FIFTY YEARS LATER, none of that has materialized; really great espresso machines represent the current apex of home gastronomy. But the vision of a high-tech kitchen remains tantalizing. "Historically, technology has entered the home through the kitchen," says Ted Selker, an associate professor at MIT, who runs a lab dedicated to exploring what tomorrow's kitchen may actually look like.

The 1950s version of the future focused primarily on labor-saving gadgetry with a "gee whiz!" factor. Selker's lab has its share of this: dishes that can be custom-stamped from acrylic disks, a "smart sink" that recognizes what you put in it and adjusts the water temperature accordingly. But he's more interested in improving the quality of how we eat and interact. "Everyone talks about fresh, fresh, fresh," he says. "But what is fresh food? The freshest food is alive." So his kitchen lab includes a hydroponic cupboard with an ultrasonic evaporator, which allows leafy vegetables and herbs to thrive like cut flowers.

"And why should a refrigerator just be a cold place?" Selker asks. "Eggs don't need to be refrigerated; butter, if you use it soon enough, doesn't need to be refrigerated. So why not have a warm compartment, maybe with a nitrogen atmosphere, so you don't worry about oxidation? What if we want apples to ripen? Throw some carbon dioxide in there."

Kitchen research is also progressing at Microsoft, where Jonathan Cluts oversees a team that projects what might be brought to market in the next 5 to 10 years. "What I try to focus on," he says, "is demonstrating what will be possible and then gauging people's reactions. So it's great when we develop something and people say, 'Yeah, I'd love to have that.' But it's also useful when someone says, 'No, don't make that.'"

Among the things people seem to like are recipes projected directly onto countertops (no need to fuss with index cards or cookbooks), an oven that can be remotely programmed from a cell phone, and a microwave that reads a product's bar code and knows how long to cook it for. And that's just the start: "We basically assume that anything in your house that has power can be part of your home network," says Cluts.

But even in this vision of the future, the feeling of home is more important than bells and whistles. "The kitchen is the social nerve center for the family," says Cluts. "So we do a lot of stuff involving scheduling, using touch-screen displays, and putting computer monitors in the kitchen so kids can do their homework there and the whole family can stay together." So ultimately, the kitchen of tomorrow may be more about preserving the domestic values of yesterday.