

# THE HP Palmtop Paper

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(We bet you can come up with more!)

1. You or your company have a vertical DOS application or data that must be available wherever you are.
2. You want a stand-alone portable email machine — maybe you don't like swapping PC cards.
3. As a dedicated Flexpad user (DOS software that replaces built-in applications), you prefer a straight DOS machine (Flexpad is included on the free 1000CX supplemental disk).
4. You can order a 1000CX in a memory-size configuration (1 MB-64 MB) that will fit your needs.
5. You've always wanted to take apart a palmtop to see how it works.
6. You like new toys.
7. You want a dedicated Super Software Carousel machine (see p. 19) that you can run from a PC card or internally from a 8, 32, 64 MB palmtop.

## USED Palmtops

### Used means Like New!

We buy a lot of palmtops. We resell the best. We maintain very high standards for palmtops we resell. Those that don't make the grade are used for parts. HP engineering combined with Thaddeus Computing's quality control processes ensures that your Used palmtop will meet or exceed your expectations!

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	32 MB DoubleSpeed	785.95	#20LN
	8 MB DoubleSpeed	545.00	#2008
	5 MB DoubleSpeed	459.00	#20U5
	2 MB DoubleSpeed	379.00	#22DS
	2 MB	339.00	#2002
	1 MB DoubleSpeed	319.00	#21DS
	1 MB	279.00	#2001
	512K	119.00	#0955
	NEW!	NEW Low Price!	
1000CX	64 MB DoubleSpeed	899.00	64CD
	32 MB DoubleSpeed	659.00	32CD
	8 MB DoubleSpeed	409.00	8CXD
	5 MB DoubleSpeed	339.00	5CXD
	2 MB DoubleSpeed	224.00	2CXD
	2 MB	199.00	21CX
	1 MB DoubleSpeed	184.00	1CXD
	1 MB	159.00	10CX

Palmtop Warranties, Shipping & Handling see page 9.

# Editor's Message



**Ed Keefe**  
The FastAid Co.  
314 SW Logan  
Ankeny, IA 50021  
CIS-ID: 75300,3667

Topcards are one of the great features of the HP Palmtop computers. The one above has appeared on my Palmtop for the past seven years. The "DC" icon on the left side of the topcard is the first and last letters in the acronym for Des Moines Area Community College (DMACC) my teaching platform for the past 27 years. The topcard at the end of this message is new. The HP Palmtop Paper icon represents my moving from an old platform to a new one. Yet the more that things change, the more they stay the same: it's still me in the middle.

In this issue, you'll read about an oldie-but-goodie Lotus 1-2-3 application in the "Through the Looking Glass" column. It's an article based on class notes from 12 years ago when I taught symbolic logic. It was and still is a novel use of Lotus 1-2-3.

David Fisher blends the old with the new to project his idea that the Palmtop is a Talent Amplifier. You'll also get a taste of something new in Bill Childer's short article on how to mix a Palmtop with a digital camera to create an electronic photolab.

In his User to User column Hal Goldstein tells about his travels south and east while searching for the perfect palmtop and the ultimate Internet connection. If only Hal could have read Conrad Cox's article about the "Goin' Postal" email program he might have found a new way to keep in touch.

As I move from a highly structured platform to one that is less structured I see the need to better manage my time. Joy Soto Kocar's article is full of tips for doing this with the TIMETRACKER/LX and TIMELOGR programs on the HP Palmtop.

*Ed Keefe*



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## The HP Palmtop Paper

Increasing Your Personal Power By Expanding Your Palmtop's Potential

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# Letters

## D&A Software Clarifies

In the July/August 1998 issue of The HP Palmtop Paper Conrad Cox wrote an excellent article reviewing our product WWW/LX Plus. I wish to add a few points of clarification to several aspects of the article.

1. WWW/LX Plus Version 2 which was announced in April 1998 is a package of four programs; WWW.EXE, HV.EXE, POST.EXE, and NEWS2.EXE; all of which have been updated since the prior version of the package (released in June 1997).

2. There seems to be some confusion about the naming of the product and the programs in the product. Let me clarify: WWW/LX is the basic name of the package of programs. The first such package was released in October 1996 and it was called WWW/LX. It included WWW.EXE and HV.EXE, and together this constituted a Web browser. Later, in June 1997, we released the second package called WWW/LX Plus. This included WWW.EXE and HV.EXE, as well as the email client and newsgroups client. In April 1998, we released WWW/LX Plus Version 2.

3. WWW.EXE is a TCP/IP engine, a program that manages all the communication with the ISP and the internet. HV.EXE is a WWW document interpreter. POST.EXE is the program that manages the email as well as the graphical user interface for email (and newsgroups). NEWS2.

EXE is the program that sends and obtains newsgroup articles from the selected newsgroups. These articles are displayed as messages by POST.EXE. Both POST.EXE and NEWS2.EXE depend on WWW.EXE for all their communication needs, as does HV.EXE.

4. HV.EXE has always supported HTML 3. In some cases HV supports certain HTML constructs in a manner unlike what we may be used to from Netscape or MSIE.

5. Regarding Frames and Tables: These are two different constructs in HTML. HV supports both.

Frames Support: Frames are essentially multiple Web documents placed on the screen at one time. Due to the screen size limitations of the palmtop, we chose to create a screen which links to each of the Web documents that would typically appear on the screen. So you can still see all the components that make up a screen using Frames.

Table Support: This construct displays data such as columns of numbers. HV can handle tables just fine. However, many Webmasters use Tables to organize information on the screen such as text, images, etc. This presents a tough problem for HV. The screen limitations prevented us from being able to do the same "magic" as can be done on larger screens and so the choice was to either format a limited width cell, or simply string all the cells in one long vertical list. You can toggle these modes in HV by pressing Menu | Options | Tables.

6. The LXPIC topic in Conrad's article was written based on the initial release level of WWW/LX Plus Version 2. In quick succession during

April-May 1998, we released several updates to the package. In one of these versions we were granted permission by Stefan Peichl, the author of LXPIC, to use the programmed calls to LXPIC directly from within HV.EXE. This allowed us to "paint" JPEG images surrounded by text on the screen, just like we did GIFs before. This was a wonderful advance for our product, and we are very thankful to Stefan Peichl for this. In fact, GIFs are now also painted by LXPIC, and the speed of this program is amazing. This is the reason LXPIC is now packaged in the WWW/LX Plus Version 2 package.

7. HV really does not support FTP, the Internet File Transfer Protocol. It DOES support file transfer from the server to the palmtop (i.e. downloading only). FTP, as we employ in FTP/LX ■; a freeware on our Webpage, www.dasoft.com; transfers files from the server to the palmtop (command GET), as well as from the palmtop to a server (command PUT). The support for downloading is identical to the support other Web browsers provide.

8. Conrad was completely correct about the similarity in the graphical user interface between Post/LX and acCIS, a CompuServe access program, by Thomas Rundel. Indeed, Thomas wrote acCIS 4.0 and the READER.EXE programs at about the same time. POST.EXE replaced READER.EXE in WWW/LX Plus Version 2, but some of the flavor was retained, because it is excellent!

## Battery Comparisons

I have been trying out the new Duracell batteries designed for high drain devices. I also did two sets of Lithium batteries and one set of standard alkalines. I used each set until the palmtop's low battery warning went off.

Some impressions. The standard alkalines lasted about 18 hours. Both sets of new Duracells lasted about 28 hours. The Lithiums lasted about 38 hours. I was not able to run either of my PCMCIA modems with the regular alkalines. The palmtop showed a low-battery warning right when I plugged in the modem. The new Duracells were able to provide the high current required for online runs fairly well. The new Duracells did better than the regular alkalines, but still had some voltage drops. I was able to run the modem closer to the "end of life" of the Lithiums than with the new Duracells.

Overall, I found the new Duracells nearly as good as Lithiums for powering my palmtop with intermittent PCMCIA modem use. The regular alkalines lasted about half as long as the Lithiums, but didn't have to run the modem (since they couldn't anyway). The new Duracells lasted about 75% as long as the Lithiums and were able to run the modem.

Steve Carder 73561,1006

## Another Way to Back Up Your Palmtop

Avi Meshar  
President and CEO  
D&A Software, Inc.

A solution to backing up your C:\drive is to keep an exact replica of it in its current state on a flashcard or your desktop computer.

**SYNCDR16** facilitates this procedure by allowing you to synchronize a directory or directory tree with another one. If you like (?Delete "If you like?) add (?To insure that this happens?) you can set it up to run automatically each day, every 3 days, once a week, etc. from the Appointment program. It works the same as conventional backup/archive programs by copying and adding new or changed files and/or directories from source to destination. But SYNCDR16 is different than the other programs because it can delete files and directories in the destination that have been deleted in the source, thus maintaining an identical copy of your current system.

The same thing could be accomplished by deleting your previous backup and then creating a fresh one of the entire drive. However, with a large drive this could take a long time. Also for a person with an 8MB or 32MB C:\ drive SYNCDR16 can provide a significant advantage over the traditional backup programs. Usually after the initial full backup, if a file changes or a new one is created then other programs make an incremental backup of the drive. This adds the new or changed files to a new backup file and takes up even more space on the destination drive. SYNCDR16 eliminates this problem by updating and deleting files in the destination drive, so that you never use more space on the drive than the size of your source drive.

SYNCDR16 does not compress its backup which allows easy access to the files, if necessary. Of course, you could use a disk compression program like Stacker on the destination drive to make the maximum use of the space. Another advantage of not compressing the backup is the speed of operation. Compre-

sing an 8MB or especially a 32MB drive could take a long time and could waste precious battery life. SYNCDR16 has other features like creating a log of all the changes it makes. And perhaps the biggest advantage to SYNCDR16 is that it is completely free, thanks to its author Kyle York.

—Allen Solof  
[allensolof@boone.net](mailto:allensolof@boone.net)

### More Email Software

Just received my copy of *The HP Palmtop Paper* and was happy to see that the email theme worked out so nicely for you. I think that if you want to extend the discussion you could tell people about Pegasus Mail. This is a free program with DOS and Window versions. I started using this combo and love it. I like to be able to keep my HP and desktop programs synchronized and with Pegasus I can maintain and update the same folders, drafts, address books, etc. on both machines, and transfer back and forth between them easily. Pegasus has more features than the other HP programs. Caveats are that the DOS program is large, about 350k, and the folders, etc. take up even more space. It is worth it for me. The other thing is that it is harder to set up because it requires a packet driver installed. Also you would have to use Pegasus as your Windows email client. To get a copy of Pegasus for DOS and Windows, use your Web browser to do a Yahoo search for "Pegasus" or try [www.pegasus.com](http://www.pegasus.com).

—Allen Solof  
[allensolof@boone.net](mailto:allensolof@boone.net)

### LXPORE Author Writes

Allow me some comments to Gottfried Burckhardt's great article in the latest PTP. LXPORE, which was written by me, is NOT shareware, but freeware. It can be used absolutely free and I can guarantee no support for it.

LXFF ("LX Fast Find"), which was also mentioned in this article, can find entries in very huge, sorted, comma-delimited files. It works very fast, even if the file size is many MB. I wrote it for my own use to find addresses and phone numbers in an excerpt of "D-Info", a CD containing all German phone numbers. If anybody is interested in LXFF, please let me know.

Steffen Demuth  
[demuth@compuserve.com](mailto:demuth@compuserve.com)

### Anyone For Minix?

Richard L Dubs, Ph.D., has been hard at work trying to get the HP Palmtop to run the Unix operating system. Richard started by trying to get Minix to work on the HP 200LX. He writes:

"MINIX is a small UNIX operating system that has been written for educational and research purposes. It can run on an 8086 processor. However, it requires 100% hardware compatibility with the IBM XT to run properly. My goal was to see how far I could get with booting MINIX on the HP200LX Palmtop with little or no changes to the MINIX source code. The biggest problem has been getting the PCMCIA card to be recognized as a disk drive under MINIX. All of the built in drivers were burned into ROM and they don't fully conform to the current standards.

I have developed PCMCIA and BIOS INT13 Hard Disk Services for the HP200LX that allow someone to boot MINIX

from a PCMCIA ATA flash disk. MINIX is not stable yet on the 200LX, allowing you (at most) to login and type one command before it crashes. Nevertheless, I believe that by solving the PCMCIA problem, I have solved one of the hard parts of getting MINIX to run on the HP200LX, and I'm hoping that the Internet community will now help finish the job. The PCMCIA and BIOS services I have developed should be just as useful to boot and run LINUX-86 (ELKS) on the 200LX. I have reached the point of diminishing returns with my MINIX project and am forced to move on to other tasks. I do not plan on doing further development right now and that is why I am ready to turn the project over to the Internet community."

*Ed replies: My hat's off to Richard Dubs. What he has done is truly amazing. The downside of the accomplishment is that there is not much you can do with MINIX except get it running and play with it. There are very few, if any, applications that run under MINIX. So, in a sense, Rich may have found a solution in search of a problem. On the other hand, if you know of an inveterate Linux "hacker" who would take a look at the code and forge ahead with the Linux-86 project, we might have a Unix box in our pockets within the next year. Now that would be "something to write home (or The HP Palmtop Paper) about."*

*Richard has made all his code available for downloading from his web page at [www.erols.com/rld](http://www.erols.com/rld). When you visit the web page, you'll be able to see photographs of the HP Palmtop starting to run MINIX, proving that it can almost be done. You'll also be able to read all about what Rich has accomplished so far.*

# New Products!

This section lists new products of interest to users of the HP palmtop PCs.

HP Palmtop Paper Staff

## SOFTWARE

### BATLOG22.ZIP ■

Version 2.2 by Seiji Ieiri. This is the update to the battery logging program. Battlog is an EXM program that lets you keep an accurate track on your palmtop's batteries. A small TSR is included which loads from AUTOEXEC.BAT and writes battery voltage to a file at specified intervals. The EXM formats this data file and presents it as a graph.

Type Shareware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### BESTCLK.ZIP ■

Although not new, this file contains a full screen analog clock sporting Roman numerals a sweep second hand and the time in Tokyo, New York, London and Los Angeles in the corners of the screen.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also on CompuServe's HPHAND Library 11.

### CONVRTLX.ZIP ■

ConvertLX gives you the ability to translate between hundreds of different measurements: Area, Linear, Liquid, Speed, Temperature, Time, Volume, Weight.

Within each category are various types of measurements. These include all the standard ones (metric, US, etc.), plus a lot of older and more obscure ones, e.g., cubits.

Type Freeware  
Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### CHARGING.ZIP ■

The archive contains several programs that let you trickle charge, fast charge, set-/disable charging, show various battery info, initialize the Palmtop to NiCd, 5 mins timeout, disable serial ports and contrast.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### DOSEEDIT9.ZIP ■

If you enjoyed using the DOS editor that came with MS-DOS 5.0 but didn't like wasting valuable disk space because it required QBasic to run then this version of the editor may be just what you're looking for. It's called EDIT version 9 and comes directly from Microsoft.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.thaddeus.com](http://www.thaddeus.com)

### DOSVER21.ZIP ■

The user is surely familiar with the message "Incorrect DOS version" displayed on the screen. DOSVER is a handy way to overcome this problem. It is similar to the utility, SETVER, but adds several new features.

Type Shareware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.thaddeus.com](http://www.thaddeus.com)

### DOCHTML.ZIP ■

HP 200LX Memo to HTML Converter DOCHTML ver. 1.1 is a command line DOS appli-

cation that converts a HP 200LX's Memo file to a HTML file that can be directly published on the web. The formatting facilities available in memo editor can be used and they get translated to their HTML equivalent. Additionally, HTML tags can be embedded in the DOC file and they are also embedded into the HTML file.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### DOX110.ZIP ■

Dox solves these problems. Dox can convert to/from rtf/text/html. i.e. It is BIDIRECTIONAL. It is easy to use — in most cases you only have to specify two things on the command line. The input file and output file. Converts font size.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### FILMS100.ZIP ■

Robert L. Mitchell offers the FILMS.GDB file in this archive. It contains a simple HP Palmtop database of the top 100 movies of all time as ranked by the American Films Institute. The records in the database contain fields for the title, year, ranking, and an empty note field.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also on CompuServe's HPHAND Library 11.

### ICNVU.ZIP ■

ICNVU is an icon utility program for the HP200LX.

The original program was written by Gilles Kohl to show the usefulness of the PAL library for writing programs with the look and feel of the built-in software of the HP200LX. This source code has been modified to display 44 icons per page instead of 24.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

### MAKEHTM.ZIP ■

Version 1.00. This program is a simple command line program that converts ASCII files to HTML format suitable for WWW browsers (such as HV. Mosaic, Netscape, and Cello).

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.thaddeus.com](http://www.thaddeus.com)

### MPGT10.ZIP ■

HP Mileage 4.5 is a small utility that enables you to keep track of the mileage performance of your car.

It offers a graphical display of recent mileage and the ability to load the data into Lotus 1-2-3.

Type Freeware

Available on this issue's *HP Palmtop Paper ON DISK* and also at [www.palm-top.net/supernew.html](http://www.palm-top.net/supernew.html)

# Where In the World Is My HP Palmtop?

*Chris Lott gives his recipe for connecting a Global Positioning System Receiver to an HP Palmtop. You'll never have to ask for directions again!*

by Chris Lott

The Global Positioning System (GPS) that has become so popular nowadays grew out of a long history of radio-navigational aids over the past half-century. Early space-based navigation satellites in the 1960's led the way to the current GPS array of satellites that fly overhead. Originally intended for military and government use, GPS attracted national attention during the Persian Gulf War. These days the low price of GPS receivers has made many wide and varied applications of this technology available to the general public.

My first exposure to GPS technology came when I took on the job of researching advanced navigation techniques for a rocket booster. The project forced me to learn all about GPS, and I wound up connecting a Garmin III GPS receiver to my HP-200LX palmtop computer. As a result I'll never have to stop and ask for directions again.

## A Little of This and a Little of That

Even with a knowledge of GPS, it's no small task to hook a little GPS receiver to a tiny computer. I felt like a chef creating a new entree: 50% inspiration and 50% experimentation. It's definitely not something you can buy pre-mixed or half-baked. Putting together a GPS/LX system has to be done mostly from scratch. Here's my



The Garmin GPS Receiver

recipe for doing this. You may modify the recipe to suit your own tastes—and budget.

## Ingredients Needed

### 1. GPS Receiver

The GPS receiver I chose is the GPS III receiver from Garmin. It has three features of interest to me: (a) it's smaller and lighter than the HP Palmtops (b) it uses a serial interface permitting it to be hooked to other

equipment, especially my palmtop, and (c) it has an integrated moving map display that allows for stand-alone use. My Garmin GPS III cost about \$360 street price about six months ago. However, there are numerous suitable receivers on the market today of varying capabilities. Some exceptionally inexpensive units don't have a display. This, of course, would require the use of a computer such as a palmtop.

### 2. An HP 200LX

My unit has been upgraded to double speed with 32Mbytes of RAM. I've also invested in a 160MB flash disk drive. When I started using the GPS receiver I had a 5MB double speed Palmtop with a 30MB PC Card. That worked fine. However, trying to create a GPS/LX system with a 2MB, standard speed Palmtop and no flash card would be impractical if not impossible. The extra speed is desirable, the extra storage space of a



## ABOUT THE AUTHOR

Chris Lott spends his days designing electronics for Phase IV Systems, Inc., a small business in Huntsville, Alabama. He is currently working on a novel, low-cost avionics system for a NASA research program. Chris has a wife and three children, and when they aren't keeping him busy, he enjoys woodworking and ham radio. He can be reached at [rclott@ro.com](mailto:rclott@ro.com)

flash card is mandatory and the more space on the flash card the better

### 3. Tracking software for the Palmtop

You can use either the LXGPS program written specifically for the palmtop by Greg Renda<sup>1</sup> or GPSCGA by COMACS<sup>2</sup>. Both of these programs do similar things: track your whereabouts and display your position on a moving map. Each program has slightly different features. You should check them out yourself before deciding which one to use. Both programs are shareware so you can download them from the Internet for evaluation. GPSCGA requires registration to get the map conversion program needed to convert your map files to a format suitable for the palmtop, but it comes with a USA map and a simple grid map for evaluation.

### 4. A Desktop PC running Windows 95 or Windows NT and suitable mapping software

Unfortunately, there isn't a single inexpensive supply of maps. The least expensive approach is to purchase a digital Atlas program, and convert regions of interest into the right format. I chose the Street Atlas by DeLorme. It seems to be one of the most popular programs and has support from various third-party programs as well. The program requires a desktop computer running Windows 95 or NT. I haven't heard of an Atlas program that runs under DOS so I've resigned myself to using my desktop for this portion of the process. If anyone knows of any alternative methods, I would appreciate hearing from you. Feel free to experiment if you already have an Atlas or want to buy a different one. The principles are pretty much the same.

### 5. Cable

This is by far the most difficult part to get due to the proprietary serial plugs on both the HP 200LX and the on the Garmin GPS receiver. Fortunately there is a fellow who makes Garmin connectors in his kitchen<sup>3</sup>. You simply order the connector you want by e-mail. When the

connector arrives a few days later, you send a check for what you think it's worth. As for the HP end of the cable I'd recommend a connector from Shier Systems for \$19. You'll need to trim the cable to the desired length and terminate the free end with the GPS receiver connector. Before you go to the trouble of soldering wires together you can terminate the GPS cable with a DB-9 or DB-25 connector and hook it to an HP serial cable.

### Preparing the Ingredients

With the GPS receiver connected to your palmtop start the DATA-COMM application on the Palmtop and set it for 4800 baud N81. Turn on the GPS receiver and make sure that it's in the NMEA interface mode. If everything is working correctly you should see data records resembling the following: If not, then check your baud rate settings on both the palmtop and the receiver.

\$GPRMC,135642,A,3442.346,N,086  
36.515,W,001.5,186.9, 210198,001.  
9,W\*72

\$GPRMC,135646,A,3442.344,N,086  
36.515,W,001.7,186.6, 210198,001.  
9,W\*79

\$GPRMC,135650,A,3442.340,N,086  
36.516,W,001.9,186.3, 210198,001.  
9,W\*72

When you have a valid data stream flowing from the receiver to the Palmtop the question arises what can you do with it?

If you're a programmer, you could design a program to decode the incoming records. This would let you have a real-time display indicating your exact position. This has enormous impact on data acquisition and would be useful for "precision farming". However, to take full advantage of this capability, you'll need the NMEA interface definition. You can get a good overview of the NMEA protocol, at Paul Tarr's website<sup>4</sup>.

### Rolling Your Own Maps

Once you've installed an Atlas program on your desktop and learned

how to use it, you're ready to start making maps. The basic file format common to both LXGPS and GPSCGA is the .PCX graphics file. There are several techniques to use. The one I chose was to copy a map region to the clipboard in Windows NT and then save it as a .JPG file. Then I could use the LXPIC<sup>5</sup> program to convert the image to the .PCX format. There are surely other approaches as well.

### Using Paper

One can also use printed maps. Just scan the map into a computer and use the image processing software provided with the scanner to save it as a .PCX file. This technique would be suitable for topological maps (which I haven't found in electronic format) and perhaps National and State Park trail maps.

### Calibrating The Map

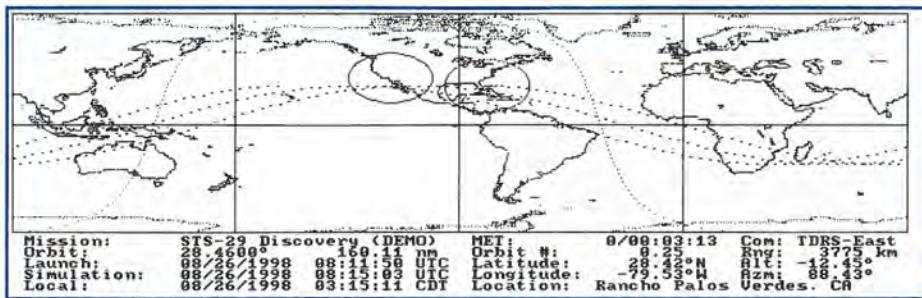
Once you have a .PCX file you must calibrate it for use by either of the two tracking programs mentioned above. This process involves identifying two or three points on the map, and giving their precise location (latitude/longitude). Once calibrated, the programs know where you are (when presented with GPS receiver data) with respect to the map image.

### Moving Map Display

Using the calibrated map(s), the GPS program you selected, and your GPS receiver, you can watch your progress on the palmtop screen as you travel around the region defined on the map.

### Where Are The Satellites?

Finally, you might want to dabble with satellite orbital prediction. Knowledge of the satellites' position at a given time can show you when you have good or marginal GPS coverage. This is especially true if you have a partially obstructed view of the sky. I found two programs which can track satellites on the palmtop. Both programs are written by David Ransom. The most suitable for run-



Screen 1: Demo of STSORBIT on HP Palmtop

ning on the HP-200LX is STSORBIT<sup>5</sup>. This program reads in standard NASA 2-line orbital Keplerian elements, and computes the satellite track, displayed atop of a world map, much like the one you see in Mission Control in Houston. This is an older program, but is still entirely functional (Screen 1).

Another option, which runs "much" more slowly on the 200LX, is the latest version of his program, STSPLUS<sup>6</sup>. The advantage of the new program is that multiple satellites can be displayed simultaneously — for example, the entire GPS constellation. It looks really neat, but be prepared for some long waits. I recommend that you learn to operate STSPLUS on your desktop before you migrate it over to the palmtop.

#### So What Now?

First of all, the particular GPS receiver that I purchased (the GPS III by Garmin) is useful by itself without any computer. I took my receiver on my recent family vacation where we used it to help us find our way several times when we were lost.

As for the uses to a palmtopper, let me suggest a few things:

1. small, low power position/time data logging capability
2. moving map display of arbitrary scale and detail
3. upload/download of waypoint and route data from/to the GPS receiver's internal memory.

Admittedly many of these functions could be performed with a larger computer, but the flexibility and size of a palmtop really make it shine in these applications. ■

<sup>5,6</sup>STSORBIT and STSPLUS are both available from <http://users.sedona.net/~dran/som/stsplus.html>

STSORBIT Version 9201 (STS9201.ZIP) is suitable for use with all IBM-compatible computers including 8086 and is compatible with CGA, EGA, and VGA display adapters. Lacks many of the features in STSPLUS and was last updated in January, 1992.

#### Commercial products mentioned in this article

**LXGPS** can be downloaded from this web site: [www.jps.net/renda/greg/](http://www.jps.net/renda/greg/) or from the author, Greg Renda, at [ggreg@ncd.com](mailto:ggreg@ncd.com). It is also available on the previous issue's *The HP Palmtop Paper ON DISK*.

**GPSCGA** can be obtained by contacting COMACS Enterprises at [103246.3642@compuserve.com](mailto:103246.3642@compuserve.com)

For **Garmin custom cables** contact Larry Berg's Purple Open Projects at home. [cdsnet.net/~purple/index.html](http://cdsnet.net/~purple/index.html)

For **more information about GPS** visit Paul Tarr's website: [www.inmet.com/~pwt/gps\\_gen.htm](http://www.inmet.com/~pwt/gps_gen.htm)

**STSORBIT** and **STSPLUS** are both available from <http://users.sedona.net/~dran/som/stsplus.html> and on this issue's *The HP Palmtop Paper ON DISK*. Palmtop users will want STS9201.ZIP.

#### NOTES:

A good overview of the technical details of GPS can be found at this site at the University of Texas: [www.host.cc.utexas.edu/ftp/pub/grg/gcraft/notes/gps/gps.html](http://www.host.cc.utexas.edu/ftp/pub/grg/gcraft/notes/gps/gps.html)

<sup>1</sup> LXGPS can be downloaded from this web site: [www.jps.net/renda/greg/](http://www.jps.net/renda/greg/) or from the author, Greg Renda, at [ggreg@ncd.com](mailto:ggreg@ncd.com).

<sup>2</sup> GPSCGA can be downloaded from: [lakecumberland.com/gps.html](http://lakecumberland.com/gps.html) or by contacting COMACS Enterprises at [103246.3642@CompuServe.COM](mailto:103246.3642@CompuServe.COM).

<sup>3</sup> Larry Berg's Purple Open Projects at [cdsnet.net/~purple/index.html](http://cdsnet.net/~purple/index.html) for ordering information.

<sup>4</sup> Paul Tarr's website: [www.inmet.com/~pwt/gps\\_gen.htm](http://www.inmet.com/~pwt/gps_gen.htm)

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# Goin' Postal: A Utility Program That Does One Thing Well—Receive and Send Email

*If your only online activity involves receiving and sending email then this tightly woven program will do what you want with a minimum of fuss and bother.*

by Conrad Cox

Most palmtoppers I speak with believe that no matter how much storage space their pocket companions have the space tends to become occupied with programs, databases and other files. So long as a given program has the needed functionality, a smaller program is a better program.

Steven Lawson kept this size idea in mind when he wrote Goin' Postal, a shareware email client for the 100/200/700LX. Despite a name which is either meant as a joke or is somewhat lacking in sensitivity, Goin' Postal (GP) does a good job of providing email online automation and off-line writing, reading and replying in the smallest of palmtop footprints.

According to the author, GP will take up as little as 115kb of space on the palmtop. The memory and storage footprint requirements allow even a 1 megabyte 100/200LX to do off-line reading and replying while keeping the PC Card slot free for a modem.

GP accomplishes some of its size magic by concentrating on electronic mail and nothing else. Some palmtop mail clients combine email, telnet, ftp, and web clients into one, all-inclusive package. If all one needs is email,

the other features use up precious storage space and require more system memory to run.

To make the program as small as possible author Steven Lawson did not use a graphical interface in GP. Instead GP uses a "text-based" menu-bar somewhat like the menu bar seen in the palmtop's built-in applications. According to Lawson, leaving the graphical interface behind saves that much more space.

Because GP is not written with the graphical interface, it is not compliant with the 100/200/700LX Zoom (Fn-SPACE) function. This means that some parts the screen will be lost if Zoom is used. If you are like me and want to see the entire screen, this could be a detriment when trying to read mail in less than adequate light conditions.

On the plus side, some parts of

GP will display most of the critical data using the middle font. In any event, the use of a third party font (like Andrew3) is a good idea.

## Installation

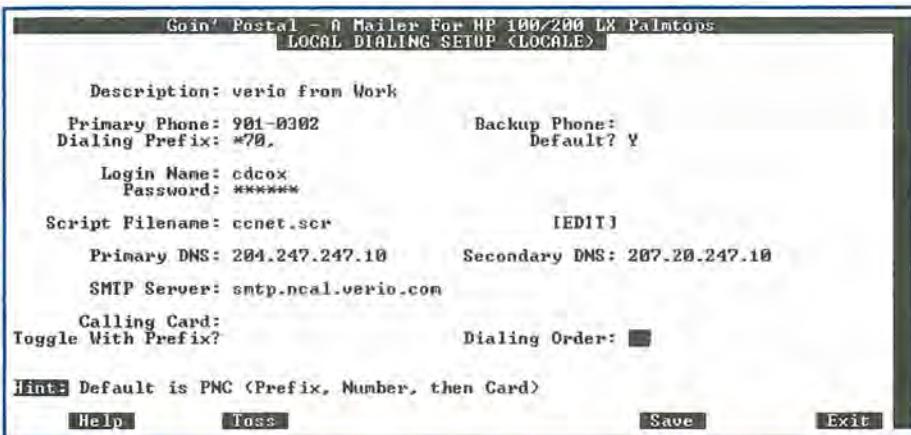
I downloaded the evaluation copy of GP onto my 2 megabyte 100LX from its home page at <http://home.earthlink.net/~sdlsaginaw/>. The file expands into a main directory and a sub-directory. The sub-directory contains several non-essential files like alternate editors, viewers and text files containing registration and setup information. GP can be configured to work with many editors and viewers. This flexibility lets the user decide whether to choose a small editor (less space at the cost of fewer features) or a larger editor (more features, but taking up more space.)

I found GP to be fairly easy to set



## ABOUT THE AUTHOR

Conrad Cox is Training Manager for a major communications company in California. The rest of his time is spent with his family, surfing the Internet, maintaining a user group web site, and watching his daughter play softball. You can reach him at [cdcox@ccnet.com](mailto:cdcox@ccnet.com), at [http://ourworld.compuserve.com/homepages/conrad\\_cox](http://ourworld.compuserve.com/homepages/conrad_cox), or <http://www.ccnet.com/~cdcox/>.



Screen 1. The Locale screen customizes ISP information for dialing from a specific location. Specific prefixes and calling card information may be entered. The order that the prefix, the phone number and the calling card are used can easily be changed.



Screen 2. Goin' Postal's Address screen is simple and easy to understand. The Hint message at the bottom of the screen displays a different message when the cursor moves to a different field.

up. First, an additional line must be added to the AUTOEXEC.BAT file to make the program aware of the local time zone. The SETUP.TXT text provides easy to understand instructions on what the line should be.

The documentation also provides instructions on how to add an Application Manager entry, an important setup step if GP will be run from within System Manager. The documentation suggests allocating 300kb of memory to GP. But you'll need to add more if you use a large editor. I tried to use D&A's PalEdit (PE) as my editor. The 300kb allocation just wasn't enough memory for GP and PE under System Manager. Even 350kb isn't enough when my Phone Book and Appointment book are open. When I terminated System Manager and ran GP from DOS; PE and GP ran just fine. However, I performed all testing while in System Manager on my "stock" 2 Meg 100LX. The author sug-

gests using a DOS memory enhancement like MaxDOS to maximize available program memory which is probably a very good idea.

### Setting Up Internet Providers and Locations

Before going on line, Internet Service Provider (ISP) or host computer information must be entered into GP. The supporting screens are fairly self explanatory. The SETUP.TXT file gives some tips on where to find the information one needs. Of course, your ISP customer service department or the host computer's system administrator is the best place to go for that information.

GP will handle multiple ISPs and mail hosts. The program can easily switch between access points, such as dialing from home, dialing from Texas, dialing from Las Vegas, etc.

Being able to select different access points has benefits. It's easy to change ISP prefix and calling card parameters just by selecting or creating a new access point. This is especially useful for those who must access three or four host computers while traveling (see Screen 1).

Most screens in GP have context sensitive Help available by pressing F1. Also, many screens have a Hint field which gives more information about the field currently being edited. I really like the Hint fields. Sometimes these setup screens aren't accessed

for months and the hint may provide enough of a memory jogger to avoid having to look at the more wordy Help screen ( see Screen 2).

During setup I created a log-on script. The script language is uncomplicated. The SETUP.TXT provides a sample script which can be adapted and modified as needed. I used the provided script without change.

### Features

I was surprised to see the array of features available in GP. For example, GP will accommodate as many Internet hosts as you need. The easy access to these multiple hosts will please palmtoppers who log into several hosts. Loading GP will display the Current Program Status screen which tells whether there are unread messages to retrieve. It also shows the current mail host, amount of free disk space and more.

By pressing the ONLINE key (F9), GP goes online to do the user's bidding and gives the user extreme flexibility in how mail is captured. Several setup defaults determine whether to download full messages or just the headers. GP can be set to download messages that do not exceed a user-defined size. Other download features include the ability to download only new messages or download messages while keeping the messages on the computer host (Screen 3).

GP's In Box and Out Box provide plenty of information about the downloaded messages. The In Box shows what messages are new or read. If only headers were downloaded each header will be marked by the user to get or skip the message, or to delete it (Screen 4, 5).

One feature I sorely miss is the ability to sort information by subject or by the "from" address. For someone who receives less mail than me this missing feature is no great loss and not having it saves space.

Messages may be saved in the SAVED box. Messages that are deleted will either be removed from the Palmtop or moved to a trash folder

for disposal later.

GP has one address book which has room for up to eighteen entries. Each entry may have as many as four individual addresses. This lets you use an entry as a small mailing list. For example, one can set up an entry called "Family" containing up to 4 email addresses for Mom, Dad, Aunt Mary and Uncle Jim. GP's address



Screen 3. At a glance one can tell how many new messages have arrived, how many headers have been downloaded, and how many messages are queued for sending.

book capabilities may seem somewhat small. But for personal email needs, it should meet most people's needs.

### Dialing Configurability

GP makes it easy to activate and deactivate prefixes and suffixes in the dialing string. Prefixes include things like \*70 to turn off Call Waiting and 9 to get an outside line from inside a hotel. Suffixes include calling cards dialed after dialing the computer modem number.

I especially like how the calling card information can be placed either before or after the ISP number. For international travelers, this makes changing a configuration a snap.

### Filters and Rules

GP also features the use of filters. Through the use of filters, the user can choose to ignore any or all mail that can be defined in advance. With GP, a text file is used to create and store formulas, or "rules," which tell GP what to do with mail that matches a certain criteria.

For example, to ignore all mail on the server except those messages from anyone at work, you would write the following formula: GET IF FROM HAS "my\_work.com"

The rest of the mail will stay on the server or follow whatever additional rules have been defined. Separate rules may be defined for each computer host or Internet provider. The rules help me prioritize my mail. This is especially important since I subscribe to several mailing lists. Sometimes these lists generate hundreds of messages. I need a way to

Goin' Postal - A Mailer For HP 100/200 LX Palmtops DIRECTORY OF UERIO FOLDER					
Num	?	Date	Whom	Subject	Size
1	R	07-26 07:17a	nus10009etc.umn.edu	Re: ANN: New version of XICE av	2.7K
2	R	07-24 03:19p	Hobchi@AOL.COM	Re: Heat while charging	2.3K
3	R	07-26 08:41a	yuml@NETVIGATOR.COM	Win 31 on HP200LX?	2.2K
4	R	07-26 01:27p	tc97t@timon.acu.edu	[windowsce-talk] RE: ANN: www.p	2.7K
5	N	07-26 01:28p	craig@palmpc.org.uk	[windowsce-talk] RE: ANN: www.p	2.3K
6	N	07-26 01:30p	tc97t@timon.acu.edu	[windowsce-talk] RE: ANN: www.p	2.9K
7	N	07-26 02:00p	scott@kbdconnection.com	[windowsce-talk] RE: ANN: www.p	3.2K
8	R	07-26 02:44p	hobchi@JUNO.COM	Re: Win 31 on HP200LX?	2.3K
9	N	07-26 02:59p	jklam@austin.metrowerks	[windowsce-talk] Mobile Service	2.3K
10	R	07-24 10:00p	TimCocker@AOL.COM	Re: HP200lx and Ericsson SH888	3.6K
11	N	07-26 03:25p	KOxwang@HEM.COM	[windowsce-talk] RE: Office Dep	2.2K
12	R	07-26 04:28p	Lee.Vick@COMPAQ.com	[windowsce-talk] Viatek Vibrant	3.1K

Screen 4. The In Box provides data about incoming messages. The data and time are converted from the sender's local time to local time as defined by the setup file. Column with ? mark shows whether message is New or Read.

Goin' Postal - A Mailer For HP 100/200 LX Palmtops DIRECTORY OF OUT FOLDER					
Num	?	Date	Whom	Subject	Size
1	S	07-08 10:29p	WMott@aol.com	Re: Reunion Committee	866
2	Q	08-02 11:09a	plex04@aol.com	On vacation	362
3	Q	08-02 12:29p	abra@cadabra.org	Your Magic Products	256
4	W	08-04 02:16p	harry@palmtop.com	tomorrow's meeting	333

Screen 5. Out Box is formatted like the In Box. The ? column tells which messages are Queued for sending, are in the process or being Written. Function keys afford access to the most used functions.

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separate my "normal" mail from all the mailing list messages. Although not documented in the SETUP.TXT file, I found a way. I created another mail host with a different name (Hpx) but the same parameters as my default mail host. I then created a different rules file telling GP to download the mailing list messages. Now I have two mailboxes: one for my "normal" mail and another for my mailing list messages.

To keep stored files as small as possible, GP internally compresses the messages until the mailbox is opened for reading. This feature can slow the process of opening a mailbox, so GP can disable this feature if the user wishes.

#### For the Technically Minded

GP includes diagnostic software should there be trouble getting the packet drivers to load and run. GP uses external packet programs. These

freeware programs come with some documentation as well as some batch files provided by GP author Lawson. The user manual provides complete information on using the diagnostics.

#### Conclusions

I was surprisingly pleased with Goin' Postal. It has features that travelers will find indispensable. It's easy to use and can easily be modified to do whatever you want to do with your email.

GP is targeted to the palmtopper who needs the most email power in the smallest memory footprint. While it falls short in a few areas (no Zoom, a small but adequate address book, and no sorting in the in and out box views), Goin' Postal's power to size ratio cannot be beat.

Goin' Postal is shareware. A 30-day downloadable demonstration is available. The demo is a full version of the registered program. After 30

days, a "nag" screen reminds you to register. Support is provided by the author via email. The Shareware fee is \$29. Upon registering you receive a registration key and a printed user manual which is the same size as the 200LX. The registration fee is good for a lifetime of product upgrades. ■

#### Shareware/Freeware mentioned in this article

**Goin' Postal (GP)** — ■ (shareware) may be downloaded from <http://home.earthlink.net/~sdlsaginaw/> and is available on this issue's *The HP Palmtop Paper ON DISK*.

**PalEdit (PE)** — (freeware) may be downloaded from [www.dasoft.com](http://www.dasoft.com) and is available on the CD Infobase from Thaddeus Computing, Inc.



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# Where Does The Time Go?

*Time = Money. The TIMETRACKER/LX and TIMELOGR programs for the HP Palmtop not only help you bill for your time but also help you make better use of the time that's left over.*

by Joy Soto Kocar

If you're like me, the question "Where does the time go?" arises all too often. My right-brained thinking gets the better of me and I lose my focus. I end up going willy-nilly between tasks, much to my own chagrin.

At the same time I have to keep close track of my time since I charge for my services by the hour. How I spend my time has a direct impact on my bottom line, and knowing the details helps me in future job estimates.

I decided that the left side of my brain could use some help keeping me in focus and keeping my business in the black. So I spent a small amount of time and found not one but two software tools for tracking billable time. I soon discovered that they both could serve as great time management tools.

## Time Tools

The first tool is TIMELOGR.WK1. It's a spreadsheet program developed for the HP Palmtop. It was written by Ben Miller, who contributed it to the HPHAND library on CompuServe. The other tool is the commercially available TIME TRACKER/LX program created by D&A Software. It is designed specifically for the HP Palmtops and has the familiar look and feel of the built-in applications.

TIMELGR maintains a database

TIMELOGR							READY	
DATE	D	CLIENT	START	TIME	END	IN SH	\$/HR	REFERENCE
01/26/98	Tu	Jones	02:00 AM	02:45 PM	02:45 PM	00:45	\$35.00	
01/29/98	Th	Jones	02:00 PM	03:00 PM	03:00 PM	01:00	\$35.00	
02/01/98	Su	Jones	10:45 PM	11:45 PM	11:45 PM	01:00	\$35.00	
02/02/98	Mo	Jones	10:55 AM	02:00 PM	02:00 PM	01:05	\$35.00	
02/03/98	Tu	Jones	02:00 PM	02:30 PM	02:30 PM	00:30	\$35.00	
02/11/98	We	Jones	09:00 AM	12:00 PM	12:00 PM	03:00	\$35.00	
02/13/98	Fr	Jones	09:00 AM	02:00 PM	02:00 PM	03:00	\$35.00	
02/17/98	Tu	Smith	09:00 AM	02:00 PM	02:00 PM	03:00	\$70.00	
02/18/98	We	Smith	10:00 AM	01:00 PM	01:00 PM	01:00	\$70.00	
02/23/98	Mo	Smith	09:00 AM	03:00 PM	03:00 PM	04:00	\$70.00	
02/24/98	Tu	Jones	10:45 AM	01:00 PM	01:00 PM	01:15	\$35.00	
03/03/98	Mo	Smith	02:00 PM	09:30 PM	09:30 PM	07:30	\$70.00	
03/04/98	Tu	Jones	01:29 PM	02:36 PM	02:36 PM	01:07	\$35.00	
05/05/98	Tu	Jones	01:01 AM	* ACTIVE *			\$35.00	
27-Aug-98			11:11 AM					

Screen 1: Opening Screen of TIMELOGR

of tasks, the time spent, and the billings for each session. It keeps a running total by session, by day, by week, along with a grand total for the entire spreadsheet. TIMELOGR has its own menu system with a rather complete set of macros. It's a very well conceived and executed spreadsheet (Screen 1).

TIMETRACKER/LX also maintains a database of tasks, showing the date, start time, duration, category information, and memo in tabular form. It's more flexible than the TIMELOGR spreadsheet in organizing the data and showing summary information in a variety of ways (Screen 2, next page).

## How I've Used These Tools

For sure I use these tools to keep track of billable time. It's much easier (and more accurate) to keep track of my time electronically than manually. Having it on the palmtop guarantees that I'll do it! At any given moment, I can determine exactly how much time I've spent for a client or a project. If I'm maintaining a timesheet for a client I can transfer the totals at the end of the day to my desktop for printing. Though both the time tracking programs have report printing capabilities I've yet to find the time to explore this feature.



## ABOUT THE AUTHOR

Joy Kocar is President of Integral Solutions, a technical services company specializing in engineering, scientific, biomechanical and software documentation as well as providing thermal, hydraulic and mechanical analysis and design services. Joy can be reached by email at [kocar@compuserve.com](mailto:kocar@compuserve.com)

#### **REVIEW: TIMETRACKER/LX and TIMELOGR**

TimeTracker/LX: A:\NWK\TTT (19/19)				27-Aug-98 11:17 am
Date	Time	Dur.	Act./Client/Proj.	Memo
14-Feb-96	8:44a	1:20	Beta Mail	
14-Feb-96	10:05a	1:01	Hphand	
14-Feb-96	11:30a	1:08	Hphand	
14-Feb-96	2:18p	1:01	HP100LX Prog	Macro Chain with Xr
15-Feb-96	8:57a	0:18	Arche Mail	
15-Feb-96	9:16a	0:43	Beta Mail	
15-Feb-96	10:00a	0:33	Hphand	
15-Feb-96	10:48a	1:09	Hphand	
15-Feb-96	9:00p	0:32	Fotofolie Mail	Agenda Mail
16-Feb-96	8:31a	2:45	Hphand	
16-Feb-96	4:51p	1:34	Beta Mail	>C:\TTT\960216a.MEM
19-Feb-96	9:45p	0:18	Beta Mail	Beta D Drive A and
19-Feb-96	10:40p	0:33	ODAT	SNDK Studies

Screen 2.: Opening Screen of TIMETRACKER/LX (Demo)

S: PR ^DATE		U	U	SEARCH
I	*** TIMELOG REPORT ***			
1	DATE: 05/19/98			
2	CLIENT: Smith			
3	4			
5	DATE ACTIVITY	DAY	\$DAY	
6	01/28/98 Revised Proj schedule. Tel w/JP	0.9	\$0.9	
7	02/18/98 Met w/John	0.0	\$0.0	
8	02/18/98 Review Field notes, spec, etc.	0.0	\$0.0	
9	02/19/98 Project meeting	0.0	\$0.0	
10	02/23/98 Misc hardware issues, FEA.	0.0	\$0.0	
11	03/03/98 Revised control specs. Dinner meeting.	7.5	\$7.5	
12				
13				
14				
15				
16				
17				
18				
19				
20				

Screen 3: TIMELOGR Report (Demo)

Date	Time	Dur	Act	/Client /Proj.	Memo
Categories					
<b>Totals:</b>					
Arche		0:18	→		\$0.00
Beta		6:02	→		\$0.00
Compuserve		11:26	→		\$0.00
Darkroom		0:00	→		\$0.00
Fotofolie		0:32	→		\$18.67
HP100LX		1:01	→		\$0.00
Hphand		6:53	→		\$0.00
Mail		5:04	→		\$18.67
Meetings		0:00	→		\$0.00
Phone Calls		0:00	→		\$0.00
Portfolio		0:33	→		\$0.00

Screen 4: TIMETRACKER/LX Category Listing (Demo)

The screenshot shows the TimeTracker/LX application window. The menu bar at the top includes 'File', 'Edit', 'Time', 'Dur.', 'Act.', 'Client/Proj.', 'Memo', and 'Options'. A context menu is open over a list of items, with 'Editor' set to 'C:\Wrd\vdlx.exe'. The 'Options' dialog box is displayed, containing settings for sorting, automatic time update, granularity, custom keys, smallest coin value, decimal places, default rate, and time entry modes. The 'Advanced mode' checkbox is checked.

## Screen 5: TIMETRACKER/LX Options Let You Pick An Editor

## **Doing Business With TIMELOGR**

Whenever I start a project I can press ALT-S, enter the client or other identifier and the billing rate. When I'm done, I press ALT-F. That's it! If I need to make changes to the times, I press ALT-E. For billable time, I use a 4-letter project identifier, which I also use as a prefix to name all files relat-

ing to the project (Screen 3).

Over the course of the day, I can see subtotals for the session, day and week, and total billings for the spreadsheet. All of this is done automatically.

TIMELOGR has some handy sorting capabilities. Chief among them is the data in column C which is used to categorize the session by client, project, etc. If I'm keeping a timesheet

for the day, I press ALT-C to get the day's totals for each category.

### **Keeping Track Of Business With TIMETRACKER/LX**

TIMETRACKER/LX automatically opens the last active log. To start an entry I simply press F2 (Add), which creates a new entry based on the last selected entry, containing the current date and time as the start time and default values for the Activity, Client, and Project fields. When I'm done with the task, I just press F7 (Stop Now). That's all it takes (Screen 4)!

TIMETRACKER/LX has a super-category called Category, with sub-categories called Client and Project. In advanced mode, the Activity can be linked to multiple Client, Project and Category selections. I use the Activity field to classify my tasks, such as: Design, Develop, Manage, Analysis, etc. I associate an entry with a Client and Project. I also link each Activity type to a Billable, Overhead, or Personal super-category. Although TIMETRACKER/LX allows multiple links in advanced mode, I prefer to make them exclusive to these three. TIMETRACKER/LX also has a Memo field that not only lets you jot down notes but also has some calculation capabilities. For example, I can adjust the cost, override the duration time, override the hourly rate or, if I have a fixed number of hours to work on a project, I can keep track of the remaining time (Screen 5).

TIMETRACKER/LX log files are compact, compared to TIMELOGR, though the program itself consumes more memory. TIMETRACKER/LX allows me to trim the log, depending on the filter I specify, and save to an archive. By setting no filters, I can clear the log, but still maintain the structure (i.e. categories), which is a great time saver.

In an instant, TIMETRACKER/LX allows me to view my data in a variety of ways, either with filters or views. I can select individual records with the Spacebar, and choose Only Marked on the Filter menu. I can set the filter

for the current date and get a synopsis for the day which gives the number of hours logged and billed.

#### Evaluating My Time Usage

More significantly, I also use both these programs as time management tools. All too often, I suspect that I'm not using my time in the most effective manner. I've used both TIMETRACKER/LX and TIMELOGR to confirm these suspicions.

Time management authorities recommend keeping a time log to get a clear picture of how you spend your time. They advise doing so at least once a year or when your situation changes significantly. How we think we use our time can be wildly different from how we actually spend it. Both TIMETRACKER/LX and TIMELOGR make it quite easy to keep track of where I've squandered my time. When doing a time usage analysis I like to keep my log constantly open, so that I can make entries on-the-fly.

As far as keeping track of billable time, both programs fill the bill. However for time usage analysis, I prefer TIMETRACKER/LX primarily because it allows me to pick from a list of categories or speed search. I simply start typing what I'm looking for and each keypress jumps to the first matching category. This reduces the effort in making entries. As far as changes are concerned, if I want to rename a category, I simply use the Edit menu, make my changes, and it is reflected throughout. In TIMELOGR I would need to search and replace all entries manually.

The little conveniences that TIMETRACKER/LX provides, has made an otherwise tedious exercise more bearable and even at times enjoyable. I find myself wondering, how much time do I really spend doing "office-organizing." All I need to do with TIMETRACKER/LX, is to add another Activity: simply select Edit Activities (F4) then F2 (Add), enter the name, associate any categories, edit the hourly rate, and press F10 when done. The Activity type is now always available.

## Put Time On Your Side!

The following are some resources that I've found to be very helpful, and have turned to time and again.

*First Things First*, Stephen Covey

*Organizing for the Creative Person*, Dorothy Lehmkuhl and Dolores Cotter Lampung

*Manage Your Time, Your Work, Yourself*, Merrill E. Douglass and Donna N. Douglass

*The Time Trap*, Alec Mackenzie

*Time Power*, Charles R. Hobbs

*Simplify Your Life With Kids*, Elaine St. James

*Speed Cleaning*, Jeff Campbell

*Getting Organized*, Stephanie Winston, 1991

*Time Management for the Creative Person*, Lee Silber

*How to Get Control of Your Time and Your Life*, Alan Lakein

*Time Management for the Unmanageable*, Ann McGee-Cooper

I use the Resource column to indicate the level of importance and urgency. For example, I set A = Vital (urgent \*and\* important), B = Important (but not urgent), C = Limited value (urgent but not important), D = Complete waste of time (neither urgent nor important). Anything that will give me insight.

I never used to be able to make the tracking exercise last the full week. Ironically, it seemed like such a waste of time, but with these tools, especially TIMETRACKER/LX, I was astounded to discover that I was maintaining 24-hour logs for over a week!

The reason I tend to do a 24-hour log is to get a complete picture of how I spend my time. It seems like the work day never ends, and neither do the chores. How is that? Luckily I have a very flexible schedule so I can intermingle tasks. TIMELOGR assumes that a session occurs in a single day, in other words, it doesn't extend over 2 days. So when doing a 24-hour log, I enter the time I go to bed then finish that session at 11:59 p.m. and start another session at 12:01 a.m. for the following day. When I get up, I finish that session. TIMETRACKER/LX doesn't have this same restriction.

I try to check myself every 30 minutes or so and make entries as necessary. It's better to make entries every time I shift activities so that I don't miss anything. Unfortunately my tendency is to shift my attention too frequently. I have to remind myself to FOCUS: Follow One Course Until Successful, a nice acronym I picked up from a time management book.

I ask the following questions, to try to keep myself focused:

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- What is the best use of my time now?
- Am I wasting my time?
- Is there a way to simplify this task?

I dare not wait until the end of the day to make entries as my memory is never as accurate as I think. I've noticed that by entering activities on the Palmtop as I do them, I become painfully aware of how I'm spending my time. This has a subtle way of forcing me to be more selective of what I do.

### Making Sense Of It All

So, I have all this data, now what do I do with it? Here again, I use the handy filters and views. The view I use the most is the Activity Totals. It gives me all the hours logged for each activity type, and the total time logged. From this I can calculate the percent time spent on each and the average number of hours spent per day. In the future I plan to export the information to a spreadsheet and have calculations done more automatically.

I can also use filters and views in combination. For example, I can set the filter for the current date, and then use the Activity Totals view. This gives me the breakdown for the day. When it's time to review my log, I try to consider the following:

Look for any patterns. For example, what size are the chunks of time I generally use? If that is intrinsic to the job then I must learn to break up tasks to fit those time chunks.

Who or what caused the most interruptions? Are they built into the job? If so, schedule them in. This doesn't hold true however, for toddlers. "Okay Junior, you can interrupt me between 11:00 and 11:30 a.m. today." Not likely.

How many things did I do that I planned to do? How many things did I put off? In other words, to what extent did I achieve my main goals for the day?

Was my time spent in proportion to my priorities? How much of my time was spent on high priority tasks compared to the low priority tasks.

What low priority tasks can be eliminated? This tells me what busywork I used to successfully procrastinate.

What activities could I spend less time on and still obtain acceptable results? I like this one a lot, because it has prevented me from obsessing over details.

What activities could have been delegated? Not too many options here for a small business such as mine.

What telephone calls, meetings, or visits could have been reduced or even eliminated?

How might I consolidate or eliminate routine tasks?

Did I take time out just for myself? I hardly ever pass this test.

What do I want to spend more time doing? Less time?

Most importantly, am I happy with the way I've spent my time? (Trick question.)

I find the following general time management tips from Lehmkuhl & Lampert to be the most helpful. They are geared for right-brain dominant people like me.

Decide what to do first, since divergent thinking produces multiple possibilities.

To avoid bouncing from one activity to another, choose the best time for a given activity.

Concentrate on one aspect of a project at a time.

Make a realistic estimate of how long each task will take.

Do difficult things during peak times—the time of day (or even week) when I am most productive. Conversely, I schedule my "brain dead" tasks during my energy valleys.

I'm never able to address all factors, but just solving one, puts me that much farther ahead of the game. In fact, I limit it to only one so I can focus on it without feeling overwhelmed or dejected about my poor time management. I have to remind myself that it generally takes 21 days of persistently and consistently performing an action before it becomes a habit. I can't allow myself to make exceptions. The minute I do, that's

the end of it. At this rate I may be quite organized by the time I'm 80!

In the end, I usually find that I do have more discretionary time than I had thought. It may take me 20-30 minutes to drink a cup of coffee, but usually I also spend it in contemplation. I just hadn't considered it as leisure time before. In fact, by categorizing each item with an Activity, I realized that some tasks are indeed leisure. Once I had identified them as such, I seemed to enjoy them more; I must've been "contaminating" my free times by not appreciating them enough.

Another revelation from this particular exercise, is that I haven't been taking advantage of small time chunks that pop up in a day, especially with a toddler. I've learned to keep a Quickie ToDo list in my LIFEMGMT.GDB database. It's amazing how much work or chores can get done in these windows of time.

The biggest time waster of all, was that I didn't spend enough time planning for the next day. There it was, rather, there it wasn't in my log.

### It's Time To End

I'm always looking for tips and resources for simplifying, streamlining, and organizing. This is a continuous battle against my natural, right-brain tendencies; so I welcome, and deeply appreciate any that you would care to share. ■

### Commercial products mentioned in this article

**TIMELGR.WK1** ■ — May be downloaded from the HPHAND forum, Library 11, on CompuServe and is also available on this issue's *The HP Palmtop Paper ON DISK*.

**TIMETRACKER/LX** ■ — A demo version called TTDEMO.ZIP may be downloaded from [www.dasoft.com/pub/TT](http://www.dasoft.com/pub/TT) and it is also available on this issue's *The HP Palmtop Paper ON DISK*. When you buy a license for US\$39.95, D&A Software, Inc. will send a registration code that turns the demo version into a full version of the program.

Also available from Thaddeus Computing 800-373-6114 or [orders@thaddeus.com](mailto:orders@thaddeus.com)

# User to User: Online in Uruguay

*During Hal's recent travels, he rediscovered how to both reduce and recover files on the palmtop. He also had a chance to try several laptops and Windows CE devices.*

By Hal Goldstein

Our family tries to visit my wife's family in Uruguay as often as we can. On our most recent visit I pledged to stay connected to my business and the world via email. In the U.S. I found an Uruguayan Internet Service Provider and after the few predictable false starts, I got connected through the Internet to hal@thaddeus.com and to CompuServe. I used both WWW/LX on the palmtop and an HP OmniBook 800D laptop. That's the happy ending of my story. Here is the beginning.

#### Thaddeus Computing Vaporware

Before leaving, I worked night and day to finish Super Software Carousel and to give feedback to Ed Keefe who was writing our Software Carousel Manual. I originally thought the Software Carousel products would take 1 to 2 months and be ready to ship in April. Instead they had evolved into time-devouring monsters. Everything that could delay the projects did. By mid-July, we had hundreds of orders to fill. I refused to leave home with the odor of vaporware hanging over my head. The push was on: get the products done before getting out of town!

Late one night while I was checking the correctness of Super Software Carousel's file structure, I found that a

number of files in Ed Keefe's Software Carousel master had the same date as my Super Software Carousel master but Ed's files were significantly smaller. For example, my version of SCONFIG, the main Software Carousel configuration program, was about 70K, Ed's version was 28K!

#### Saving Space with DIET

I gave Ed a call. "Yes," said Ed. "I routinely run all my EXE and COM files through DIET." DIET can compress EXE and COM files as much as 70%. These DIETed programs still execute fine. The only penalty is that these programs take a fraction of a second longer to get started. (Long

time readers of *The HP Palmtop Paper* will recall that DIET can also be set up as a TSR resulting in compression of data files).

With that reminder, I started DIETING Super Software Carousel files and other files on my prototype 64 Meg palmtop. I reduced the entire disk space requirements of Super Software Carousel 750K bytes, realizing my 5-megabyte target with plenty of kilobytes to spare. Below is a listing of my successes. Note that in keeping with the spirit of my agreement with Software Technologies, the authors of Software Carousel, the products ship with the original sized files. SSC also ships with the compressed files, which

#### Files Sizes Using DIET

FILE	BEFORE	AFTER	SAVED	NET SAVED	COMMENTS	FILE	BEFORE	AFTER	SAVED	NET SAVED	COMMENTS
<b>Super Software Carousel Files</b>											
777.exe	41,281	24,868	40%	16,413	Game	garlic.exe	19,587	11,903	39%	7,684	Fixes DB
bj.exe	26,928	13,658	49%	13,270	BlackJack	pco.exe	74,266	50,024	33%	24,242	Outline
blitz54.exe	57,386	28,914	50%	28,472	Checkers	subst.exe	18,478	13,042	29%	5,436	DOS util
boggler.exe	90,794	55,028	39%	35,766	Game	view.exe	92,250	48,216	48%	44,034	Viewer
bridge.exe	83,665	38,639	54%	45,026	Game	zip.com	17,068	12,815	25%	4,253	Transfer
cribbage.exe	93,560	48,248	48%	45,312	Game	f.exe	109,408	54,322	50%	55,086	Draw
hqpublic.exe	6,602	4,694	29%	1,908	Game	lune.exe	52,584	34,189	35%	18,395	Music
hpqtris.exe	5,449	3,459	37%	1,990	Tetris	fix_scr.exe	4,576	2,748	40%	1,828	S/Carousel
masterhp.exe	37,056	22,617	39%	14,439	Mastermind	optimize.exe	33,427	20,264	39%	13,153	S/Carousel
mine100.exe	14,656	8,886	39%	5,770	Game	sc_menu.exe	70,222	40,269	43%	29,953	S/Carousel
nyet.exe	25,136	11,826	53%	13,310	Tetris	scconfig.exe	69,906	28,161	60%	41,745	S/Carousel
rev4_1.exe	125,408	77,124	39%	48,284	Othello	<b>TOTALS</b>	1,671,536	926,832	45%	744,704	Bytes saved
worm.exe	42,730	25,611	40%	17,119	Game						
igo.exe	336,646	184,911	45%	151,735	Game						
playex.com	7,907	4,531	43%	3,376	Music						
chess.exe	114,560	57,865	49%	56,695	Game						

All-time best-selling software for DOS task-switching. . .



# Software Carousel

No more palmtop memory limitations!

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- ALL programs task-switch like BUILT-IN programs!
- Every program can use maximum memory!
- No more Out of Memory messages!
- Have as many Apps, Games and Utilities open as RAM/FLASH disk space allows. . . at the same time!
- Easily customize to your exact needs!
- Simple hotkey combos switch between DOS sessions. Like switching between differently configured palmtops! Up to twelve!
- Multiple DOS sessions open at once! Devote an entire session to a large Lotus or Database file. Or open two Lotus spreadsheets at once. Switch between them easily!
- Runs on any 100/200LX, on flash card or in system memory. More memory, more sessions!

*Your palmtop can be up to...*

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## Have up to 12 Palmtops in One!

An easy-to-use control panel allows you to customize up to 12 DOS and/or System Manager sessions to your exact needs.

Switch between DOS and Built-In programs as easily as you open NoteTaker!

Don't know what to do with all this new palmtop potential? Check out **SUPER Software Carousel** to see how Thaddeus Computing can save you many hours of loading and configuring, and provide you countless hours of happy and productive palmtopping!

## Great with 8/32 MB DoubleSpeeds or Flash Card!

Talk about a Next Generation 200LX!

Combine Software Carousel (and especially **SUPER Software Carousel!**) with the speed and memory of an Upgraded Palmtop, and you're talking about unleashing the full potential of your palmtop!

Works with Flash card memory too! (Not quite as fast.)

So if you already have an Upgraded Palmtop, or you're thinking about it, Software Carousel is the ideal way to make the most of it!

And, of course, we offer a 30-Day Money-Back Guarantee so you can find out for yourself!

## New Version: BUY or UPGRADE

Thaddeus Computing Software Carousel 7.0 fixes bugs from previous versions (6.8-6.92). Especially recommended for those who use more than one flash memory card.

PLUS! An all new, greatly improved User's Guide makes learning and configuring much easier!

Millions of people have purchased Software Carousel; and the Palmtop Edition, new or upgrade, is just too palmtop-enriching to pass up.

But don't order until you've looked at **SUPER Software Carousel!**

## How do I Buy?

Simple. If you only want Software Carousel (as opposed to **SUPER Software Carousel**), we'll send it on a 3.5 Disk with an easy-to-use electronic User's Guide that will walk you through the installation and configuration process.

Software Carousel NEW  
Software Carousel UPGRADE\*

\$79.95      #SCN  
\$19.95      #SCU

## \*How do I Upgrade?

To take advantage of the Software Carousel Upgrade offer, you must supply Proof of Purchase of your current version. The easiest way to do this is to email us your serial number (run screen), or send us a photocopy of your Software Carousel Manual or your disk. We can also accept any other Proof of Purchase such as a receipt or confirmation from the company where you originally purchased. Fax, mail or email proof with your order.

# SUPER Software Carousel

Like fast task-switching? Like the Built-In Apps?

## How About 40 More!

### Easy To Learn, Easy To Use!

*Just like Built-In Apps!*



Applications: Ready to go immediately!



Games: Years of challenging fun!

Pre-configured with the very best freeware and shareware Games, Utilities and Applications available for your Palmtop!

### Applications

#### HV (Hypertext Viewer)

HTML browser to view Web download loads.

#### PE (PalEdit)

A MEMO-like editor with many enhancements including spellchecker.

#### VR (Vertical Reader)

Lets you read doc files and electronic books, vertically on the palmtop

#### DBV ( DataBase Viewer)

Fast phone, appt and database file viewer.

#### View

Lets you view files from a variety of word processing formats.

#### Tune

Metronome and musical tuner.

#### ZIP

Fast PC to palmtop serial transfer program.

#### Draw

Palmtop drawing paint program

#### PC Outline

Enter thoughts, plans, ideas, and organize them into a hierarchical structure.

#### Stereo Shell

DOS File Manager.

#### garlic

Fixes corrupt database files.

#### PKZIP

File archiver compressor.

#### LHA

File archiver/compressor.

#### LXPIC

Lets you view GIF JPG BMP, PLX graphics files.

#### Andrew3

More readable palmtop font.

#### CloseFir

Close Filer to save mem

#### Buddy

Zillion utilities in one.

#### fastdb

Speeds up database programs (e.g. Phone).

#### MoreEXM

Breaks system limitation of 7 EXM files. Enable software like ZOOM.

#### Typing Tutor

Type faster on the palmtop.

#### Zoom

Wonderful Magnify-like program that enlarges and makes more readable any section of the screen in built-in apps. For example, can blow-up datacard for more readable phone numbers

#### Subst

DOS 5 utility superior to ASSIGN

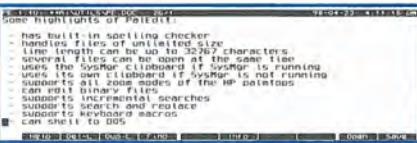
#### Vclock

Whole screen clock and timer

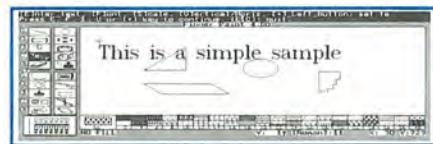
*Here's a brief preview of what SUPER Software Carousel does for your palmtop!*



Use HV and LXPIC to view web documents graphics.



Advanced editing with MEMO-like PalEdit with spell checker.



Paint, Flowcharts and maps with Draw



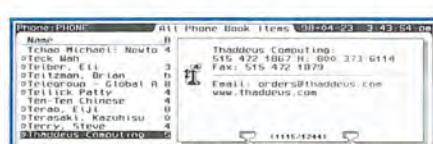
Read literature or documentation on palmtop sideways.



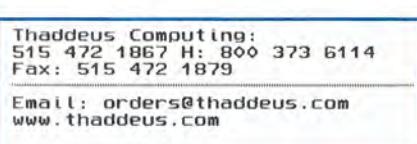
LXPIC can view PCX, BMP, JPG, GIF files on your palmtop.



Visible Clock: Full screen clock, timer, stopwatch.



Zoom blows up any phone book, appointment book, or database item. Above is a before and after view.



**Thaddeus Computing:**  
515 472 1867 H: 800 373 6114  
Fax: 515 472 1879

Email: [orders@thaddeus.com](mailto:orders@thaddeus.com)  
[www.thaddeus.com](http://www.thaddeus.com)

### Games

#### Dominoes

#### Golf

#### Mine Sweep

#### Solitaire

#### (many kinds)

#### FreeCell

#### Blackjack

#### Reversi (Othello)

#### Therapist

#### Play Music

#### Yahzee

#### Bridge

#### Sokabin

#### Boggle

#### Chess

#### 42 LX

#### Hearts

#### Checkers

#### Go

#### 777

#### Cribbage

#### Tetris

#### Tetris

#### 3-D Tic Tac Toe

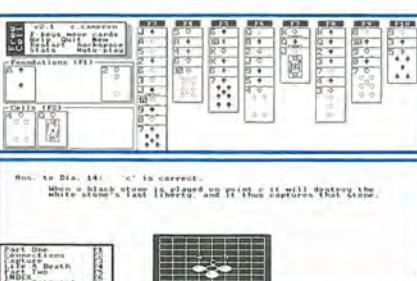
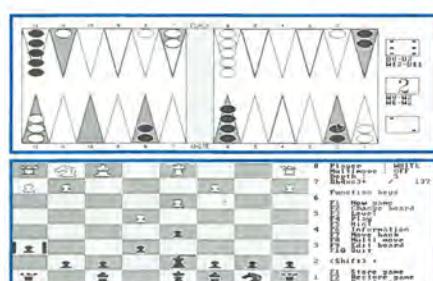
#### Worm

#### Tiles (Mah Jongh)

#### Klondike

#### MasterMind

#### Go-Moku



Here's how Backgammon, FreeCell, Chess, and a Go tutorial look on the palmtop. Other games include Tetris, Checkers, a music selection, and a palmtop therapist.

### Here's how to order:

Super Software Carousel comes on a CD with complete, easy-to-follow installation instructions and a concise electronic User's Guide.

If you have Thaddeus Computing install it while your palmtop is with us (free installation) you'll still receive the CD. (You can even send your palmtop just for the free Software Carousel installation.)

If you are upgrading from a previous version of Software Carousel, see How Do I Upgrade? on page 8 to save \$60.

**Super Software Carousel (New)** \$139.95 # SSCN  
**Super Software Carousel (Upgrade)** \$79.95 # SSCU

### System Requirements

Includes the complete version of Software Carousel, plus lots of additional software. Runs on HP 100LX, 200LX, or 1000CX on flash disk or in system RAM (C drive). Full package requires 5 meg: a little over 2 meg for applications, 2 meg for games, and 1 meg for Software Carousel sessions. Even more applications than listed are included on CD.

Apps

Zoom Anywhere

Games!

are what the user installs.

### **Rediscovering Undelete in Filer**

Towards the end of my family's 24-hour journey from a small Iowa town to a small town in Uruguay, bleary-eyed, playing with my palmtop, I was writing batch files (big mistake). I had just learned that my 1 megabyte 200LX upgraded to 64 megabytes actually had 66 megabytes. It turns out that all palmtops (1 meg, 2 meg, or 4 meg) upgraded to 64 megabytes end up with a 2 meg F drive (640K for System Memory) plus a 64 meg C drive.

Actually, the 2 Meg F drive is the original C drive. So, if you do a hard reset (CTRL SHIFT ON) and answer Y to reformat C, the 2 Meg drive gets reformatted. However, once the 64 Meg drivers are re-installed, the 64 Meg drive remains intact even after reformatting C. This is also the case on 32 Meg upgrades which have a 1 or 2 meg F drive.

I decided I would use that F drive space, which normally wouldn't get used, as a place for Software Carousel's swap file and use the C drive for EMS memory. EMS memory gets created using the INSTEMM utility that comes with our upgraded palmtops. This strategy would allow me to use space on both the F and C drive for Software Carousel's swap duties. I planned to run SCONFIG to tell Software Carousel to use F for disk space and use expanded memory on C.

Eventually, it all worked. However, in the process, at the end of my journey, I created a batch file that was supposed to delete unnecessary F drive files that get created on reboot. Instead, due to minor exhaustion and lousy programming I managed to wipe some key files off my flash card that I wanted for the trip.

I usually have a copy of Norton Utilities 'Undelete' program on my Palmtop; however, I forgot to copy it to my new 64 Meg prototype. Then I remembered that those wonderful HP Palmtop engineers included an undelete utility in FILER. I pressed

MENU File Undelete and was able to recover most of my lost files! As Ed Keefe points out in Quick Tips, you can also undelete lost directories.

### **Trying the OmniBook 800D for size**

For my trip I decided to purchase a laptop since there were various Windows 95 programs I needed to use. I bought a 233 MHz Toshiba Satellite with CD and disk drive, active matrix screen, 4-gigabyte drive, and 32 megabytes of memory. The Toshiba box was very powerful and practical, but I just didn't like it! I guess after all these years enjoying and writing about HP portables and palmtops, I've been spoiled. I think HP Palmtop users will understand this. I didn't have the child-like excitement of playing with the Toshiba. There were no surprises—nothing special about the machine. I returned it. Then I cashed in some favors from 12 years of writing about HP mobile computers and requested an OmniBook 800D for review from HP's PR agency.

I know I should have requested a Sojourn, but I felt I was "cheating" anyway, since I didn't really know if I would write about it. As it turned out, the Sojourn's were reserved for a few of the elite computer publications (The HP OmniBook Sojourn is an ultra thin — 11.69" x 8.58" x .71", 3.2 lb — 233MMX laptop with 64MB of RAM, 2.1-GB hard drive and 12.1" SVGA TFT screen). It is pricy at \$4999 and is the fruit of a joint effort with Mitsubishi.

In any case I was happy to get my OmniBook 800 for the trip. Especially since I really like it.

Unfortunately, the HP OmniBook 800 5/166, introduced over a year ago, with its 166MHz CPU, 16 MB RAM, 2100MB hard drive, and 10.4 TFT SVGA display is already a bit out of date. I would assume HP would come out with an upgrade soon. The good news is that you can pick up the OmniBook 800 for about \$2300, and by the time you read this, probably less.

What I like is that it is truly

portable. Weighing just 3.9 pounds and being only 11.12" x 7.27" x 1.57" means you can easily work on a plane or throw it in a briefcase (The Sojourn's screen is larger but that increases its length and width). The OmniBook 800 uses the HP-designed pop-out mouse that can be a little awkward, but I like it better than touch pads. The keyboard is touch-typeable.

HP Palmtop users will appreciate a truly distinguishing quality of the OmniBook 800: its palmtop-like instant-on feature. What a pleasure not having to shut down the machine wait for it to boot up Windows. Few, if any, of the competition including the Sojourn, have this feature.

Anyone who appreciates a compact, useful, well-engineered computing device would probably enjoy this machine. I like HP's compromises much better than the Toshiba Libretto or the Hitachi VisionBook Traveler. I do look forward to seeing the Sony VAIO, and the new Sharp machine, but as I mentioned, I am not fond of touch pads. I hope HP continues this line of OmniBooks.

### **Useable Windows CE devices!**

OK. I admit it. I've finally met a Windows CE device that I like. On a previous trip in the Catskills I had the opportunity to play with Windows CE devices. I typed this portion of the article on an NEC MobilePro 750C on a bus winding its way through the Catskill Mountains towards New York City. The MobilePro sat on my lap, Pocket Word open, clearly displaying 16-point bold red type. The responsive keyboard was just large enough to touch-type on. Given the quality of the MobilePro and obvious attention to detail, I almost thought it was an HP product. It is amazing what they packed into this 1.9 lb, 9.6 x 5.4 x 1.25 inch handheld PC.

The MobilePro 750C comes with 16 MB of internal memory, half of it devoted to file storage and half to running programs. It comes with the standard Windows CE 2.0 fare built into ROM, including Pocket Word,



NEC MobilePro 750C

Pocket Excel, Pocket PowerPoint, Pocket Outlook. In New York, I used the MobilePro's internal 33.6 Kbps modem and Pocket Outlook to get my email.

The MobilePro 750C also has VGA and serial ports, and slots for Type II PC cards and Compact Flash cards. The card slots mean there's plenty of room for additional storage space or I/O cards for Ethernet connection, parallel port or SCSI port adapters, and more.

In addition to the typeable keyboard, the MobilePro offers both pen and voice input options. The Calligrapher handwriting recognition software is built into the MobilePro. It recognizes separate characters, written on the screen with a stylus. An upgrade is available to MobilePro users (and users of other H/PCs) that recognizes continuous cursive writing.

You can also record a voice memo (in .WAV format) with the MobilePro's clamshell case open or closed. Simply press the record button located above the left hinge. Play the message back with the built-in voice recorder application. The feature is potentially quite useful, especially when voice recognition technology can be incorporated. Unfortunately, the current implementation does drain the battery and takes about 10K per second of voice (a little over one-and-a-half minutes of recording per MB). The bad news is that while the microphone is in the front of the keyboard, the speaker is underneath the unit. Even with the volume all the way up I had to have my ear to the speaker.



Casio Cassiopeia E-10 Palm-size PC

Playback was barely audible, at least to these aging ears on the bus. In a quiet environment, however, playback sound was acceptable. It's too bad they didn't include an ear phone jack for easier transcribing.

The MobilePro uses a Lithium Ion rechargeable battery. I was disappointed to learn that you can't substitute AA's or some standard off-the-shelf battery in an emergency. But the NEC and other color-screen Windows CE units would suck regular batteries dry very quickly. The trick is to buy a second battery pack and have it charged for long trips. Still, the Lithium Ion batteries last 2-3 times longer than standard laptop batteries.

I also have been playing with a Windows CE Palm-size PC from Casio. It's about the same size and form factor as the 3COM PalmPilot, and also includes pen and voice input and standard Windows CE Palm-sized PC applications (slightly different from those included with the Handheld PCs). It's a well-conceived machine with lots of features. For complete descriptions of both units see Rich Hall's review in our sister publication, *Handheld PC Magazine for Users of Windows CE*. I asked Rich, former editor of *The HP Palmtop Paper*, what he thought of the Palm-size PCs. He said that he was used to a keyboard and that it was tough getting used to pen entry. He added that you tend to use these pen-entry devices differently from handhelds with keyboards. You enter as little data as possible via pen input. Most data entry is done on a desktop PC and downloaded to the Palm-size PCs when you synchronize

## Commercial products mentioned in this article

**Software Carousel** — NEW \$79.95 UPGRADE \$19.95; All-time best-selling software for DOS task-switching.

**Super Software Carousel** — NEW \$139.95 UPGRADE \$79.95; Software Carousel pre-configured with the very best freeware and shareware Games, Utilities and Applications available for your Palmtop!

**For Both, Contact:** Thaddeus Computing; 800-373-6114 or 515-472-6330; Fax: 515-472-1879; Email: orders@thaddeus.com; Web: [www.thaddeus.com](http://www.thaddeus.com)

**HP OmniBook 800** — HP dealer, \$2300

**HP OmniBook Sojourn** — HP dealer, \$5000

**NEC MobilePro 750C** — \$899 Contact: your local NEC dealer or NEC; Phone: (USA) 888-8-NEC-NOW. Web: [www.neccsd.com/products/mobilepro](http://www.neccsd.com/products/mobilepro)

**Casio Cassiopeia E-10 Palm-size PC** — \$399 Contact your local Casio dealer or Casio, Inc.; Phone (USA): 888-204-7765 or 973-361-5400; Web: [www.casio.com](http://www.casio.com)

them with the desktop. You use the Palm-size PCs for accessing appointments and phone numbers, and taking short notes.

One of the key features for all Windows CE PC Companions (the generic term for Handheld and Palm-size PC's) is Windows 95/98 desktop synchronicity. It is very easy to synchronize email, appointments, phonebooks, to-dos, and Microsoft Office documents between a desktop or notebook PC and a PC companion. Also, all PC companions support Internet browsing with Pocket Internet Explorer for the Handhelds and Mobile Channels for the Palm-size PC.

Am I ready to give up my 64 MB double-speed 200LX with Super Software Carousel on it? Not likely! I may continue to use the NEC MobilePro for travel. Email and word processing are most of what I do on the road, and it does this very well. This is a much less expensive alternative to purchasing a laptop. If I didn't have free access to the NEC unit, I'd probably be content with my 200LX and Newton keyboard. ■

# 200LX: The Talent Amplifier

*Electric drills, pneumatic hammers, and giant earth movers are power tools that amplify our physical efforts. Can we consider the 200LX as a power tool for our talents and our minds? This Palmtop user answers with a resounding "Yes!"*

By David H. Fisher, Jr.

This article is about how one person has used pocket computers, including the HP Palmtop, to amplify his own talents as well as the abilities and talents of others. The article won't teach you how to use a Palmtop but it may give you a new way to look at the power tool you carry in your pocket. Perhaps as you read it, an idea will jump out and help you discover a use that will change your world in a positive way.

#### An Insurance Sales Amplifier

I received my teaching degree in Physical Education, coaching and nutrition, yet, when I graduated from college, I found work and income in the life insurance business.

I'd been selling life insurance for almost seventeen years before I got my first computer. It was a small pocket computer called the Tandy Radio Shack PC-1. I gave it to myself as a belated Christmas present in 1980. The TRS-80 PC-1 didn't have any built-in software. However, it did have a form of the BASIC language. To get it to do anything useful, I had to teach myself how to program. Once I had a middling grasp of programming, I could teach the pocket PC about life in the insurance business. Within a couple of months I had developed a program that would help my clients discover how much life insurance they needed.

I called the program the "Personal Financial Plan." My sales volume increased so rapidly that my company's home office called to congratulate me. They wanted to know what I was doing differently that had caused my sales volume to increase so dramatically. What I was doing was letting my clients enter the requested information into the pocket computer as each question appeared on the one line screen. When they finished, their total insurance-need appeared as if by magic. They almost always bought that amount of life insurance. They were fascinated with this small pocket computer and how it could figure out how much life insurance they needed. Soon my company had me traveling around the country distributing pocket computers and putting on instructional seminars for our sales force. Within months, other life insurance companies heard about what I was doing with pocket computers and had me putting on seminars and distributing the computers to their agents.

The pocket computer was amplifying the unique talents of insurance agents all over the country, enabling them to better serve their clients.

#### Predicting the HP Palmtop

Before long was I publishing a Newsletter called "ONLINE" which was distributed quarterly to all the people who had purchased the pocket computer and insurance software. In the newsletter I described many of the features of the TRS-80 PC-1. From time to time I predicted what I thought pocket computers would be like within the next few years. One concept I predicted was a compact style pocket computer which opened up like my wife's compact. The top contained the screen and the bottom was the keyboard. In another "prediction" I described what I called a briefcase computer which was a larger version of the compact computer. Both of these computers are now a reality. The compact computer is the HP 200LX and the briefcase comput-



#### ABOUT THE AUTHOR

Dave is president of Dave Fisher, Jr. Productions, Inc. and FAT STATS and author of the book *FAT STATS: A Guide To Weight Control*. He developed the FAT STATS Personalized Body Profile used by major corporations, branches of the US military, schools, police and fire departments and individuals throughout the United States. He and his wife Kathy have been married for 35 years. They have three children and three grandchildren. Dave is a Staff Member on the CompuServe GOODDIET Forum. His e-mail address is: 102711.3602@compuserve.com and his web site is: [www.cjnetworks.com/~fatstats](http://www.cjnetworks.com/~fatstats)

er is the notebook/laptop computer. I also predicted that the compact computer would ultimately turn into a portable CPU. When its owner would get to their office or home they would close the compact computer and slide it into a docking station that was attached to a full-sized keyboard, monitor and printer. I called this a computer shell. The world would be full of these computer shells and people would carry their portable CPU with them and simply slide it into the docking station and have a complete PC. Of course, when on the go, the compact computer would work just like the 200LX. I still think this will ultimately be the way people will use computers. The portable CPU will have the ability to send and receive data without being hooked up to a telephone line. In fact, it will also serve as a mobile telephone.

### Amplifying My Other Talents

I continued to develop programs for the TRS pocket computers. The new software grew out of my background in coaching and nutrition. Before long I had programs that could

keep real-time basketball and volleyball statistics, track physical fitness testing, prescribe equine colic treatment, and aid in football scouting.

The University of Nebraska football team's coaching staff liked the football scouting software so much that they asked me to modify it for their MS-DOS PCs. I did so and the software became an important part of the Nebraska Cornhusker's scouting system. They used the software to scout the first half of the game by entering the downs, distances to a first down, field positions, hash marks, formations, plays and the results for each offensive play by the opponent. At the end of the first half they would press one key and the report would immediately be printed out for the defensive coordinator who would review it with the team in the locker room prior to the start of the second half. The program enabled them to predict what their opponent would do in given situations such as 2nd down, with 10 yards to a first down; on the 50 yard line, on the right side of the field, if they were in the I slot-left formation. This program runs

nicely on the 200LX which is much easier to use than trying to balance a notebook computer on your lap. In fact, I much prefer using it on the 200LX because of the numeric keypad, the portability and the long battery life. In addition, when a coach calls with a question, I can quickly bring up the program on my 200LX and answer the question. The palm-top is also an excellent platform to use for demonstrating the program to a coach who is a prospective buyer.

The 89th Regional Support Command (the Army Reserve located in Kansas, Missouri, Nebraska and Iowa) found out about the work I did with pocket computers and asked me to develop software for the Army's physical fitness test on a SHARP pocket computer. Soon I was in Wichita, Kansas entering the results into the pocket computer as the soldiers completed each part of the physical fitness test. Following the testing, each individual's results were printed out and placed in their file folder. This was a tremendous time saver for Army Reserve personnel.

Soon I was modifying and expand-

*Those interested in participating in an HP Palmtop users group should contact the following individuals. Send us contact information formatted as below if you wish to be added as a contact for a users group in your area. Some of the individuals listed offer Palmtop advice but may not be organizing an official users group.*

### HP Palmtop Worldwide User Group News

Send material about User Group activities to Conrad Cox; E-mail: 76164.467@compuserve.com; Website: www.cnet.com/~cdcox

**ARGENTINA — Buenos Aires:** Miguel Angel Misseri; E-mail: 73070.3665@compuserve.com / Martin Sebastian; Capital Federal; E-mail: marseb@giag.com.ar; **Cordoba:** Paul Nani; Tel: 54-51-715649; E-mail: pnanri@cordoba.com.ar

**AUSTRALIA —** Dr. Barry Collins; c/o Forensic Science Center; Tel: 08-8226-7700; E-mail: collis@atom.forensic.sa.gov.au

**AUSTRIA —** Ulrich Hoesch; Hoesch@hp.club.or.at

**BRAZIL —** Marcos L. Pedreira; Tel: 55 84 211 6162; E-mail: mpedroza@sumner.com.br

**DENMARK —** Jesper E. Sig; Tel: 45 49 15 60 42; Fax: 45 49 16 10 01; E-mail: 100660.3503@compuserve.com; Web: http://ourworld.compuserve.com/homepages/Sig/hpug.htm

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**GREECE — Athens:** Stavros D. Zacharakos; Tel: (+3 01) 8050041; Mobile Tel: (+3) 093 254 717 24hrs.; Fax: (+3 01) 8050041. **Galatsi:** John Tsaliramos; c/o TAFARM; Tel: (01) 29.17.401; Fax: (01) 29.28.174.

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**HONG KONG —** Rim 8, 20/F, Blk B, Wah Kai Ind Center, 221 Texaco Rd., Tsuen Wan, Hong Kong; Tel: 2409 0969; Fax: 2407 0782; E-mail: encom@asianonline.net

**HUNGARY —** Zoltan Matok, Orbitrade Hungary Ltd.; E-mail: zmatok@orbitrade.alba.hu; Tel: 36 22 327 687; Fax: 36 22 327 784.

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**ITALY —** Mr. Andrea Valdre; Tel: 39-6-87295.205; Fax: 39-6-87295.215; E-mail: a.valdre@agora.stm.it; Also Salvatore Fiorenzo; Tel: 39-933-8120; Fax: 39-665-7295

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**KOREA —** Song, Taegun, M.D.; Tel: 82-2-501-4288; E-mail: placebo@chollian.net; address: 12-603 Samho Apt., Seocho-dong, Seocho-gu, SEOUL, KOREA

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**PORTUGAL — PPTUG:** Tel/Fax: 351-1-2597216; E-mail: suplano@individual.eunet.pt

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**SOUTH AFRICA —** Don Hoggan; 19 Somers Road, Clarendon 3201 Pietermaritzburg; Fax 27331 942338; E-mail hoggan@mweb.co.za

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ing the program I designed for the Army Reserve into the "FAT STATS Personalized Body Profile" which I now use to help people take control of their weight. Using the program, I have produced "FAT STATS Personalized Body Profiles" for thousands of people throughout the United States and in many other countries. The program uses the DOS Q&A database program (hard to find). I travel all over the country putting on weight management seminars for branches of the military, police & fire departments, health organizations and corporations. Participants receive a copy of a book I wrote called "FAT STATS: A Guide to Weight Control" and a "FAT STATS Personalized Body Profile". To save a lot of wasted time while traveling, I have loaded Q&A on my 200LX. I now feed the data for about 300-500 seminar participants into the 200LX while in my motel room, at the airport and in the airplane. When I arrive home, all I need to do is import the data into the office computer and print out the "Profiles". I used to do this with my laptop but it was too bulky. In addition it is easier to enter the data into the 200LX since it has a numeric keypad.

With my handy 200LX, when I return home, the bulk of my work is already completed. The 200LX has truly amplified my productivity.

Recently I started writing monthly weight management columns called "THINK & Lose Weight". Most places where I have given my "FAT STATS Weight Management Course" now print my monthly columns in their newsletter. I write the column using PalEdit. I really like this editor as it includes a spell checker. I have all of my column points of contact addresses in acCIS and e-mail them a column each month. And, whenever I have a few idle minutes, I pull out my 200LX and work on the next column.

I now have a weight management website: [www.cjnetworks.com/~fat-stats](http://www.cjnetworks.com/~fat-stats). Soon I plan to purchase WWW/LX so I can monitor how many people have visited the site as well as surf the Internet.

I use the 200LX to keep track of all my scheduled seminars and appointments. I keep a record of all past seminars and results in the DataBase. I have all of my contacts in the phone database. And I track three checking accounts in Pocket Quicken.

I use the 200LX and acCIS 4.0 to

log on to the HPHAND forum where I continue to learn about the amazing features and functions of, what I consider, the world's most useful computer. In addition, for three years, I have been a participant on the CIS GOODDIET weight management forum. About a year ago I was appointed a staff member. I head the "Use Your Head" Section of the forum. With the 200LX I participate on the forum daily regardless of whether I am at my office, in my home or traveling. The 200LX has amplified my ability to help people LEARN how to take control of their weight.

The 200LX helps me remember birthdays & anniversaries. I enter them as an appointment and log information in the note field such as the year of birth or marriage and a record of gifts that were exchanged, etc. For family members I include when they graduated from high school and college and other special occasions. This often results in some interesting conversations, as people are amazed at my memory. When the birthday/event is over I save it after increasing the year by one. This saves memory over logging it as a repeated appointment for several years.

The 200LX also reminds me when it is time for a flu or tetanus shot. It helps my wife and I keep up with our children and friends who live out of town through e-mail. Because the 200LX plays such an important role in my life I back it up to my notebook computer every weekday before I leave my office. Twice a month I back it up to my office file server and this file server is backed up overnight via a tape backup which is then stored in a safe deposit box.

The computer world has just begun to scratch the surface of the potential of the 200LX. Perhaps you will come up with the next idea that will cause everyone to want to own this wonderful little computer. The 200LX truly is a "Talent Amplifier." ■

## New! Link-A-Printer II Smaller size & Attached cable



Link-A-Printer II is a serial to parallel converter that allows direct printing from your OmniGo 100 to any parallel printer. It also works with the HP 100/200LX.

\$79

Link-A-Printer II has a built-in connectivity cable that plugs into your OmniGo 100. Since it does not require batteries or extra cable Link-A-Printer II is simple and easy to use.

### Also Available Link-A-Printer I

Requires connectivity cable and optional battery. Features auto on/off fixed 9600 baud.

\$59

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# Through The Looking Glass: Logic in the Palm of Your Hand

*Ed shows how the logic functions in Lotus 1-2-3 can save your sanity in a logic course as well as in business.*

By Edward M. Keefe

**I**f we extend credit on the Buskens account, they will feel obliged to accept our bid on the next project. Either we could use a more generous profit margin in making our next bid, or Buskens will not feel obliged to accept our bid, or both. However, it will never happen that we use a more generous profit margin and that our financial situation will get worse. Hence, if we extend credit on the Buskens account, our financial picture will get better."

How would you respond to this argument? Decision makers should never have to face such tortuous reasoning, but all too often they do. Students of logic, however, who daily confront this type of reasoning soon learn that it's not enough to respond with "That sounds right." They learn to prove definitively that such reasoning is either correctly or incorrectly constructed. Truth-table analysis provides a precise procedure for such proofs.

You may remember seeing a truth-table in a college course in logic, but did you ever think that those columns of zeros and ones would find their way into business and research? The fields of operations research, digital circuit design, computer science, and legal contract writing currently use truth-tables. While you won't design

a circuit by following this article, you will provide yourself with an intellectually challenging experience with one of the more tangential uses for the Lotus 1-2-3 program built into your Palmtop.

Truth-tables provide a precise path through a logical argument by enabling a logician to follow a line of reasoning step by step. However, such paths are often replete with potential potholes. To ruin a lengthy analysis, you need only one mistake. However, using 1-2-3 to perform truth-table analysis enables you to detect the flaws in arguments.

## To Be or Not To Be

The truth-table shown in Screen 1 is familiar to logicians and mathematicians. The table shows the logical meaning of *and*, *or*, *if ... then* and *not*. Most people are familiar with the common usage of these words. However logicians don't tolerate loose usage because, for them, words must mean precisely what they say.

To read the truth table, first look only at the top row. Reading from left to right, the table says that given any two simple statements assigned the variables X and Y, you can create the following compound statements: X and Y, X or Y, and If X then Y. You can also deny a simple statement: Not X.

In the table, the zeros stand for false, the ones stand for true. The first two columns show all the possible states of truth or falsity of these two simple statements. That is, both can be true, both can be false, or one can be true and one can be false. The zeros and ones in the rest of the table tell whether the various compound statements composed of these simple statements will be true or false.

Take a simple example. Let X stand for the statement "Wolfgang Amadeus Mozart composed music." Let Y stand for the statement "William Shakespeare discovered America." I hope that you all readily agree that statement X is true and statement Y is false. Now look down the first two



## ABOUT THE AUTHOR

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columns of the truth table. You want to find the row that displays 1 in the X column and 0 in the Y column, in this case, row 3 (See Screen 1).

Consider first the compound statement X and Y. Wolfgang Amadeus Mozart composed music and William Shakespeare discovered America. Look in row 3 of the X and Y column and you'll see that this statement evaluates to 0, or false. The whole statement is false because one of the statements is false.

Now consider the compound statement X or Y. Wolfgang Amadeus Mozart composed music or William Shakespeare discovered America. Looking under the X or Y column, you see the value 1 in row 3. This statement is true because one of the statements is true.

What about the statement Not X: Wolfgang Amadeus Mozart did not compose music. This statement is false. If you look in the sixth and seventh columns of the table, you'll see that if the original statement is true (1), the opposite of that statement is false (0), and vice versa.

But what about the case of If X then Y. If Wolfgang Amadeus Mozart composed music, then William Shakespeare discovered America. Why would this be false? According to the rules of symbolic logic, the entire statement is false because the first part of the compound statement is true, while the second part is false.

Notice that the truth table for two statements is only four rows deep. If you let n stand for the number of simple statements in a compound statement, then the number of rows in the truth table is  $2^n$ . (i.e., 2 raised to the n power).

#### Valid or Invalid?

The opening paragraph of this article is a good example of a compound statement made up of several simple statements. Logicians call the whole paragraph a logical argument. The task of the logician is to prove that the argument is correctly constructed. Such a proof establishes the

X	Y	X and Y	X or Y	If X then Y	X	Not X
0	0	0	0	1	0	1
0	1	0	1	1	0	1
1	0	0	1	0	1	0
1	1	1	1	1	1	0

Screen 1: This truth-table demonstrates the logical meaning of and, or, if..... then, and not. The zeros stand for false; the ones stand for true. The first two columns show all the possible states of truth or falsity of the two simple statements: X, Y. The zeros and ones in the rest of the table tell whether the various compound statements composed of these simple statements are true or false.

validity or invalidity of the argument.

To prove the validity of this argument, you need look only at its structure; that is, you can throw away the words and examine just the framework of the argument. To begin such an analysis, you pick out all the simple statements in the argument and assign a letter to each. In this case, let's use the following:

C = We extend Credit on the Buskens account.

A = They will feel obliged to accept our bid.

P = We could use a more generous profit margin.

F = Our Financial picture will get better.

Not A = They will not feel obliged to accept our bid.

Not F = Our financial situation will get worse.

Now you can rewrite the structure of the opening argument by using single letters in place of the statements:

if C then A

P or not A

Not (P and not F)

Then if C then F

For this structure to be valid, the first three compound statements must lead, unerringly, to the last statement. Furthermore, they must do so whether each of the simple statements is true or false. To prepare this argument for truth-table analysis you convert it into the following long compound statement:

If [(if C then A) and (P or not A) and (not (P and not F))], then (if C then F).

What you have done is link the first three statements with the word and, and made that lengthy compound statement the first part of an if... then statement. The conclusion of the argument becomes the second part of the if... then statement. The conclusion is an if .. then statement itself. This conversion to letters will let 1-2-3 do the work of analyzing the argument.

#### Table the Matter

Now let's put the 1-2-3 logical operators #AND#, #OR#, and #NOT#, as well as the @IF function, to work in determining the validity of the opening argument. As you may know, #AND# and #OR# look at two cells in a worksheet and show either 0 (false) or 1 (true), depending on the values in the two cells. The operator #NOT# looks at only one cell and returns 0 or 1. The @IF function gives you a way to determine whether an if... then compound statement is true or false.

By examining the truth table for "If X then Y" in Screen 1, we can see how to emulate this relationship using the Lotus @IF( ) function. The truth table says in effect "When the value of X is less than or equal to the value of Y, then the value in the fifth column is 1, otherwise the value is 0." This can be emulated by using the Lotus function @IF(X<=Y,1,0).

To set up the truth-table worksheet as shown in Screen 2, start 1-2-3 on your Palmtop and set a global column width of 5: ([Menu] Worksheet Global Column-Width and enter 5.) Next, enter the letters shown in row 1. These letters stand for the simple statements in the argument.

A1	A	B	C	F	D	E	F	G	H	I	J	K
I	0	0	0	0	0	0	1	1	1	0	1	1
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0

Screen 2: Columns A through D constitute a table of all the possible truth values for four statements. By entering formulas (in columns E through K) that represent the premises in the argument presented in this article, you can determine the argument's validity. In this case, column J contains a formula representing the conclusion of the argument. Because this formula returns all ones, which indicate truth, you know that the whole argument is valid.

Next, in columns A through D, enter the zeros and ones, which represent all the possible combinations of truth values for these four statements.

You already know how to calculate how many possible combinations of truth and falsity will exist for the variables — in this case, namely  $2^4$  or 16. However, you might wonder how to determine the proper order of the zeros and ones for the truth table. Once you ascertain the total number of combinations, you have all the information you need. For column 1 of the truth table, you enter zeros in the first half of the column and ones in the second half.

Then in the next column, you enter zeros next to half of the zeros that appeared in the previous column, and then ones in the rest. Then you enter zeros opposite half of the ones in the previous column, and ones in the rest. You continue this process until you've filled the first four columns (Screen 2).

Now assign range names by positioning the pointer in cell A1, pressing [MENU] and selecting Range Name Labels Down. Indicate range A1..D1 and press Enter. Then enter the following formulas in the indicated cells:

#### CELL FORMULA

E1	@IF(C<=A,1,0)
F1	+E1#AND#G1
G1	+P#OR#(#NOT#A)
H1	+F1#AND#I1
I1	#NOT#(P#AND#(#NOT#F))

J1 @IF(H1<=K1,1,0)  
K1 @IF(C<=F1,1,0)

Select: [MENU]Copy and copy range E1..K1 to range E2..E17. Now examine the values in column J. They should all be ones. This tells you that whatever the truth values of the individual statements, the end result is that the structure of the argument is always true or valid. If any one of the values in this critical column is a zero, the whole argument will be invalid. That's all it takes, just one zero and it's close but not good enough.

#### Test Yourself

Now that you've learned the fundamentals of truth-table logic, it's time to put your skills to the test. Here are two arguments for you to evaluate. Use the techniques presented in this article to determine whether they are valid or invalid.

1. If you become a programmer, you will be too busy to take vacations. On the other hand, if you do not become a programmer, you will not have enough money to take a vacation. Therefore, whether you become a programmer or you don't, it follows that you will have either no time or no money for vacations.

Use the following abbreviations for the statements in this argument:

- E = become a programmer
- V = too busy to take vacations
- M = have no money
- 2. If you don't bring me flowers

this week, then you want me to think that you don't have a guilty conscience. However, if you want me to think that you don't have a guilty conscience, then you must, in fact, have a guilty conscience. Therefore, you must have a guilty conscience.

Answers: Both arguments are valid. ■

## More Logic Files

In this month's *The HP Palmtop Paper ON DISK*, you'll find more files that will help you review and practice your logic skills.

1. LOGIC.ZIP is a collection of text files and a database file that are the fruits of having survived a college course in Logic. If you ever decide to take a course in Logic, we hope the instructor won't mind if you bring along your Palmtop.

2. TTM.ZIP contains a program called TRUTH.EXE and a companion documentation file. It performs basically the same function as the Lotus 1-2-3 spreadsheet program with regard to truth table analysis. It's the work of Michael P. Kelly and is copyrighted 1989. Its coding is different but you might like it as a stand-alone program.

3. LOGICP.ZIP contains the LOGIC.EXE program which is actually an almost complete course in categorical and syllogistic logic. It's not merely a "read-only" program. You can interact with the program at spots to test out your growing skills in this style of Logic. You'll also wear out the [ON] / and [ON] \* buttons trying to view a color-enhanced program in black and white.

CAUTION: Do not use the MONO8025.COM file in the Palmtop's D:\BIN directory along with the LOGIC.EXE file. Using the two programs together may cause your Palmtop to lock up and require you to press [CTRL][Shift]-[ON] and answer N to recover.

# ••• BASIC TIPS •••

Unless otherwise noted, all tips are by Ed Keefe.

## 1-2-3

### Can Lotus 1-2-3 in the Palmtop deal with the Year 2000 and Beyond?

This question keeps coming up on Compuserve and on various sites on the Internet. The answer is 'yes': the HP Palmtop's version of Lotus 1-2-3 can handle this problem.

The functions in 1-2-3 that deal with dates are @DATE(year,month,day) and @DATEVALUE(date-string).

If for example you enter @DATEVALUE("14-OCT-2002") in cell A1 of a spreadsheet and use the [MENU] Range Format Date 1 command to set the date format and then use the command [MENU] Worksheet Column Set Width 12 and Enter to eliminate the overflow indicators (\*\*\*\*\*\*) you'll see 14-OCT-2002.

To use the @DATE() function, remember that Lotus 1-2-3 counts dates starting with the year 1900 and goes up to 2099. Thus to enter my birthday I'd use @date(38,8,25) which would show up as "25-Aug-38". To show the date of my 100th birthday I'd use @date(138,8,25) which would display as 25-Aug-2038.

## DOS

### Erasing Pesky Files

Occasionally a file may appear on your Palmtop as a result of some unknown glitch. The file name may contain some unprintable characters that prevent it from being erased by Filer.

To get rid of such files start Filer and point at the drive and directory that contains the pesky, undeletable file. Then go to the DOS prompt by pressing [MENU] Options DOS. Type the command ATTRIB, at the DOS prompt and press the Enter key. (Note the comma after the word ATTRIB. The comma is a shortcut that saves you from typing -A -H -R -S.) When you press Enter all the attributes of every file in the directory will be removed.

Then type the command DEL \*.\* /P and press Enter. The DEL command will prompt you for a 'Y' or 'N' response for each of the files in the directory. Press N until you come to the undeletable file and then press Y and the file will be deleted.

To make sure there are no other problems with your disk, use the CHKDSK /F command. If you get a message that some damaged files were found, answer Y to the question about 'fixing' them.

## PC CARDS

### When do you need to turn off your Palmtop?

You don't need to turn your Palmtop off when you insert or remove either the serial cable or the adapter cord.

You should turn off your palmtop when inserting or swapping any PCMCIA cards. Some of these cards draw a brief surge of power when inserted. This surge can briefly drop the voltage of the batteries enough to reboot the palmtop, or even corrupt the C: drive.

—Steve Carder: 73561,1006

## Filer

### Undelete BOTH Files and Directories

One of the lesser known features of Filer on the HP Palmtops is that it can undelete files and/or directories. Undeleting directories goes beyond the normal capabilities of DOS.

On those few occasions when I accidentally deleted a directory on the Palmtop, the undelete operation worked flawlessly and recovered both the directory and all the files in it. That feature alone makes Filer a worthwhile program in my opinion.

### Speed search in Filer

Speed search works in Filer. That means you don't have to scroll up and down a list of files to find a file or directory. Simply start typing its name as you

would in List View in any database. You can also type-ahead while it's thinking, when you switch to a directory with masses of files. It took me a couple of years to realize what I'm sure is obvious to almost everyone else. I guess I didn't "see" the obvious because when you speed search in a database a line pops up with the word "Locating:" in it followed by the characters you enter. This line doesn't appear in Filer. You have to type "blind" but the search still works.

—Roger Law 100045,1000

## Delete Files

Here is a little palmtop tip. When you're using Filer and press F8 to [View] the contents of a file you can press the DEL key to delete the file. You don't have to press the ESC or F8 to close the file first. To paraphrase: "A keystroke saved is a keystroke earned.."

—Toby Lawrence

## Appointment Book

### Spacebar Toggles Completed ToDo's

You can check off completed ToDo items by pressing the spacebar. The HP 200LX User's Manual and the Help Screen in the Palmtop tell you to press the Minus (-) key to check off completed ToDo's. Neither source says anything about the spacebar.

However, the use of the spacebar toggle is documented in the HP 95LX manual (page 17-30). HP must have left the spacebar toggle in place so people who upgraded from the 95LX wouldn't have to unlearn one keystroke and learn another.

—Victor Roberts 70413,1423, Jeff Mattox et al

## WorldTime

The Palmtop's built-in World Time application is actually a database file and shares many of the properties of other database applications such as NoteTaker, Phone and the general Database. This means that you can perform the following operations:

change the sort order

# Do you have a Palmtop you no longer use?

We'll BUY IT...  
even if it's broken!

Thaddeus Computing (that's us) can always use palmtops. If you want to mail in your Palmtop equipment and manuals to us, here is what we will pay:

**Palmtop in good working order and good shape:\***

HP 95LX or HP 1000CX (with manuals): \$35

HP 100LX (with manuals): \$55

HP 200LX (with manuals): \$75

**Broken Palmtop:\***

Broken 95LX (with manuals): \$10

Broken 100LX or HP 1000CX (with manuals): \$20

Broken 200LX (with manuals): \$25

\* Without manuals subtract \$5; HP 100LX or 200LX subtract \$10.  
We'll adjust the price if equipment works but has some significant damage.

## Accessories:

HP Connectivity Pack w/cable disk and manual: HP 100/200LX: \$15; HP 95LX: \$5.

Uncompressed Flash and SRAM cards: \$2.50 per megabyte (e.g., 40 Meg=\$100)

Modem cards, cables, software, chargers, other items: We'll look things over, but we may not be able to offer much. We'll adjust price as appropriate if accessories come without manuals, or if other items are missing.

Send equipment to: HP Palmtop Used Equipment, Thaddeus Computing, 110 N. Court, Fairfield, IA 52556. USA. Include a note with your mailing address, phone and fax number. If you need to talk with us, you may call, 515-472-6330. You will receive reimbursement within three weeks after we receive the equipment.

*When you send in your palmtop, if you mention you saw this box you'll receive a free \$35 one-year subscription (or renewal) to Handheld PC Magazine. Offer good through September 30, 1998.*

create subsets  
change the columns

With these operations you should be able to answer the following questions:

Which city is the northernmost: London, UK, or London, Ontario?

To find the answer, press [MENU] View Sort and set the first sort field to City and make sure the Ascending checkbox is empty. Set the second sort field to Latitude and press tab to get to the Ascending checkbox and press the spacebar to put a check mark in the box. Press Enter and do a speed-search for London by pressing the letters L O N D. Open the record for London, ON by pressing the Enter key and see that the Latitude is 42.67. Then press [F7](Next) to see that the latitude of London, UK is 51.33.

How do you avoid having Aarhus, Denmark as the topmost city?

If you set the first sort field to City and make sure the Ascending checkbox does not contain a checkmark, you'll get Zurich, Switzerland as the topmost city in the list. Of course if that's not satisfactory you can sort all the cities by any of the fields in a record. Finally you can keep a custom list of cities in view and press the [F9] function key to toggle from a Custom to All lists.

If you want to know where in the world the clock is the "least" just sort the World Time database by Hours with a check in the Ascending box. You'll find that the answer is Kwajalein Island.

If you want to use speed search on international Access codes or city prefixes, just use the [MENU] View Arrange Columns... and then press the [F4](Edit) key and choose the item you want for the first column. Press [F10](Done) when you've finished modifying the appearance of the World Time database.

—Jesper Søig 100660,3503

## HPCALC

### Register Arithmetic

The HP Palmtop's Calculator has 10 registers for storing and recalling numbers. You can make the first five registers appear on the screen in the Arithmetic sub-application by pressing [Menu] Options Calculator Modes and pressing 'E' (You can also force the calculator to show the stack by pressing 'T'.) There may also be "named registers" available when you're using a Solver equation—more about these later.

Whether or not the registers are visible on the screen, they're available for use in many of the other sub-applications. For example, in Calc press CTRL+O to start the Conversion sub-application. Press L to open the Length Conversion window. Key in 10 and press F2[mile]. Now, suppose you want to compute the ratio of feet to US survey feet. Here's the way to do this with Register Arithmetic.

Press M[Rcl] F4[Foot] N[Sto]3 (see Reg3=52,800.00 in the calc line). Now press F10[More] and press M[Rcl] F8[ft US] (see ft US = 52,799.89). Press N[Sto]3 and M[Rcl]3 and see Reg3 = 1.00. Press [Menu]Options Number Format 9 Enter and M[Rcl]3, again to see Reg3 = 1.00000200. This value will be available for further computations in register 3 until you change the contents of the registers or clear all the registers. Of course, you don't need to do register divide for this example. You could simply Rcl foot and Rcl ft US and press the divide key. Either method will get you the desired result.

Register 0 is a special register. It acts like the Memory register available on many inexpensive pocket calculators. In the Arithmetic application you can use the F7 key to store a value in Reg0. The

F8 key recalls the contents of Reg0 to the calc line and F9 and F10 perform Memory addition and subtraction.

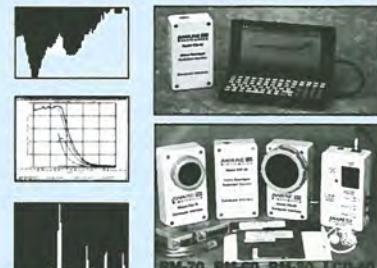
In Solver, and the other sub-applications that assign variable names to the function keys, you can use N[Sto] (optionally followed by + - \* /) and then press a named function key.

In effect the 10 built-in registers and all the named variables can act as independent calculators that can perform simple arithmetic operations.

For old-hands who were weaned on the likes of the HP 41C calculator, such storage arithmetic was a very handy trick. And, if memory serves me correctly, the HP 41C even let you perform storage arithmetic on the stack registers (something HP Calc won't do). I also recall that on the 41C you could use RCL+ and RCL-. I suppose HP decided to omit these features to protect the sanity of its customers.

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# ••• QUICK TIPS •••

*Unless otherwise noted, the tips in this section are by Ed Keele.*

## Appointment Book

### Monday-Friday Appointment

One of the things that my VCR menu has is that the 200LX does not have is the Monday thru Friday programming. In order to set an alarm on the 200LX to repeat Mon-Fri, you have to set it up as a Custom alarm with a lot of key pressing.

It's taken me a long time to figure out that all I had to do was Copy and Paste a Mon-Fri Custom Alarm that I'd already set up. Than I just changed the text and time and specified All Occurrences and Presto; I had another Custom Mon-Fri Alarm without all that extra key pressing. (13 key presses by my count!)

—Mike Mitchell CSi:76752,3710

## HPCALC

### Lease a car with TVM in hand

You can use the Time Value of Money application in HPCALC to calculate the interest rate of a lease. In CALC press [MENU] Application TVM and enter the following information:

Number of periods: (Number of months in the lease)

Annual interest rate: -LEAVE BLANK- Present value: (Sales price of car)

Payment (Lease payment)

Future value: (residual value on lease.)

After entering this information, press F7 to calculate the effective interest rate.

Don't let a salesperson fool you. They often claim that you should take the total of the down payment plus the total of the lease payments and the residual and compare that to a conventional loan. However, that does not compare financing the total price (since it assumes you have the cash to pay the big balance at the end of the lease.)

You can use the TVM to calculate the total payments on a loan with an early payoff. To do this, make the term of the loan 5 years, for example, and enter the percentage rate and a future value of 0. Then

change the number of payments to equal the loan term and press the future value key to see the early loan payoff amount.

The method I found to work best is to calculate everything in advance, then make your offer based on: "I can put this amount of money down, and can pay this amount per month for X number of years." Then forget about the percentage rates, price of the car, etc. If the dealer can match your figures you're set. The details don't matter anymore.

—David Shier [SS&S] 74777,2477

## Lotus 1-2-3

### Day of Week Routine

Suppose you wanted to get a number that represented a "day of the week" given any date. How would you do this in Lotus 1-2-3? How would you show the actual day of the week based on this number?

Here's one solution by way of an example. Start with an empty spreadsheet and in cell A1 put the function @DATE(98,7,19) and use [Menu] Range Format Date 1 and [Menu] Worksheet Column Set-width 12 to make the contents of the cell appear as 19-Jul-98.

July 19, 1998, occurs on a Sunday which for many people is the first day of the week: for others it's the last day of the week. If you want the day of the week number to be 1, put the function @MOD(A1-1,7)-1 in cell B1. You should see 1 appear in the cell when you press Enter. The @MOD() function returns the remainder when it divides the Lotus date-value by 7. Since the remainder can be any number between 0 and 6, we simply subtract one from the date-value and add 1 to the answer to get a number between 1 and 7.

If you prefer to have Sunday as the 7th day of the week and Monday as the first day, then put the formula @MOD(A1-2,7)+1 in any cell (e.g., cell D1). You should see 7 when you press Enter.

If you want to show the name of the day in a given cell, use the formula @CHOOSE(@mod(@date(yy,mm,dd)-1,7)+1,"NULL","SUN","MON","TUE","WED","THU","FRI","SAT") or the formula @CHOOSE(@mod(@date(yy,mm,dd)-2,7)+1,"NULL","MON","TUE","WED","THU

","FRI","SAT","SUN")). Use the first formula if you prefer Sunday as the first day of the week. Use the latter formula if you want Sunday as the seventh day of the week.

If you're not interested in the day-of-the-week number, you can shorten the formulas above to @CHOOSE(@MOD(@DATE(98,7,19),7),"SAT","SUN","MON","TUE","WED","THU","FRI") which will simply give you the day of the week.

By way of explanation, the @CHOOSE() function takes two arguments: an offset value then a comma followed by a list of values or strings. The values or strings are also separated by commas. The first item in the list always has the offset value of 0, the second item has the offset value of 1, etc. The function returns the value of the string at the given offset position.

### Finding Elapsed time

Finding the time between the start and end of an event is a piece of cake in Lotus 1-2-3. Just construct the following spreadsheet and push a couple of buttons to get answers to 1-second accuracy.

Starting with a blank spreadsheet, put the following macro in cell C1. '@NOW~/RV~~' and then use the command [Menu]Range Name Create \T and indicate cell C1 as the range to be named.

In cell A2 type 'Start'  
in cell A3 type 'End'  
in cell A4 type 'Diff'

Use the command [Menu] Range Name Label Right A2..A4 to give names to the cells B2, B3 and B4. In cell B4 enter the formula +END-START. Format the cells B2..B4 with the command [Menu]Range Format Date Time 3 and press Enter.

To use the spreadsheet put the cell cursor in cell B2 and press ALT+T to register the starting time of an event. Later, put the cursor in cell B3 and press ALT+T to register the end time of the event. The difference will appear in cell B4. Note that the macro uses the trick of "Range Value Copying" to lock in the value of the @NOW function. Without this, the values in cells B2 and B3 would change whenever any other cell was modified.

## CALC

### Documenting an Equation in Solver

In the last issue of *The HP Palmtop Paper*, we presented a Solver Equation that works with complex numbers (pairs of numbers in which one number is in the real domain and the other is in the imaginary domain).

If you're like me, you probably tuck such equations away in an archive where they tend to collect electronic dust until you find a good use for them. The problem is that by the time you need such an equation you've forgotten how to use it.

To provide yourself with some instructions, you could imbed comments in the body of the equation: just enter text enclosed by exclamation marks.

A better way to add instructions is to use the Name field of the Solve Catalog screen. The Name field most often contains the name you give to an equation. The rest of the line in the Catalog screen usually displays the first line of the equation itself.

Since the name field can contain up to 60 characters or so, you can use several lines in the Catalog screen to give yourself some instant help when you load the equation file in Solver. The screen dump pictured here shows how this looks for the Complex equation file.

## Connectivity

### LXCIC

LXCIC is a modem card enabler and thus a CIC100 alternative on the Palmtop. It can be run resident or nonresident. If resident, it occupies only 800 bytes.

If your modem card is capable, it will allow you to power up/down the modem. You can also disable the socket, reset the PC card, change the interrupt type, save the card's information to disk or get a status display.

LXCIC could be a very useful program for Software Carousel users. There are known problems when the built in CIC100 program is used in conjunction with Software Carousel. LXCIC can be run as either a resident or nonresident program. This means that it could be loaded in one SC session and not in others. The program has not been tested on all possible PC card modems. It's definitely worth a try

to see if it works with your brand of modem. The price is definitely right!

LXCIC ■ is copyrighted freeware by Stephan Peichl.

## Miscellaneous

### Software Carousel

Save those \*.BAK files created by the Software Carousel program. They could be useful for letting you have more than one configuration (setup) for Carousel.

Some users like to have 6 or more Software Carousel sessions. I prefer keeping the number of sessions at 3 because it keeps the swap file at under 2 Mbytes and the time to boot up the machine is faster. However, there are times when I wish that I had up to six sessions; for example, when I'm working on a program using Borland's C++ or LXBATCH. The extra sessions would let me edit and compile programs in one session, test them in another session and debug them in yet another session. If the program crashes I can kill that session and return to the programming session and examine the code without having to reboot the whole machine.

I used the SCONFIG program to set up one group of three sessions along with the three startup batch files for typical use of my Palmtop. Once everything was working properly, I saved the batch files and CAROUSEL.OPT (the SC "options") file in a separate directory. Then I created an entirely new group of three SC sessions and three new batch files for doing programming on the Palmtop.

To switch from one group to another, I use a batch file to move the current CAROUSEL.OPT file and startup batch files out of the way and move the original CAROUSEL.OPT and startup files into the SC directory. Then I reboot the Palmtop to reinitialize SC.

If you're using Software Carousel on a 2MB palmtop, this technique might let

you have several groups of sessions and still not exhaust all the memory on your fast C: drive.

### A 32 bit checksum program

A few PalmPads that have been upgraded to double speed and 8 or 32 Mbytes of memory experience rare glitches. Occasionally a program will have selected bits that get switched off or on in the wrong places. This can make a program inoperable and even cause the Palmtop to crash or lock up. About the only recourse is to restore the errant file from a good backup. Since the DOS Chkdsk command can't catch such an error there has been no way to tell if a file has gone bad until now.

Andreas Garzotto wrote the FCHECK program to let him detect whether a file had become corrupted before any other disaster might strike. The FCHECK program assumes that all of the files on the C: drive are intact when it's first run. It computes a log of all the files along with a checksum value. When the program is run again, the new checksum is compared with the original checksum. The results of any discrepancies are displayed on the screen and also placed in a log file where they may be examined later.

If you're experiencing problems with programs or suffering from an unusual number of corrupt databases or spreadsheets, FCHECK may help you determine if your machine is suffering from this rare glitch. Hopefully you'll never have to use this program, but it's good to know it's available as a software detection tool.

FCHECK.ZIP ■ by Andreas Garzotto, 73064, 1657

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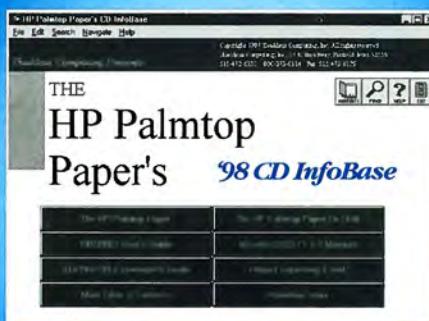
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