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Professor Gadget
The Media Lab's Ted Selker is cooking up more inventions to make our everyday lives easier.

By Megan Vandre
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On the Friday before St. Patrick's Day, associate professor Ted Selker meets me in the doorway of his glass-walled Media Lab office wearing forest green hiking boots, cotton socks the color of Granny Smith apples, asparagus-tinted jeans, and a lime button-down shirt that reflects yellow-greenish tints onto his winter beard. As I greet him and follow him to his basement labs, I can't help but recall the words his assistant, Heidi, uttered when I appeared for this "show and tell" introduction to Selker's inventions. "You'll see," she said. "He's pretty quirky."

Photograph by John Soares.

Selker is a much-lauded idea man whose prototypes and projects have been featured everywhere from Wired to the Wall Street Journal to ABC World News Tonight. His most famous invention, which he developed as a researcher at IBM, is the TrackPoint, the tiny, rubberized mouse button in the middle of many laptop keyboards.

These days Selker is focusing on computerized gadgets for solving everyday problems. He directs the efforts of Counter Intelligence, a research group using computers to build the kitchen of the future. He also heads a team that is working on "context-aware computing"—creating computers and other machines that can sense people's needs.

As we walk, he bobbles in his hands the prototype of a gadget Time named one of the top inventions of 2002 (the commercial product is called Sputmik—a play on Sputnik—and is sold by Design Continuum). It's a plush fabric ball that zips open to reveal wiring and a microphone. At conferences, Selker tosses this satellite microphone around the audience so participants' questions will be heard.

Our first stop is Selker's main lab, which houses most of his context-aware-computing group's projects. As we enter through a set of glass double doors, I see numerous prototypes on display, most on height-adjustable hexagonal stands, which ring the room. Selker designed these stands, which he calls

"chameleon tables" because of their versatility. Equipped with sensors, the floor is also one of the projects; it monitors the groupings of people in the room and coordinates a system of lights and projectors on the ceiling, spotlighting a podium, for instance, when one person appears to be addressing a group. The seemingly normal futon in the corner is actually a multimedia couch bed. By staring or blinking at images projected on the ceiling above the bed, you can turn on a radio or set an alarm clock without moving a major muscle. While the system could create the world's worst couch potato, it could also be ideal for people with physical disabilities.

Talking a blue streak, Selker walks me around the lab, demonstrating inventions. "One of the differences between my approach to product design and classic design is that I make prototypes, that is, things that physically and actually work," he says—even though many of those prototypes are not working as they should just now. During our tour, Selker is constantly distracted by the problems that need fixing, by people with questions, and by interesting spare parts, which abound in both lab and office. He picks parts up momentarily and mutters about them, half to me, half to himself.

At one point, Selker's former IBM associate Kim May, who is visiting MIT to help develop an exhibition of the lab's projects, arrives to work on one of its newest ideas: a car equipped with sensors and alerts to teach motorists to drive better. The car will include such innovations as a steering wheel that vibrates if you change lanes without signaling. Selker is immediately caught up in the project. He wants to help May, who is looking for a computer monitor to use in the car's headrest. But when a futile search through the spare parts in the main lab yields nothing, Selker returns to our tour.

I follow him out the double doors and around the corner to the lab for Counter Intelligence. It looks like a test kitchen, with various projects distributed across countertops, cabinets, and appliance faces. These include a scanner that evaluates the food items you have on hand and tells you what you could make with them and a countertop conveyance system that vibrates dishes into the sink. Spare parts and old projects rest on tables, counters, and cabinet tops.

Again, Selker points out each gadget and explains its function. That done, we sit down to chat about how he began inventing. Suddenly, he stops midsentence. "Oh my gosh! I just saw something I want to show somebody!" he exclaims. He jumps up, and when I move from my chair, he climbs onto it, reaches onto the top shelf of one of the cabinets, and retrieves a small monitor attached to some kind of machine. Clearly, the contraption is meant for May; the search for a monitor has been on Selker's mind all along.

Anxious to deliver the monitor, Selker quickly leads me back to the main lab, where he hands the piece over to May with a grin.

"Do you mind if I take it apart?" May asks.

"I think the thing to do is probably turn it on first and see what it is," Selker replies. "Then you can take it apart. It might be fun to look inside."

Just then, Heidi phones from upstairs. Since Selker is "always late," Heidi says, she tries to keep him on schedule. Show and tell is over.

Hoping for one last question, I follow Selker back upstairs to his office. "Where do all these ideas come from?" I ask. He says they are often the natural outgrowth of others' dilemmas—just like finding the monitor. "It's fun for me, in the social dynamic, to solve [people's] problems," he says. "I walk around the world quite critical. Everything bothers me. Then I try to think about how to fix it."

We reach the office, and already someone else is waiting for him. "I've got to go do something else," Selker says, and walks off abruptly.
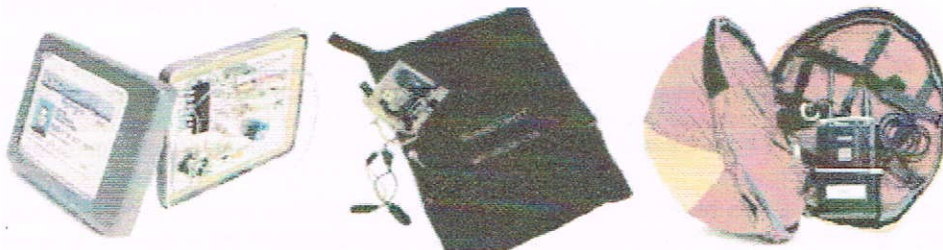
A high-tech car key can pull power from wireless networks to remotely unlock a car door or turn on the air conditioning (*left*). A