A Futureproofed Power Meter

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A DIFFERENT SCRIPT FOR AN INFORMATION APPLIANCE

One unfortunate vision of our technological future is the "innovation imperative," which strongly implies that our things and appliances must always get "smarter." I am working together with Serge de Gheldere of the European design firm Futureproof/ed, to create a new domestic power meter that breaks that old cliche. Our proposed power meter is accurate, high-tech, and digital, yet as dumb as a brick.

You, the user, are the ultimate source of intelligence and value judgements here. This appliance responds to human language, yet is not itself "smart." Although it can talk to you and also listen and take action, it fails the Turing Test spectacularly. There's no pretense that you're addressing some Artificial Intelligence inside our power meter. You give the meter your words, and it reacts by a predesigned script. Its interaction is limited to data that you, the user, might actually want to know, practically and immediately, from a power meter.

The display of this device is entirely blank. Unlike most flashy, pushy, information appliances, it is anonymous and discreet. It doesn't explain itself or promote itself; it doesn't even offer a logo or a brand name. That's because you already know what it is for: it's your power meter. You got it, and you put it there. You don't need it to flash some display all the time, aimed at no one.

Being the human, you're the clever one in this relationship. You are the one with genuine awareness, who is making smart decisions about your energy consumption. The power meter merely does useful, dumb things that are inhumanly accurate, such as measuring your electricity consumption accurately in real time, storing the history of your energy consumption with an embedded microprocessor, and coordinating with your appliances to run them off-peak, thus saving you money.

This meter's most important relationship is not its tie-in to other household devices, but its core relationship with you, the human. When you speak up with an idea about power or meters, then it listens to you. Only then does it show a display.

In order to see the meter's display you have to speak to it--or rather, to the software speech-recognition function in its embedded chip. Eventhen, the meter doesn't merely blurt out a stream of data. Instead, it tests you to see if you yourself, the decision-maker, really know what is going on powerwise.

Let's say you are consuming ten kilowatts. If you say "Nine" or "Eleven," the meter will stay impassively blank. But if you say "Ten," the exact electricity consumption will then display. The meter will show you your exact current consumption rate at that moment: say, 10,768 watts. It can also show you the recent history of your usage, plotted against time, so that you can recognize your consumption patterns over a period of time and make some intelligent comparisons.

It doesn't take long to get this mechanical reward for demonstrating your intelligent human knowledge. You can get the first number right within a few seconds, even if you are utterly ignorant of the power flowing through your home. But by first demanding your best guess, this product shifts the moral and intellectual responsibility from mere electrical hardware to you, a moral actor. This, of course, is where the responsibility belongs. Only you can really know; your meter just measures and displays. And if you don't know, then the meter displays this, too.

Because people are good at learning, this device ultimately makes itself obsolete. Soon you've been trained to recognize the patterns of your power consumption, and you can set up some optimal situation (say, buying green power). Then you can pass the meter on to your benighted neighbor.

However, this simple and dumb little device could easily be elaborated, so as to draw you deeper and deeper into the hidden realities of electrical networks. Learning about your own household power consumption is just the first game. Next you can learn about power in the context of your neighborhood, and learn how your own neighborhood compares to others. You might even learn about the hidden environmental impact of every wasted kilowatthour. For instance: how many living trees would it take to sequester the carbon dioxide that your fossil-fueled house spews into the atmosphere?

Why not extend the meter's timescale drastically? This would show the consequences of today's consumption on your grandchildren. A humble power meter then becomes an experimental feedback system for today's industrial metabolism. A meter becomes our visual monitor into the future, displaying the by-products of our actions and choices today.

With every purchasing decision, with every time we turn a light switch or a car key, we make unconscious (and possibly unwanted) choices that shape our lives. This direct relationship only seems abstract and distant because our meters are so badly designed. With a properly designed feedback loop, people can bring this abstraction into the realm of immediate awareness and action.

Natalie Jeremijenko, 1999 Rockefeller fellow, is a design enqineer and technoartist (see Whole Earth, Summer 2000). Her strikinq work has been featured in the Rotterdam Film Festival, the Guggenheim Museum, the Museum Moderne Kunst, the LUX Gallery, the Whitney Biennial, and Ars Electronica. Lately, Prof. Jeremijenko has been designing power meters, along with her associate Serge de Gheldere and student John Ferri.