

Mealtime Pilot Program Reveals Future of Kitchen Technology

Innovations in design and product applications

By John Filippelli

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It has been said that the best way to predict the future is to invent it, and that is precisely what the Internet Home Alliance has done with the advent of its "Kitchen of the Future." The Alliance, a non-profit network of companies dedicated to advancing home technology, developed the concept -- which is based on broadband Internet connectivity -- to create a more simplified and streamlined kitchen experience for consumers.

To gauge the concept, it was recently put to an eight-month, real-world test, called the "Mealtime Pilot Program," where the kitchen was set up inside the homes of 20 Boston-based families. Dubbed "the most ambitious test of networked kitchen-based appliances and devices ever conducted," by Tim Woods, the Alliance's v.p./ecosystems and development, the program featured products from various Alliance members. These included Whirlpool Corp., iCEBOX, Peapod by Stop & Shop, and Sears, Roebuck & Co. -- all installed to determine the degree to which consumers are ready to adopt and use Internet-enabled devices in the kitchen.

The program created a connected kitchen environment incorporating networked version of two existing products, the Whirlpool Polara refrigerated range, and the iCEBOX Flipscreen. Using these, consumers were given the ability to program the oven to refrigerate, cook or hold a dish for a set mealtime; adjust or cancel the oven from their cell phone or mobile tablet Web-enabled entertainment/command center; or receive text messages on their cell phone from the oven confirming the evening's cooking instructions.

According to Jurgen Heuer, director of advanced technologies for Whirlpool Corp., the three main issues that the program focused on were: to see if it was viable for consumers to have access to their appliances from outside the home; whether stationary or mobile devices were preferred; and if a client had an Internet device in the kitchen, what additional software applications they would like.

But, not only did the study reveal key insight for manufacturers, it also showed that Internet access and media entertainment features in the kitchen made the kitchen more enjoyable for consumers -- which was precisely the intent, says Heuer.

"What people are saying is that they want to make a good meal and take care of their family, and they feel that they don't currently have the time," he explains. "So, [the Mealtime results indicate] good news for time-crunched families, because it goes against the traditional view that technology fragments a family at home and reduces the time members spend with one another. It helped participants save time and effort in meal planning and preparation...and had salutary benefits in terms of family interaction."

Time at hand

Ease-of-use was by far the biggest prerequisite to winning over harried consumers, the study revealed. And, as Heuer notes, the beauty of the program is that it is suitable for any technologically open-minded consumer.

"I've had five-year-olds cry when we took the Web tablet away from them, and I've had 55-year-olds that cry, too," he jokes.

But, above all, he adds, is the positive difference Mealtime made on various aspects of the consumers' lives -- a prospect that indicates that the "Kitchen of the Future" may be very close at hand. "After the study, we had people put quotes in a log, and among the things they wrote were that the technology gave them freedom, brought their families together and they began preparing healthier food. That is a big message," Heuer stresses.

Among the other findings were that, with Mealtime, household Internet usage increased in most pilot homes. With Mealtime, Peapod customers also found it easier to check supplies on hand and add items to their online shopping lists -- a great time-saving benefit.

Staying connected

In order to stay connected to the consumers, Heuer notes that specific things needed to be done during the study.

He explains: "We chose an architecture that is called 'Residential Gateway-based.' There is a box in the house that acts as a home server, and it creates a connection to the Internet on the outside and a connection to the appliances on the inside."

And, although there was a variety of devices the consumers were to use, Heuer notes that it was critical to keep each family's environment consistent.

"When you do an experiment [like this], you [must] keep the variables as fixed as possible. So, we created a two-phase approach, where we gave some of the people the stationary iCEBOX [unit], which was mounted underneath the cabinet, while the other people received the mobile device, the Web tablet. This way we could see the consumers' initial impressions and the comparative impressions," he says.

Among the other capabilities available to the consumers was the ability to call their oven from their cell phone to see if they forgot to turn off the oven -- and to turn it off from the cell phone should they need to -- as well as surf the Internet for recipes and coupons, create shopping lists and e-mail those lists to an online grocer for home delivery.

Heuer continues: "The consumers' privacy was also a huge concern for us, and we tried to not monitor them too aggressively. Therefore, we stayed away from monitoring what buttons people pushed or what clicks they made [during the study]."

A kitchen-friendly printer -- one with a small footprint, that was designed to be splash-proof and available in designer color options to match a variety of kitchen designs -- was also part of the program, and deemed to enhance the connected kitchen environment, according to the Alliance.

The bottom line, though, was not about specific products, but about end results, Shaw stresses. "When it comes to digital home products and services, consumers buy, and will continue to buy, solutions," he concludes.

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