

## PRACTICE

### DESIGN CHALLENGE

# Beyond the Gray Box

Why do computers look so much alike? Computer scientist David Gelernter challenges designers to "think different." I.D. Magazine solicits three alternatives.

BY DAVID GELERNTER

Most technologists believe that it is silly and childish to be interested in the appearance of a computer, because a computer's job is to compute. If it's ugly but computes well, it's a good machine. If it's gorgeous and computes badly, it's a doorstop. The idea that computers ought to be beautiful is the epitome of a stupid proposition.

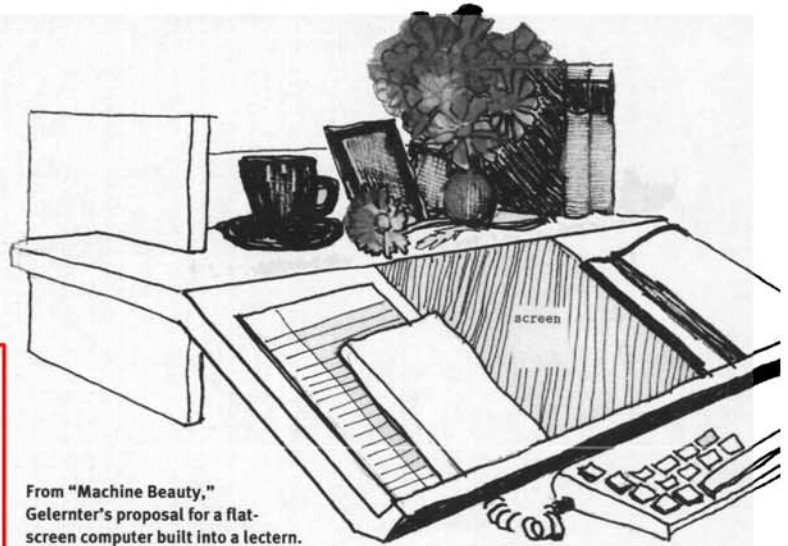
But it isn't; in this and many other ways, computer experts have yet to come to grips with the breakout of computers into the everyday landscape. Computers are so prominent and ubiquitous that not caring how they look or how it feels to use them is like writing off chairs or walls or desks—it's gross negligence. And we don't use computers only for specialized tasks; we depend on

them daily for writing and communicating, some of us spending hours working on them.

There are, of course, first-rate designers at work today. There have even been heroes of computer design: the CM-1 and CM-2 parallel supercomputers of the 1980s, designed by a team headed by Tamiko Thiel, were elegant and fascinating. At Yale, visitors stopped by the machine room often to admire the thing just as sculpture.

Today's designers, even the best, are trapped in a tired and dispiriting culture. Every computer on the market is a plastic box. Is no other material even thinkable? Plastic comes in a million flavors—opaque or clear, matte or shiny, marbled, metallic, speckled. Why does almost every computer on the market have the same dull finish and dull color?

Designing a computer is something like designing a TV—each one is a box dominated by a screen. In the 1930s and 1940s, radio designers turned out exuberant, colorful and lovely objects of all sorts, but TV design (after a bit



From "Machine Beauty," Gelernter's proposal for a flat-screen computer built into a lectern.

of experimentation in the early 1950s) went nowhere. Computers followed in the TV tradition. Are TVs and computers less worthy of design exertion because the images they display (not the boxes themselves) set the tone?

As cars developed, their design and technology advanced together. Technologists posed problems to designers (here's the substructure; make it usable and decent-looking) and designers posed problems to technologists (make the car lower, the inside larger, the exterior color choices wider, and so on). Streamlining began as a design gesture

and turned into an engineering necessity. Why has there been so little comparable interaction between computer designers and computer technologists? Is computer design fundamentally different or more difficult? Has the lack of a clear-cut design leader or superstar in the industry kept interest from developing? Are consumers too lazy to care? Or are designers too lazy to bother?

David Gelernter is professor of computer science at Yale University and author of *Machine Beauty, Elegance and the Heart of Technology* (Basic Books, 1998).



JOHANNA GRAWUNDER, SOTTASS ASSOCIATI, EXECUTIVE COMPUTER

"In the next era of computer design, a kind of cubist disassembling and distortion of the parts will transpose the inside world of the machine, aesthetically, luminously and linguistically, into the realm of interiors. The screen becomes a wall, the keyboard a roll-up laptop, and most everything is done by remote control, from wherever. An executive computer would become an executive environment, made up of different selected elements that facilitate the use of the tool, customized every time to the taste, desires and working habits of the individual."

LUNAR DESIGN, 427C

"This system would combine and centralize the computing power responsible for running several machines into one easily upgradable mega-computer called 427c. Networking each computer product from the 427c eliminates costly hardware and software duplication and allows for flexibility in the style and functionality of each individual device. The 427 is connected to four products: **Webtools** (below), a sculpture of three remotes and box of various Web-browsing tools such as flat screen and stylus; **Wyndoframes**, LCDs that blend into the environment; **Kidesque**, a flip-top wired desk for children; and **Wecker** (right), a multimedia computer with detachable screen for reading the early morning Webpaper or checking email at night. The antenna expands to indicate the arrival of new email, and a squeeze of the balloon accesses the mailbox."

