

Technology computers/communications

Artificial intelligence is will-o'-the-wisp, says Ben Shneiderman. We need tools, not robots.

Banks that chat, and other irrelevancies

By Carrie Shook

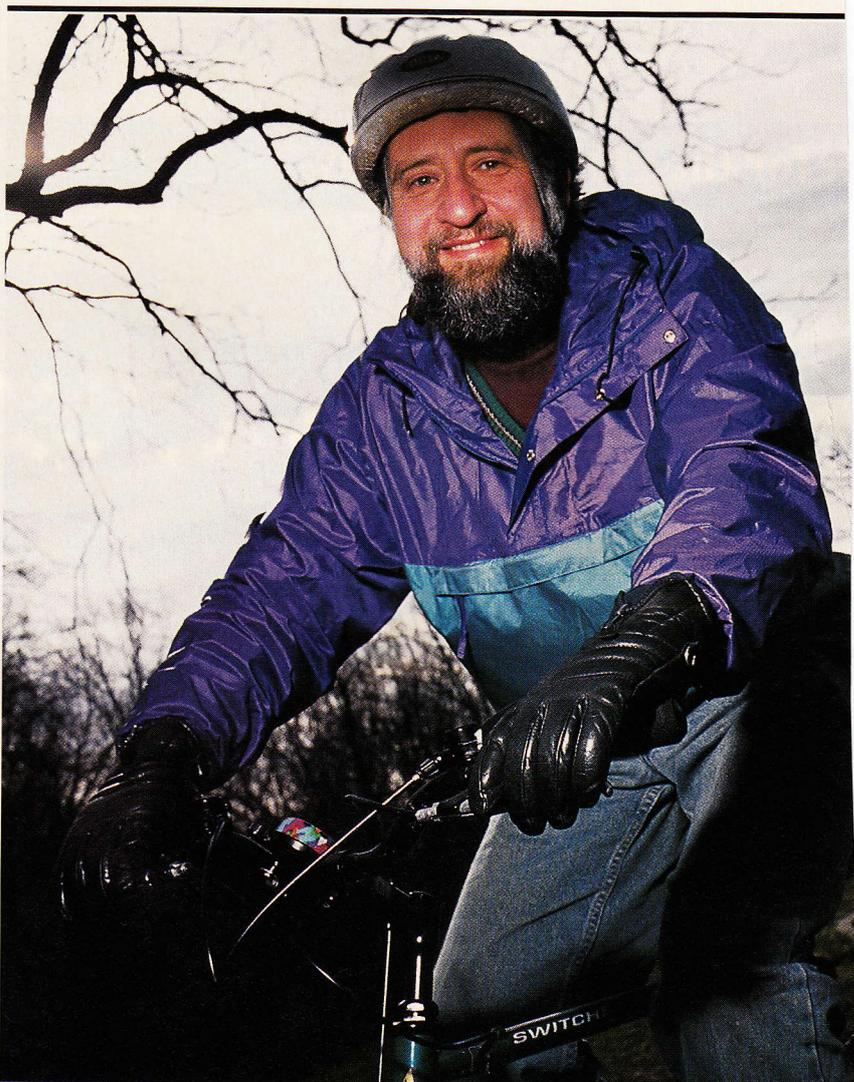
THE SPEED AND DENSITY of computer chips double every two years. Software engineers are wondering what they should do with all this brainpower. They have been thinking futuristic thoughts about artificial intelligence—that is, the mimicking by machines of the most characteristically human behavior. Talking robots, the stuff of science fiction for decades, now seem to be within grasp. Do we need them?

A thundering “no” comes from Ben Shneiderman, head of the Human-Computer Interaction Laboratory at the University of Maryland at College Park. We don’t need exotic, futuristic machines, he says; we need machines that do mundane tasks faster or better. His advice to the computer industry: Stop thinking about HAL of *2001* and think about pull-down menus that are easier to navigate and help screens that are really helpful.

Shneiderman, 50, is author of *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (Addison-Wesley, third edition, 1998). FORBES asked him to explain his controversial views.

FORBES: What’s wrong with creating intelligent computers?

Shneiderman: Artificial intelligence has been a counterproductive and misdirected effort for 30 years. I call it the “obstacle of animism.” It goes back to the 18th century, when there was an attempt to build human forms that would play musical instruments and draw pictures. It was fascinating for the royals, but the technology became nothing more than a museum piece.



DANUTA OTENOWSKI

We see it now in talking cash registers, talking automobiles and talking bank machines. The reality is that users don’t want an electronic buddy or a chatty bank. On the first encounter it may seem cute; the second time it’s just an annoying distraction.

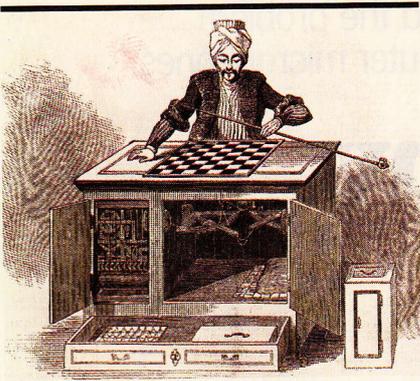
IBM’s Deep Blue is a smarter chess

Ben Shneiderman

Who needs talking dashboards?

player than world champion Garry Kasparov. You aren’t impressed?

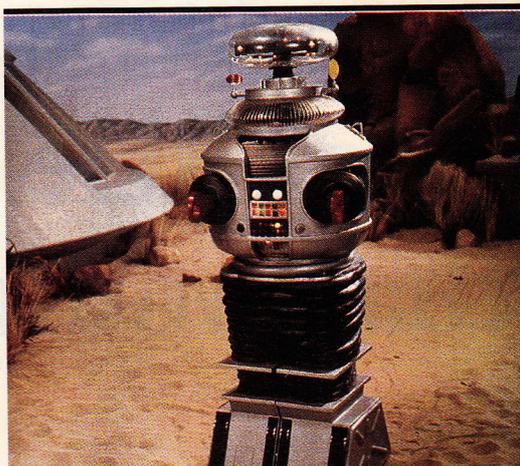
It was nothing more than great entertainment. The chess-playing hardware extensions and software



COURTESY OF LA MUSEE D'ART ET D'HISTOIRE, NEUCHÂTEL



"LOST IN SPACE" COURTESY OF NEW LINE PRODUCTIONS



Why can't a machine be more like a man?

Age-old dreams of manlike machines include (from left): a chess player (hiding a human master inside), a musician, and the robot from the television series *Lost in Space*.

intelligence than a wooden pencil.

The best use of computers is to enhance human abilities. We need tools that make us 1,000 times smarter and more productive. We don't need a computer that can make a medical diagnosis as good as the best physician's.

The most useful technology in the last 20 years served human needs; it did not replace or mimic human styles. The World Wide Web, digital libraries, news groups. These are attractive because they enable users to find information and communicate thousands of times faster than they could with other media.

Bill Gates disagrees. He says talking computers are the next big thing.

Certainly speech technology is remarkable, and there will be some practical uses, like dictation and interfacing on the telephone. But I don't think it will ever become widely used. It is much too slow, which interferes with human problem-solving. It's pitifully slow compared to a visual display.

I am willing to bet 1% of my net worth against 1% of Bill Gates' net worth over what the future holds for speech interaction.

So what should computer designers strive for?

Improve usability. There is a loss to the economy because machines crash or a user cannot open a document or

figure out a pull-down menu. Computers should be more affordable and well designed. Microsoft Word should have one-tenth the number of features and be one-tenth as complex.

What will computers be like in 2010?

Web computers will be thin and lightweight and look like a half-inch-thick notebook, with a wireless connection to the Web. My fantasy is that they'll be built for \$100. There will be no keyboard—you just touch the screen. When you walk into a business meeting, you will click on your handheld computer and deposit your business cards in everyone's computer. The minutes of the meeting will be entered automatically.

And the Net? How will it evolve as a tool to make us more efficient?

Search engines need to improve. They are in the Model T stage now.

On-line communities are the wave of the future. There will be an on-line environment for doctors. If you are brought to an emergency room anywhere in the world, your medical records should be available within 15 seconds in the local language.

When people come to my office they will see an information panel on my door, connected to the Net. Visitors will see my name, touch it and view my schedule. If I am running late, I can send a message via E-mail to this panel for them to read. ■

were so specialized that it is very unlikely that they can be used to influence other applications. The only thing the match proved is that the programmers did a wonderful job. No technology can mimic human style; no computer can experience human emotions and pain. The computer is merely a tool, with no more