicate more with our staff." About 15 percent of all orders placed include a personal message.

Best Feedback Ever Received

Safeway launched Easi-Order as a pilot at its Basingstoke superstore, giving a PalmPilot to 200 existing Loyalty Card customers and selected employees. After six months of testing, research and fine tuning, they are now expanding the pilot and rolling out the system to five other stores. Safeway reports not only enhanced customer loyalty, but increased sales volumes in virtually all categories.

"We performed extensive customer interviewing and learned that Easi-Order has actually made grocery shopping an enjoyable experience," Winch says. "In all the customer research we've ever done, this is the best feedback we've ever received." Winch says that when interviewed, every customer said he or she had spoken highly about Easi-Order to other people.

Smith is quick to point out the key to the solution is the application, not the device that delivers it. Although increasing in use, PCs are not commonly found in homes in the UK. The PalmPilot was selected because people required an average of only a minute and a half to learn how to use it. Also 25 percent of the customers required no instruction at all. Another personal organiser, developed by Psion plc, is being evaluated because it offers a larger display — almost twice the number of characters. Longer term, Safeway plans to offer Easi-Order on Java**-compliant platforms such as set-top boxes on TVs.

Cascading Benefits

What many find remarkable with Easi-Order is a tiny device communicating directly with the host system. Such a powerful and proven pervasive computing application is expected to cascade into other industries, offering potential benefits to many other IBM customers.

Winch says, "Working with IBM has been an extremely rewarding experience. Everything about Easi-Order works on IBM architecture — servers, databases, network computing — and it all works flawlessly. I've been so impressed with IBM's commitment throughout this entire process and the very practical business results we've achieved."
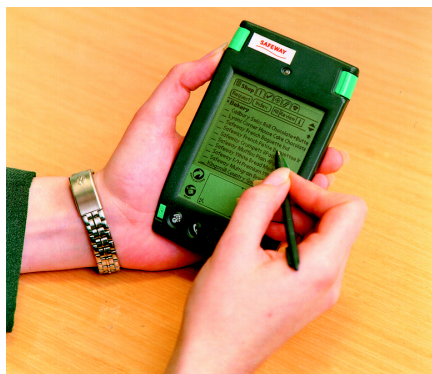
IBM's Intelligent Miner data mining software lets customers download personalised shopping lists.