TechTalk

IT AIN'T HEAVY; IT'S MY COMPUTER

As traffic on the information superhighway picks up speed, electronic performance support and multimedia are moving from the desktop to the blacktop. But is that Dr. Seuss in the driver's seat?

I sat there with a 3-pound computer clipped to my belt and a 2-inch monitor hanging from a headset just below my right eye. I spoke softly into the thin, wire microphone suspended beneath my lips: "Next screen," I said.

The virtual image created by the monitor made the information appear as though it was being displayed on a 12-inch screen. This was great! Unbelievable. It was so small. What would they think of next?

I turned off the computer and looked over at my friend, Sue. She had been waiting, rather indifferently, for me to finish gaping at my latest computer system. I held the system out and said, "Want to take a look? It's really something."

"Nope," she said without looking up from her magazine.

"This baby has built-in speech recognition, a virtual viewscreen, and all the power of a 386 in a 6-inch box," I said excitedly. "It's great! Here—" I practically shoved the system into her hands.

She ignored me and flipped a page of her magazine. "You know, you really looked like a geek with that on."

I realized my mouth was open, so I shut it. She wasn't going to look.

"Hey, this is revolutionary, Sue. It's so small. You've got to look at this virtual screen to really appreciate the system."

She looked up from her magazine. No one can resist a 2-inch monitor, I thought. Then a sickly smile formed on her lips. She said, "You work in human resource development—not on the Enterprise. What good is a wearable computer in HRD?"

Silence.

"I can't believe you're asking that!" I said at last, trying to think of at least one reason the system was important. "You work in HRD just like me; you figure it out." I sat the system down and shook my head. "Are we going to lunch or what?"

We went to lunch. I didn't have a nice time.

That night after work, I was sitting with my two-year-old son reading *The Cat in the Hat*. I read, "I sat there with Sally, we sat there we two, and how I wish we had something to do."

I remembered the lunch with Sue. We sat there we two—and I wished I could have thought of some snappy comebacks for Sue.

I read a few more pages. Then, as sometimes happens, both father and son fell asleep. Well, all I can say is that my subconscious stepped in, because I had a dream that cleared up everything between me and Sue. See the box, "Small Matters Big," on page 59, for my revelation. (My apologies to the late Dr. Seuss.)

EPSS and multimedia. Until recently, electronic performance-support systems were used exclusively in environments in which computers were the medium through which employees performed their jobs (for example, customer-service representatives or flight controllers). Employees who didn't use computers to perform their jobs couldn't take advantage of EPSS because there was no system (computer) to run the performance-support software. In other words, you can't have just-in-time support if you have to stop doing your job in order to find a training manual or computer to get help.

With the advent of portable and even wearable computer systems, there are no longer technical reasons why you can't develop EPSS and multimedia for employees on the move.

For example, the U.S Army uses the wearable computer system I mentioned in the opening (manufactured by Park Engineering in

Veradale, Washington) to help soldiers repair the M1/A1 tank in the field without searching through paper manuals or getting outside help. Similar systems are used for taking inventory when auditors must have free use of both hands to move boxes or count parts.

EPSS and multimedia training on portable and wearable computer systems will be big business in the next few years, especially if you consider as an indication the ever-expanding offerings of smaller and smaller computer systems.

I've outlined a few of the possible categories of delivery systems:

Personal digital assistants. Slightly larger than wearable systems, PDAs are hand-held systems available from several manufacturers (including Apple Newton, Cascio 7000, Tandy Z-PDA, and GRiD 2390). All systems come with a built-in display; they generally include handwriting-recognition abilities, which allow the user to interact with the system using a stylus. Most of the systems include limited wordprocessing, information indexing, and wireless fax capabilities.

Other firms make a variety of peripherals that can be attached to PDAs for added capability. Motorola, for example, offers the NewsCard, which allows compatible PDAs to access news and information services, receive and send electronic mail, and make file transfers through wireless transmissions.

Probably the biggest complaint about PDAs is that their handwriting-recognition capability is not accurate enough. Manufacturers promise to correct this problem in upcoming versions.

Subnotebook computers. A step up (in size) from the PDAs are the so-called subnotebook computers. Subnotebooks such as Ambra's SN series and Gateway's Handbook weigh in at under 4 pounds, as do most top competitors.

Most include an attenuated (smaller than standard) keyboard, a trackball (a mouse-like device), and a view screen. Most systems include hard drives as well as other removable peripherals (such as wireless fax cards) that connect to the computer via PCMCIA Type 1 or 3 slots (or ports). Many of the peripherals are

credit-card-size hardware that you insert into the PCMCIA slots. On some versions of subnotebooks, such as Compaq's Concerto, the

screen (monitor) can be removed from the keyboard and used as an electronic writing pad.

Notebook computers. Notebook

Small Matters Big

We sat there at lunch; we sat there we two,
and how I wished a retort I could find for Ms. Sue.
"Why does small matter? Oh, why should we care
that computers are shrinking, nearly lighter than air?"
"Why does small matter?" she said with a smirk.
"You realize, of course, that you're not Captain Kirk."

She sat there and smiled so mockingly sweet,
I started to run but could not move my feet.
Everything seemed hopeless as I sat there with Sue.
Everything seemed terrible; what was I going to do?
The vice-president has told of the highway to come,
and I was sure that small mattered, but Sue had my tongue.

I shut my eyes tight, and nearly jumped from my seat
when a convoy of trucks rolled to a stop at my feet.
"Why are you here?" I asked. "Please go away."
"I am trying to think, and you're right in my way."

The trucks sat there in silence; then a door opened wide,
and my son jumped from the cab and lit at my side.
He said, "These trucks are sad, Dad, and they're all full of dread.
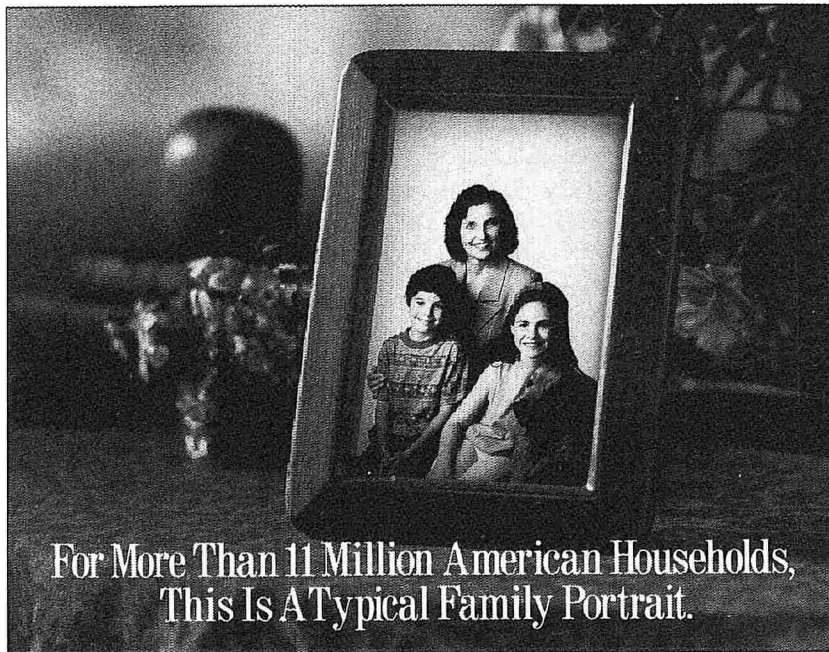You see, the information highway, it ends up ahead."

Without another word, the implications were clear.
At last it made sense, why small matters here.
My son smiled big and turned on his shoe.
He said, "Go have some fun, Dad; go tell your friend Sue."

For the first time at lunch, I was able to think.
I opened my eyes and gave Sue a big wink.
I said, "All employees need training, I'm willing to bet,
and not just employees who sit at a desk:
The mechanic and electrician, the repairer in the field,
the assembly-line worker and the many other skilled."
"Now, don't you see, Sue? Now, don't you understand?
Small matters big in this superhighway land."
If the mechanic and electrician can wear computer gear,
then the electronic highway can go anywhere.

I said, "Performance support, multimedia, and the rest,
can take to the byways, and expand from the desk."
"It can help the electrician, and the repairer out back,
it can help the truck driver to display a new map.
It can help the mechanic and delivery people too.
And lo and behold, it could even help you!"

Well, I finished my say and looked over at Sue.
Her smile was gone, and her lips had turned blue.
Her hair had turned gray and she stood to her feet.
And before I could move she started to shriek:
"Small matters big; I can see this is true.
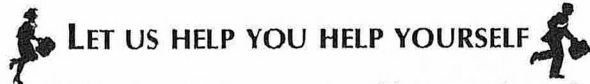But you look like a geek, and you sound like one, too!"

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computers usually weigh less than 7 pounds. They are slightly larger and heavier than subnotebooks, and they generally have more capability—featuring, for example, longer-lasting batteries and better displays. Notebooks are capable of doing everything desktop computers can do (and a few things that desktops can't—such as travel).

Some notebook models, such as NEC's Versa series and Toshiba's T4700 C series, have one-step connection (or docking) to desktop-size computer hardware. This allows notebooks and subnotebooks—either at home or at the office—to drive larger monitors, hard drives, and other power-guzzling peripherals.

And such software as Airsoft's AirAccess and Traveling Software's LapLink Wireless can be used to transfer information wirelessly from notebooks and subnotebooks to companion desktop systems that have shared files. The obvious benefit is that people on the go can keep updated versions of software in sync on their notebook and office computers.

Other options. Sony and Philips offer portable multimedia players that are a cross between PDAs and notebooks. The players come with built-in screens and mouse control, but few or no keyboard features. They are intelligent, but they are not fully functional personal computers.

The main function of these machines is playing and allowing the user to interact with information (text, graphics, digital audio, and digital video) stored in a variety of CD formats: CD-I (compact disc—interactive), CD-ROM (compact disc—read-only memory), CD-ROM XA (compact disc—read-only memory/extended architecture), and CD-audio (standard music CDs).

With the continuously expanding offerings of small, portable computer systems, the electronic superhighway truly is moving from the desktop to the blacktop. The next time your organization needs a training solution, why not take everyone for a ride?