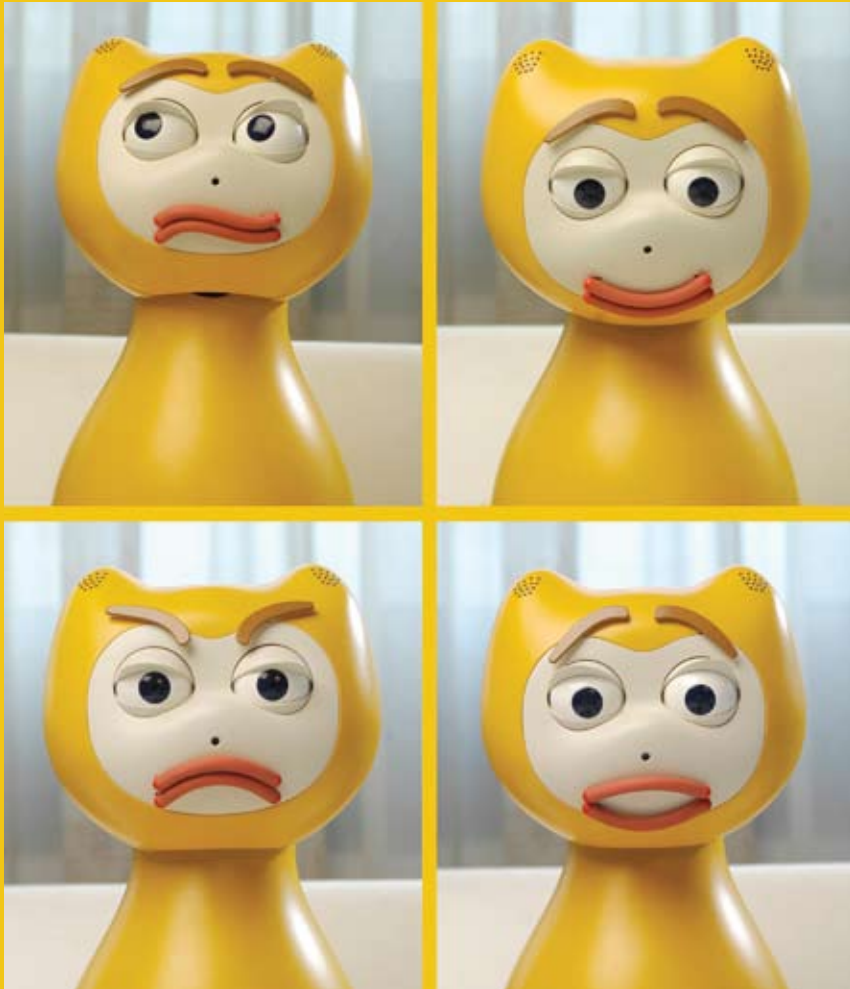


SOLUTIONS



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The iCat Is on Your Tail

Robotic feline keeps tabs on your home energy consumption

In search of a better way to get people to conserve energy, researchers Cees Midden and Jaap Ham turned to an unconventional technique: using a robotic cat to scold people when they use too much electricity.

Research has found that showing people their energy usage as they program an appliance could significantly

reduce energy consumption. Midden and Ham, psychologists at the Eindhoven University of Technology in the Netherlands, wanted to know whether feedback from a “social” agent would be even more effective.

Enter the iCat: a 15-inch-tall, yellow robot in the shape of a cat’s head and chest. Developed by Philips, the

iCat can speak and make facial expressions by moving its mouth, eyes, eyebrows, and eyelashes.

Midden and Ham wondered whether the cat might be able to goad people into lowering their energy consumption. So they programmed the iCat to respond to people’s decisions, then used it in a study. Participants were seated in front of simulated washing-machine displays and asked to do virtual loads of laundry. Some people had a meter on the screen, showing their electricity usage, while others had an iCat perched nearby.

When people in the latter group used less energy, the iCat congratulated them with a smile and expressions such as “Fantastic!” But when they didn’t act so green, the iCat looked sad or displeased and derided their energy usage as “Terrible.” The iCat group used 47 percent less energy than the group with the energy meter, the researchers found. And the iCat’s criticism had a bigger impact on conservation than its compliments did.

Midden and Ham meant their work as an experiment and aren’t planning to deploy the iCat in real homes. However, they do envision incorporating social feedback into household appliances—say, a display of a talking face on the washing machine. But it’s not clear how people would respond to negative feedback over the long term.

Midden says the iCat was “sometimes pretty rude,” and the team found that people became irritated when the cat ordered them to use a particular washer setting. In other words, humans may only be able to take so much sass from a robotic animal. ✪

—Roberta Kwok