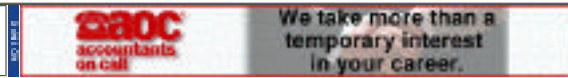


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Computer may have air about it / Aromas the next interactive experience

BY MCGREGOR McCANCE
Times-Dispatch Staff Writer

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Remember when your personal computer was so very impersonal? There it sat, just blinking and beeping, the case fan humming. Your fingers clacking on keys broke the silence.

Now, of course, a set of speakers is as standard as a mouse, and

watching a DVD movie on a 19-inch color monitor is no more silly than buying a sweater over the Internet.

Even the symphonic flourish signaling Windows 98's start-up is part of the experience of using a modern computer.

"It's so subtle and yet it's so compelling," said Peter Aiken, a Virginia Commonwealth University associate professor of information systems.

"All of those things serve to enhance the user interaction."

What if you could smell what's on the computer screen? A vial of Narcisse. A glass of zinfandel. Fresh hyacinths.

Subtle? Compelling? Gross?

That's for the market to decide, maybe. But count on the emergence of aromas as at least an experiment in the evolution of interactive computing. Several groups already are

racing to bring products to the market to augment the sensory experience.

Firooz Rasouli, a Richmond chemist, heads one.

Rasouli now works for Philip Morris USA as a research engineer. His pursuit of click-and-sniff began when he was at the Illinois Institute of Technology a few years back.

As he worked with his brother, also a scientist, on a computer application for telemedicine uses, Rasouli realized that doctors diagnosing patients by long distance can be hamstrung if they can't smell as well as see what they're working with, especially if the patient is a trauma victim.

"You need more than just looking at the picture," Rasouli said. "I thought, 'We can use it for so many purposes, especially Internet commerce.'"

Rasouli didn't have to convince his Illinois Institute of Technology colleagues.

"You're talking to a scientist," Hamid Arastoopour said wryly. He is chairman of IIT's Department of Chemical and Environmental Engineering.

The two, along with colleague Ali Oskouie, won an IIT grant to pursue the project. Their first device is like a small box with a fan in the back. It uses small plastic tubes with a tiny wire in each. Each tube encases a scented material -- a brand of perfume, for example.

When a computer user clicks on an icon of that perfume, its corresponding wire is heated. Perfume molecules escape through the plastic, and the fan blows the aroma out of the device.

This device still is in development, but Rasouli and his team have tested the method successfully. They won a patent last summer for their Tele-Aroma Drive.

Rasouli said he thinks the device could be available commercially in about two years, once the scents are moved from the tube format to a compact disc format. The odors can be sealed there because, like the tubes, a CD is made mostly of plastic.

The product could be used initially as a marketing tool, Rasouli said. A company could send a CD with various embedded scents to lure people to its Web site, where the user could click and smell the company's product line.

"I think this will give a little more touch of reality to the Internet," Arastoopour said.

This, however, is a prototype. The more ambitious challenge takes the Tele-Aroma Drive further, embedding an "alphabet of smells" on a disc.

Instead of a specific perfume, the alphabet consists of basic elements of aromas. The idea is to click on, say, a coffee icon, and the correct elements arrange to produce the appropriate smell. The aroma drive player's laser provides heat to activate the scents.

"It's like combining two different colors to come up with the third color," Arastoopour said. "This is more important for general smells. I don't think a wine or perfume manufacturer is going to reveal the alphabet of their smells."

But the thought of being able to generate just about any smell begins to spin ideas again.

"If they could do that, there would be some very, very compelling opportunities," VCU's Aiken said. Aromas could accompany scenes in movies and video games or be paired with e-mail messages.

Rasouli and his colleagues aren't the only ones working on click-and-sniff technology.

An Oakland, Calif., company called DigiScents plans to offer scents to computer users to go along with Web sites, e-mail, games and streaming videos through a "personal scent synthesizer" called the iSmell.

The company's Web site predicts "broad consumer access" to the iSmell by this spring.

"It's all done to draw people in," Aiken said. "Everybody's looking for the next killer application as they try to figure out what we can use to make people want to go buy computers."

Or make them want to buy aroma drives for their computers.

Not everyone is as excited about this frontier as DigiScents or Rasouli and Arastoopour. A computer with smells could become just a smelly computer.

"Let's keep the Net the Net and not try to make it too close to real life. There are enough people who are having trouble telling the difference even now," David Fiedler, editor of WebDeveloper.com, wrote in reaction to the first wave of PR from DigiScents. "Imagine people coming up with spam with built-in skunk bombs."

Skeptics aside, Arastoopour and Rasouli do consider it a great time to be involved in their project. They also recognize the importance of finding an industrial partner to move the Tele-Aroma Drive from the scientist phase to a market stage. "That's very critical," Arastoopour said.

Aiken is interested in how consumers react to the technology. For him, it brings to mind a feature one company had back in the early days of Apple's Macintosh computers.

The utility added sounds to desktop mouse movements. Drag a file icon across the screen and a little sound played. Drag the icon of a larger file and a more robust effect sounded.

A cool feature, Aiken recalled. "The whole idea was to have this tremendous new way to interact with the machine." But it never really caught on enough to become a standard.

Rasouli certainly isn't thinking the Tele-Aroma Drive will fall flat.

"This is the future," he said. "What I'm thinking is we're adding a third dimension to the Internet and computers."



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