

Power in your palm

Are they really indispensable or just a handful of gadgetry? A look at PDAs / **Simson L. Garfinkel**

FOR YEARS, COMPUTER junkies have been mesmerized by the idea of the "personal digital assistant." The notion is to have a light-weight computer that can fit in your hand and can run for weeks on a single set of batteries. A computer that you can and would want to carry everywhere. A computer that could actually save you time — as opposed to being just a glorified Nintendo GameBoy. A computer that would combine the best features of today's laptop computers and "Star Trek" tricorders.

On my desk are four such attempts. Each fits comfortably in my hand and runs for about a week on batteries. Each weighs about a pound. And each comes with a little plastic "pen" used to write on the computer's screen.

The smallest, easiest-to-use, and unquestionably the most popular of these computers is U.S. Robotics Inc.'s Pilot. This computer fits in a shirt pocket and holds an electronic phone book, a calendar, a things-to-do-list, and a little memo book. It weighs just 5.7 ounces and runs for nearly two months on a pair of AAA batteries. Over the past year U.S. Robotics has sold hundreds of thousands of these machines. Last month the firm started selling two new models: the PalmPilot Personal (\$299) and the Professional

(\$399). Unlike the original Pilot, the new Pilots have a backlit display, so you can use them in dim lighting. The Professional has twice as much memory as the personal and support for e-mail and other Internet uses.

The Pilot's tiny screen shows roughly 13 lines of 32 characters. Entering data is a pain: You can pick out your memos letter-by-letter using an on-screen keyboard, or you can write them using a tortured handwriting called "Graffiti," which takes about half an hour to learn — and which is pretty slow. There's a lot of free software on the 'Net.

A little bigger than the Pilot are two computers running the Windows CE operating system, a version of Windows developed by Microsoft for hand-held computers. Windows CE comes with stripped-down versions of Word, Excel, Schedule +, Microsoft Exchange, and Internet Explorer. The computers also have infrared ports for "beaming" data, a PCMCIA slot that will take a PC card

modern or memory card, and a keyboard that's about the size of my outstretched hand.

As with its original DOS operating system, Microsoft is licensing Windows CE to any serious hardware firm that agrees to Microsoft's terms. I have Windows CE machines from Casio and Hewlett Packard. Both are the size of a checkbook. The Casio Cassiopeia weighs 13.6 ounces and has a screen that displays 12 lines of 75 characters when you're running Microsoft Pocket Word. The as-yet unreleased HP 320LX has a wider screen that displays 105 10-point characters; it weighs a

pound.

Windows CE is supposed to have the same interface as Windows 95 so that PC users will feel right at home. Unfortunately, CE is different enough that I had to still spend an hour reading the manual cover-to-cover. Because it's so new, there is pitifully little free software on the Internet. Windows CE machines tend to cost about \$600 and run for a few weeks on a pair of AA batteries.

The heaviest and most mature of the PDAs on my desk is the Newton MessagePad 2000, from Apple Computer. The Newton 2000 weighs 1 pound, 6.2 ounces, is about the size of a DayTimer, has two PCMCIA slots, infrared port, and can record and play sounds. It comes with a contact manager, a calendar, alarm clock,

Web browser, e-mail package, spreadsheet, and even a word processor (which requires a special external keyboard). It runs for a week on four AA batteries.

When Apple introduced the original Newton in 1993, it was ridiculed. The computer was supposed to recognize your handwriting and use sophisticated artificial intelligence to do what you wanted. The reality was quite different: Instead of the Newton learning how you wrote, you had to learn how to write so it could understand you.

Today's Newton 2000 (about \$1,000) comes with a new microprocessor, Digital's

StrongARM, which is 10 times faster than the processor in Apple's Message Pad 100. Because of this, the handwriting recognition is noticeably improved, but far from perfect.

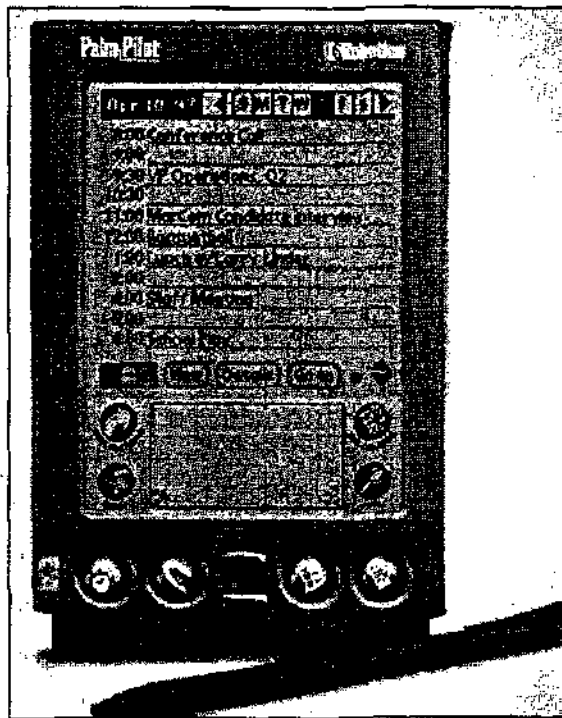
I've been switching among these various PDAs, trying to find the one that I like best — or if I even need one at all. Ideally, I'd love to be able to stop lugging around my laptop. But I'd settle for being able to lug around my laptop less often.

What makes the decision process difficult is that each PDA has its own personality. The Windows CE machines have really loud speakers, which make them perfect for alarm clocks.

Unfortunately, their screens are muddy and hard to read. The Pilot is easy to carry and it's got a great screen, but graffiti is painful. The Newton is nearly as powerful as my laptop computer. Unfortunately, it's not as powerful: The few days I've tried using just the Newton, I've felt crippled.

These machines all excel in letting on-the-go business folk carry around data from their desktop computers and make minor modifications. But I'm not convinced it's best for me. On the other hand, I know there are lots of people who are absolutely thrilled with these gizmos, so I'm going to try to stick with them for the next two weeks. During that time, I'm inviting Globe readers who have these machines to let me know what you like about them and what you hate, and what you would like to see in future products. I'll print some of the best stories, and I'll send all of the letters I get to the companies making these devices.

Got a PDA story you want to share? Send it to plugged-in@simson.net



U.S. Robotics' Pilot is the most popular handheld computer.

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