# I Can See What You Mean



**New products and services will free us from the shackles of old technology. First to fall: the PC's AT architecture.**

From the home office I've set up in my Boston apartment, I have a clear view across the Charles River to MIT. Sometimes when I'm editing a BYTE story about far-future technology, I look up from my desk and wonder just what is going on in the MIT Media Lab, what strange future they're assembling over there.

But it turns out that with the right software, I can see what they're doing. Literally. MIT, along with dozens of other institutions and businesses, runs a number of Web-accessible spy cameras (or just *cams* in the vernacular). There's even a guy over there, Steve Mann, who has mounted a wireless video camera on a helmet. Jump to his page (http://www.white.media.mit.edu/~steve/netcam.html) and you can see what he sees.

Mann, in fact, has a troop of friends with headcams. You think the scariest moment in a businessperson's life is when Dan Rather and the *60 Minutes* crew knocks on the door? Try to imagine how you'd feel if six people wearing head-mounted video cameras showed up in your office.

Among the mad-scientist community of computer engineers, it's an accepted notion that wearable computers and their I/O devices are just around the bend. And it's also accepted that, not far behind them, is the generation of users who will come to accept implanted computer technology.

As Marc Demarest, director of strategic marketing for Sequent Computer Systems, says, "The computer wants inside your head." He expounds the frightening point of view that technological evolution is opportunistic, like the evolution of parasites. The devices seek hosts. And he doesn't mean Sequent superminicomputers. He means a living, breathing class of host, who will come to depend on technology the way we now depend on the bacteria in our digestive system.

His evidence: Computers are getting closer to us and our personalities. We can now get affordable virtual-reality goggles that put SVGA monitors 2 inches from our eyeballs. And there is a whole industry growing up around designer mouse pads, screen borders, and even color-coordinated computers—all of which are designed to make us more comfortable with the technology. But technology would be even more "in our head," Demarest says, if software user interfaces were less adversarial and more visceral, as they are in good video games, which present enormous amounts of information—graphical, intuitively—and put the player in a "tight loop" of information and response.

If the concept of computer evolution matching biological evolution is a little too far out for you to grapple with right now, at least you can agree with me that the computer wants inside your wallet. When we began doing this month's Cover Story, "The New PC," I called Ted Selker, IBM's manager of its user systems ergonomics research division. Selker designed the IBM TrackPoint eraserhead pointing device, not to mention the Butterfly keyboard on the ThinkPad 501C. I asked him what leading-edge machines he had floating around in his lab that he could send us for the story. He said, "Give me two days. I'll build you a wallet computer."

The wallet computer didn't make it into this issue (too far out even for us), but several other new technologies did, including those embodied in the machines on this month's cover. Illustrating the latest trends in dockable portables is IBM's Leapfrog (the squarish machine with the confusing case). Apple shows its vision of portable technology migrated to the desktop (check out the screen and keyboard), and Archistrat has a line of computers based on a new bus architecture.

None of these machines use the ancient architectures of the PC—ISA cards and slow serial ports, for example. We think that's great. The old architecture has been with us for too long and is hobbling our steps into the future. These new machines are the platforms for the future. We'll be seeing new architectures on our desks soon, just as you may soon be seeing wearable webcams in your office lobby. ■

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