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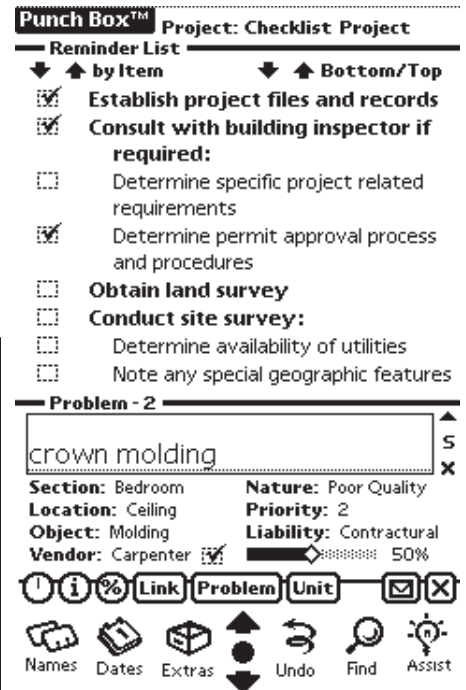
Paperless Office Tools

by Craig Savage

Figure 1. *A tap on the Newton display is all it takes to select punch-list items from menus built into third-party software called PunchBox. The finished list can be sorted in the Newton, or exported to a desktop computer for printing.*

Most carpentry hand tools work right out of the box, but they all work much better after you've had some time to fine-tune both the tools and your skill at using them. I put my 14-inch Record jack plane to work the day I bought it. But I didn't get the results I wanted until I'd taken time to sharpen the iron and to develop a feel for the proper angle at which to hold it.

This month's article will review two new "information hand tools" that have made their way into my office "toolbox." Both will work right out of the box, but like my hand plane, some fine-tuning will be worth the effort.

Office In Hand

One tool that just might give businesses a shot at the "paperless office" is Apple's *Newton MessagePad*. This personal digital assistant (PDA) is about the size of a paperback book, and serves as an electronic notetaker and personal planner. You enter data with a penlike stylus, either by tapping the "keys" of an on-screen keyboard or by writing directly on the plastic, Etch-A-Sketch-like screen. The Newton's OCR software translates your handwriting into computer text.

Newton comes preloaded with an empty form call NotePad (which saves your scribbles as discrete notes), a To-Do List, a Daily Calendar, and a Names List (which holds addresses and phone numbers). All of the data from any of these lists can be stored in folders, sent over the phone lines as faxes or e-mail, or "beamed" to other Newtons via the built-in infrared sensor. In addition, the Newton Connection Kit transfers data to and from your Mac or Windows computer.

Newton has several useful built-in features. For instance, the Newton Assistant recognizes certain common phrases, such as "Call Susan." When the assistant sees the command "call," it triggers Newton to look up the next word — in this case the name "Susan" — and then dial her number. (Newton has a speaker that you can hold up to the phone to automatically dial.) The assistant also understands, for example, that the word "lunch" means 12:00 p.m. A note such as "lunch with Craig Wed" will cause the assistant to place the word "Craig" in Wednesday's 12:00 p.m. daily calendar slot.

The original Newton model 100 has been around for more than a year. That first version got weak reviews, mostly because of trouble with the OCR feature. I have the improved model 120, and in the two weeks I've been using it, the Newton has learned to recognize 9 of every 10 words I write. (Most of my subs don't do that well.) Still, Newton's handwriting recognition software has a ways to go before it can convert the quick and often sloppy notes taken in the field into consistently readable text.

Electronic clipboard. The fact that you can hold a Newton in one hand, like a small clipboard, makes it the perfect job-site tool, especially when used with third-party construc-

(APPLE COMPUTER INC.)

Newton MessagePad 120 ($699) is available from Apple Computer (One Infinity Loop, Cupertino, CA 95014; 800/776-2333).

tion software. I tried a program called *PunchBox* ($495 from Revelar Software, 2350 E. Parleys Way, Suite 3, Salt Lake City, UT 84109; 800/669-5191). PunchBox is the ideal tool for making those long to-do lists that every construction job requires. (Other third-party software programs, such as Pocket Quicken, Go Figure Custom Calculator, and Equate Spreadsheet, are also available.)

Here's how PunchBox works. Say you've walked into a bedroom in the Smith residence to make a punch list. With PunchBox running on the Newton, it takes just three "taps" on the Newton's display to establish the exact location in the house of the punch-list items you will be entering. First, tap on "Smith Job" in the Unit menu; next, tap on "Bedroom" in the alphabetical list (Atrium, Bath, Closet, Den, and so on) in the Section menu; then choose "Ceiling" from the Location menu (Figure 1).

Individual punch-list items are entered the same way. Tap on, say, "Molding" in the Object menu, then tap on "Poor Quality" in the Nature menu to describe the type of problem. Finally, tap on a selection from the Priority menu, and assign responsibility in the Liability menu. (With

Figure 2. *PaperPort displays scanned images as "thumbnail" sketches. In the Macintosh version shown here, images can be grouped and filed in separate folders, and enlarged to full size for viewing.*

Newton's handwriting recognition feature, you can enter any of these choices — or any other text for that matter — by writing on the screen.)

The point is that in just a few seconds, you have entered a detailed task description into an electronic database of to-do items. The data includes a description of the problem, exactly where it is, who is to blame, and who should fix it. And because you've only entered the data once, there's less chance of a transcription error. More important, you can sort the list in several ways. You'd probably first sort a punch list by job, then by subcontractor, but you could also sort the list by problem. Knowing that one sub has the more problems than others is good information, as is knowing what problems occur most frequently. In fact, you can search all of the data stored in the Newton by key word, so if you only remember part of an entry you made weeks ago, you can still find the note. With enough practice, the Newton can replace your paper clipboards and notepads.

Because subcontractors' fax numbers are also stored in the Vendor section of PunchBox, you can fax the sorted list of drywall problems, for example, as soon as you transfer the information to your desktop computer. (Future versions of PunchBox will be able to fax directly from the Newton.) There are no fax forms and cover sheets to fill out, and no need to enter the same data two or three times. If you appreciate the power of the database and the speed of the fax, you can understand how Newton and PunchBox can help you.
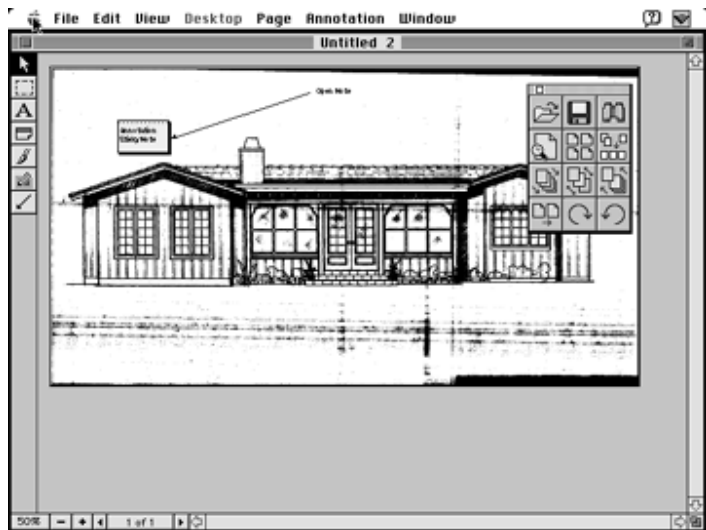

Figure 3. *Full-size images can be "marked up" using an electronic text tool, arrow tool, and sticky notes. Other icons are used to "stack" and "unstack" images, as well as to rotate and organize images.*
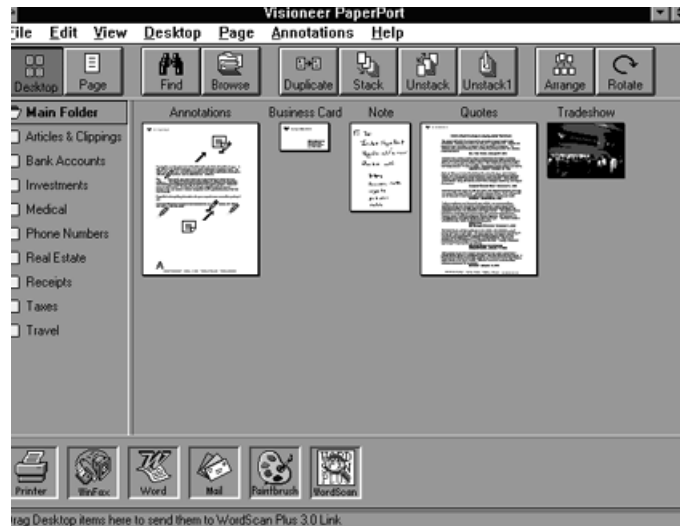

Figure 4. *In the Windows version of PaperPort, drag and drop a thumbnail image onto the appropriate icon to print or send it by fax or e-mail. You can also launch PaintBrush to edit the image, or use OCR software to convert the image to text.*

PaperPort ($399) is available directly from Visioneer (2860 W. Bayshore Rd., Palo Alto, CA 94303; 800/787-7007).

Single-Sheet Scanner

Another new office tool is the *PaperPort* scanner and software system. Like a fax machine, a scanner converts images on paper into digital images, which can then be stored and retrieved as electronic files. The PaperPort, which hooks up to the serial port on Windows machines and to the modem port on Macs and Windows, is a sheet-feed scanner with a resolution of 200 to 400 dots per inch (the average laser printer prints at 300 dpi). The PaperPort is 3 inches wide by 3³/4 inches tall, and only 12 inches long — small enough to sit on your desk between your computer and the keyboard.

When you insert a sheet of paper into the PaperPort, the system soft-ware launches automatically. Pages are scanned and displayed on screen as "thumbnail" images, which can be stacked into groups, named, and filed in separate folders (Figure 2). You can also zoom in to view the page at actual size. Once enlarged, each image can be marked up using an electronic version of a highlighter, a text tool, and sticky notes (Figure 3).

Stored image files can be retrieved and then faxed or sent via e-mail simply by dragging and dropping them on the appropriate icon (Figure 4). And images that come into your system via a fax/modem can be imported into PaperPort and stored with the other scanned images. (In fact, a PaperPort combined with a fax/modem and a laser printer eliminates the need for a separate fax machine and copier.)

These features are handy for me in dealing with my electrician, for instance, who lives by the fax. He sends me a daily report showing work finished and not finished, as well as a list of the items I need to accomplish before he can complete his work. The fax gives him an audit trail of information, and I use it as a to-do list for my crew. With PaperPort, I can make comments on his faxes and return them without ever having to print them. The PaperPort also comes with WordScan Plus. This optical character recognition (OCR) software converts a "picture" of scanned text into ASCII characters that are compatible with word-processing software.

At $399, PaperPort is a bargain tool for imaging, faxing, filing, editing, copying, managing, and archiving paper documents. The Windows version is also available with software called Zyfile — an industrial-strength filing system useful if you truly intend to "go paperless." A slightly bigger scanner, called the Scan Partner Junior ($599 from Fujitsu), holds 10 sheets and comes bundled with imaging software called Watermark. ■

Craig Savage, a longtime builder and computer user, owns Savage Co., in Carpinteria, Calif., and publishes the Macintosh Construction Forum *and* Windows On Construction *newsletters.*

If you have a question about computing in construction, address it to State-of-the-Art Contractor, JLC, RR 2, Box 146, Richmond, VT 05477.