



Innovative companies are hooking coffee machines, industrial gear, cars, product packaging, and more into the Net. So what's the payoff?

BY ROBERT POOL

If you think the Internet is just a huge worldwide network of computers, think bigger. The new growth area for the Internet isn't in more PCs, it's in other devices-connecting all kinds of traditional products that were invented before there was an Internet. Like what? Like everything. Like washing machines and other "white goods." Like factory equipment, Coca-Cola vending machines, thermostats, electric meters, and toys.

Coca-Cola vending hermostats, electric toys.

ONLINE FACTORY Newport Electronics' iSeries controllers monitor industrial processes for conditions like temperature, voltage, and stress. With Ethernet jacks and TCP/IP protocols built in, they serve up

Web pages and send e-mail to engineers if alarm conditions arise. "Our vision is to connect everything to the Internet," says Marc Berrebi, CEO of eDevice, whose Internet-enabling chips are built into coffeemaker Lavazza's espresso machines.

Harbor Research predicts that the number of non-PC/non-phone intelligent devices to be networked for remote monitoring and e-services will exceed 500 million. Those defangled devices will represent an annual

\$200 billion opportunity in 2010 for the companies involved in their networking, monitoring, and servicing.

Do you really need the Internet in your toaster? Maybe not, but that's not the key issue, says John Williams, manager of research for Harbor, which specializes in examining what it calls intelligent devices. Sure, people must be convinced of the benefits of smart devicesand it's easier to sell business and industrial users on this idea than consumers-but it's not end users who have the most to gain.

It's companies that make wiredup products. Networked devices give businesses the ability to perform remote diagnostics and repairs; do a better job managing inventory and forecasting demand; collect usage data for inventory control, product development, and marketing; and charge customers extra fees for improved and additional services. Most useful of all may be the chance for manufacturers, often a step or more removed from the final consumers of their products, to "regain control of their businesses" by Internet-enabling their products, says Williams. "In today's environment, other people control your brand. You want to be as close to the customer as possible," he says. "We live in an information economy. If you don't have real-time information about your product and how it's being used, you're toast."

ROBERT POOL is a technology writer and author of Beyond Engineering: How Society Shapes Technology (Oxford University Press, 1997).

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