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STATE OF THE ART

Putting Your PC in a Pocket

By DAVID POGUE

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In the last few years, the biggest breakthroughs in personal computing haven't had much to do with personal computers. Instead, many of the most exciting and popular inventions have been designed to let you carry a copy of the data that's on the PC you already have.

What's an iPod, for example, but a \$300 portable hard drive containing a copy of your PC's music files? What's a Palm or PocketPC but a \$300 data bucket for carrying away a copy of the PC's calendar and address book? And what's a BlackBerry but a \$400 mirror image of the PC's e-mail?

Of course, the unstated assumption behind all of these developments is that your pocket isn't big enough for the computer itself. But for a couple of former Apple laptop designers, that assumption is obsolete.

Thanks to some of the very advances in miniaturization that make hand-held gadgets possible (bright indoor-outdoor screens, two-inch hard drives), these guys have devised an entire Windows XP computer that's only 4.9 by 3.4 inches and less than an inch thick. They pose an intriguing question: Why would you buy a bunch of gadgets designed to liberate the data from your PC if you could just shove the entire PC into your pocket?

What they've come up with is an amazing little 14-ounce computer. It's called the OQO (pronounced OH-cue-oh), not to be confused with AT&T's instant-messaging device (Ogo), a wind instrument (oboe) or John Lennon's widow (Yoko Ono).

The best way to appreciate the OQO's benefits and tradeoffs is to consider each of its components individually, just as you would when buying any new computer.

KEYBOARD With a gentle push, the screen and body slide halfway apart like the two slices of

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If you can get over the lack of a CD drive, there's a lot to be said for the OQO.

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bread on a jelly sandwich. You've just exposed a thumb keyboard. It's like the one on a BlackBerry, except that this one even has arrow keys, modifier keys (like Ctrl and Alt), and a separate number pad. (Weirdly, though, the number keypad is upside down. That is, the top row includes 1, 2 and 3, cellphone-style, instead of 7, 8 and 9, computer-style.) You can also attach a full-size U.S.B. keyboard when you're not computing on the run.

MOUSE OQO has dreamed up a bizarre but perfectly workable mouse-replacement solution. Between the letter and number keys sits a pea-sized, immovable circle of stubbly black stuff. Your first instinct might be to scrape it away, assuming that it must be a bit of dried airline food.

Instead, you're supposed to push against it in the direction you want the arrow cursor to move, much like the little red nubbin on I.B.M. laptop keyboards. To click, you press a button on the OQO keyboard's left edge. Mousing is now a two-handed operation, but why not? Your non-mouse hand is usually left to twiddle its thumb during PC mousing anyway.

Of course, you can't very well draw or sketch by pushing against that black textured blob, so the OQO is also equipped with a stylus and a touch screen. (Only a special stylus works on this screen, which prevents accidental clicks but also means you can't use a retracted pen or a fingernail in a pinch.)

And because neither a mouse-click key nor a stylus is ideal for scrolling through documents, Web pages and lists, the OQO even has a thumbwheel on its bottom edge. With these three input devices, you won't miss the mouse for an instant. If anything, you'll wish that your bigger computer had them.

SCREEN The screen is readable both in sunshine and indoors; in fact, a sensor makes it brighten automatically in bright light. The resolution is 800 by 480 pixels, shrunk down to the size of an index card. The result, as you'd imagine, is crisper than crisp.

But the problem isn't crispness; it's legibility. Text that appears as 10-point italic on a real PC becomes one-point indecipherable on this screen.

Because pocket electron microscopes are not yet commercially available, you'll have to rely on software to bail you out. For example, the OQO's factory-installed Windows desktop theme enlarges the type size of window names and icon labels. You can enlarge any Web page using the View menu in Internet Explorer. And in Microsoft Word, Excel and Outlook, pressing Ctrl while turning the thumb wheel neatly enlarges or shrinks the text of whatever document is on the screen.

But in dialog boxes, menu commands and error messages, the type is just tiny, and that's that. It's about the size of the fine print on a consumer-electronics rebate form.

GUTS There's no room for the usual cooling system (fan, ventilation holes, chimney effect), which rules out processors like the lava-hot Pentium. What saves the day is a cool-running one-gigahertz Transmeta chip.

This processor isn't what you'd call blazingly fast; dictation software, video editing and 3-D shoot-'em-up games are pretty much out of the question. But there's plenty of speed for any kind of Internet activity (Web, e-mail, and so on), graphic design, music and video playback, Microsoft Office, databases, less action-intense games, and so on.

Memory-hungry programs like Photoshop aren't very usable, either, because the OQO has only 256 non-expandable megabytes of memory. The hard drive isn't what you'd call capacious, either: 20 gigabytes is all you get.

Of course, most real-world new PC's have at least twice that amount of memory and disk space. Clearly, OQO hopes that you'll think, "Wow, this little guy is a heck of a lot more powerful than any palmtop," and not "Jeez Louise, the Dell I had in sixth grade had more horsepower than this puppy."

EXPANSION The OQO's edges offer a microphone, a headphone jack, a FireWire connector (for attaching hard drives and camcorders) and a U.S.B. port (version 1.1, alas, not the faster 2.0 type). Better yet, it's a wireless powerhouse; it contains both a WiFi antenna (for connecting to wireless networks) and a Bluetooth transmitter (for dialing a Bluetooth cellphone, exchanging files

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laptops and so on). Both wireless features work superbly.

at the office, you can slip the OQO into its accompanying dock, whose cable all-size monitor (up to 1280 by 1024 resolution), another U.S.B. and FireWire jack, an Ethernet connector for high-speed networking, and an audio output. The idea, of course, is that you can leave your printer, scanner, keyboard, mouse, monitor and network cable permanently attached to the dock, so that when you're not out and about, the OQO is a no-compromise (well, low-compromise) everyday PC.

You don't even have to shut down the OQO or put it to sleep first — you just slip it into the dock and watch with satisfaction as your desktop monitor blinks to life. That bit of elegance saves you a lot of time and hassle (and reminds you of the creators' Apple heritage).

THE DRIVE The OQO has no built-in CD or DVD drive. Barring an amendment to the laws of physics, there would be no way to fit one.

Here, at last, is the OQO's Achilles' heel. In fact, it's probably Achilles' entire leg up to just above the knee. How the heck are you supposed to install commercial software or watch DVD's without a drive?

The company has no suggestions except to buy an external U.S.B. or FireWire drive, which will set you back about \$75.

THE UPSHOT OQO the company has big plans for OQO the computer. It claims to have generated wide interest in industries like insurance, field sales, public safety, manufacturing and health care. For example, doctors and nurses could call up patient records at home, on the road or, over a wireless network, anywhere in the hospital.

But if you can get over the lack of a CD drive, there's a lot to be said for the OQO even for individuals. When your digital camera's memory card gets full, no worries; just offload the photos to the PC in your purse or pocket and keep shooting. You don't have to transfer your videos from your PC to one of those \$500 video players for your train ride, because you'll have the PC itself with you. And forget about printing out your Mapquest driving directions or your Travelocity travel itinerary from your PC. Why bother, when you can open the original electronic document at any time?

OQO's claim that you could use the OQO as your sole computer is a tad far-fetched; its limited memory, speed and storage would probably put a crimp in your computing style. It's not cheap, either, although it's in line with laptop prices: \$1,900 with Windows XP Home Edition installed, \$2,000 for XP Professional. And the battery life is disappointing: about 2.5 hours per charge. At least the battery is removable, so you can swap in a fully charged spare.

Otherwise, though, OQO is the most elegant, versatile, solidly build miniature PC possible with current technology. Its creators have blown the concept of the digital hub to smithereens, and given whole new meaning to the term pocket PC.

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