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Releasing the power to everyone.

TimeOut Tour starts here

In a kingdom full of new software for the Apple IIgs, the *TimeOut* series of AppleWorks enhancements from Beagle Bros continues to be a cornucopia of fresh programs for the classic (as well as IIgs) Apple user. We haven't taken a good look at the *TimeOut* series since February, but the programmers in the Beagle kennel have been busy this year. So get on the bus and let's take a *TimeOut* tour.

Our first stop will be at the core or kernel of *TimeOut*. This is a set of routines written by Alan Bird that request desktop memory from the AppleWorks memory manager and use it for *TimeOut* applications. All *TimeOut* applications come with this core program, which has to be "installed" inside APLWORKS.SYSTEM. Each *TimeOut* disk includes an installation program that will do this for you. In addition, each *TimeOut* disk includes an application called *Utilities* that is used to configure other *TimeOut* applications (if necessary), to sort, rename, and otherwise manipulate the *TimeOut* menu, and to make selected *TimeOut* applications memory-resident for fast access.

After *TimeOut* has been installed in your copy of AppleWorks, AppleWorks runs just like it always has except that when you press open-apple/escape (just slightly more reach than open-apple-Q), a *TimeOut* menu, much like the open-apple-Q Desktop Index menu, appears in the middle of your screen. The *TimeOut* menu contains the names of your *TimeOut* application programs. When you install *TimeOut*, one of things you have to specify is where you've stored your *TimeOut* applications. You can specify your AppleWorks disk, which is a good choice if you can put all your AppleWorks and *TimeOut* files on a single 3.5; a slot and drive, which is a good choice if you use 5.25 disks; or by ProDOS pathname, which is a good choice if you have a hard disk and want to set up a specific subdirectory or two for *TimeOut* programs.

When you startup AppleWorks, *TimeOut* scans the disk location you've chosen and puts all the applications it finds there in its menu. This makes adding new applications very simple—just copy them to the disk or subdirectory that you've specified as your *TimeOut* location. The procedure is similar to adding fonts or desk accessories to a IIgs System Disk.

In addition—if you have the latest version of the *TimeOut Utilities* program (v2.0, Jun 1 88)—you can access other *TimeOut* applications that are on other disks or in other subdirectories. The newest version of *Utilities* has an "Add Applications" option that allows you to select any disk or subdirectory; *TimeOut* will make an additional menu using all the applications at the location you select. Additional menus aren't permanent—they last only during your current session of AppleWorks. Any single menu has room for 30 applications. You can have any number of menus. You flip from one menu to the next by pressing the Tab key.

At a *TimeOut* menu, just as with the Desktop Index menu, you select the application you want by highlighting it with the arrow keys and pressing return. What happens next depends on which *TimeOut* application you have selected.

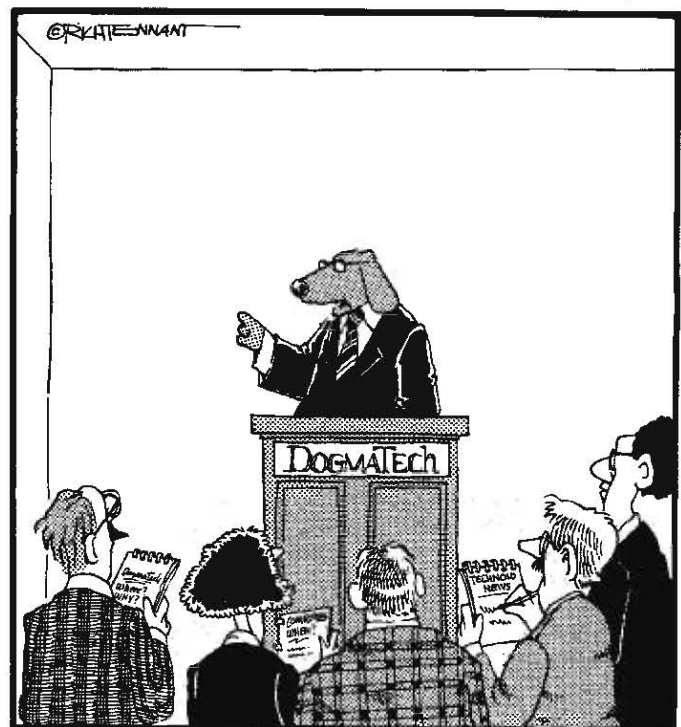
Let's get back on the bus and drive over to the Word Processing Arena. Word processor users will be particularly interested in three of the *TimeOut* applications, *QuickSpell* (\$69.95), *Thesaurus* (\$49.95), and *SuperFonts* (\$69.95).

QuickSpell looks up each word in your document in an

80,000-word Random House dictionary, as well as in your own custom dictionary, and gives you a list of words that weren't in either one. Working from this list or from a display of each word as it appears in the context of your document, you can ignore the word, replace it, add it to your custom dictionary, or ask *QuickSpell* for suggested spellings. It will also show you all the places in your document where the same word appears twice twice in a row and ask you if you'd like one of the occurrences removed. On the *QuickSpell* disk you also get a little *TimeOut* program that will count the number of characters and words in your document and give you the results and your average word length.

In its default configuration, *QuickSpell* checks your entire document. However, by using the configuration option of the *TimeOut Utilities* program, you can change it so that each time you select *QuickSpell* it will ask whether you want to spell-check the entire document, the words currently displayed on your screen, or just the word the cursor is on. You can also use the configuration option to specify the disk location of the main and custom dictionaries, to have *QuickSpell* ignore words with digits, and to have *QuickSpell* keep a list of all the correctly spelled words you've used in memory. Keeping all the words used so far in memory makes repeatedly spell-checking the same document very fast.

I use *QuickSpell* professionally, but my favorite use for it is to



"I'M AFRAID I DON'T UNDERSTAND ALL THE REPORTS OF OUR UPGRADE HAVING A DELAYED RELEASE DATE, UNLESS, ... WAIT A MINUTE - HOW MANY PEOPLE HERE DIDN'T KNOW I WAS SPEAKING IN DOG-MONTHS?"

avoid "Daddy, how do you spell..." questions. I taught my sixth-grader how to use *QuickSpell* and she uses it on her book and science reports. *QuickSpell* is much more patient and less argumentative than I am at suggesting spellings. It gives your student a list of suggestions she can scroll through; when she finds the word she wants she presses return and *QuickSpell* puts it in her document in place of the misspelled word. And when your student is ready to have her work checked, *QuickSpell* catches all of her errors and points them out without being demanding, acting disappointed, or using a flood of red ink.

The second *TimeOut* program of interest to word processor users, *Thesaurus*, will give you a list words that mean almost the same thing as any word in your document. Simply place the cursor on the word you want a synonym for and select *Thesaurus* from the *TimeOut* menu. If the cursor is on a space or blank area, *Thesaurus* will prompt you for a word to use.

As with *QuickSpell*, you can scroll through the resulting list and replace an existing word with a suggested word by pressing return. Or, if you'd like to see more suggestions, you can hold down open-apple and press return; you'll get a list of the synonyms of that word. Using this approach, you can dig down several levels deep for a word. When you do this with a paper-based Thesaurus, you end up with all your fingers holding the places of words. It's much quicker and easier to keep your mind on what you're looking for using *TimeOut*.

When you use *Utilities* to configure *Thesaurus*, you're allowed to specify the location of the 40,000-word synonym dictionary, to specify whether you want *Thesaurus* to add suffixes to selected words to make them grammatically the same as the word being replaced, and to specify alternate names to use for "noun", "verb", and other parts of speech. If a word can be used as more than one part of speech, *Thesaurus* will display separate lists of synonyms for each part. I haven't thrown my *Roget's* in the fire yet—it has lots more choices and gives opposites as well as synonyms, which *TimeOut* Thesaurus can't do—but about 80 per cent of the time I can find the word I want using *TimeOut* faster than I can figure out what I did with my book thesaurus the last time I used it.

The third *TimeOut* program of interest to word processor users is *SuperFonts*. It allows you to print word processor documents on your dot-matrix printer using the same fonts as are used by IIGs desktop programs or Macintosh word processors. Nearly 50 fonts come with the program and hundreds more are available in the public domain. You can mix fonts, sizes, and styles (bold, italic, outline, etc.) within a document. *SuperFonts* also allows you to include graphics (single- or double-high-resolution) within a document.

To accomplish all this, you must add some funny-looking squiggles to your text. For example, "<f1>" means "use font 1". The squiggles, however, are only used to specify things that can't be specified with open-apple-option commands. For things like margins, simply use the oa-option command as you normally would. Once your squiggles are in place and you are ready to print, simply select *SuperFonts* from the *TimeOut* menu. You'll have to answer the same series of questions AppleWorks normally asks when you print something, but that's it.

If you'd like to preview what your document will look like (printing takes longer when you use graphics-based fonts, even on an Apple II), you can select "Print to screen" and *SuperFonts* will use the Apple II's double-high-resolution graphics screen to show you exactly what the document will look like when printed. You can use this feature to fine-tune your squiggles before committing your work to paper.

The latest release of *SuperFonts* also includes a new *TimeOut* application called *Paint*. *Paint* is a within-AppleWorks graphics program that allows you to create or edit double-high-res graphics (single-res graphics and PrintShop GS graphics can also be loaded, but not saved). You can use it with either the mouse or the keyboard (read the documents—every command has a keyboard equivalent, but all the equivalents don't appear in the pull-down menus). *Paint* gives you the ability to make easy circles and boxes, to print text using any IIGs font (4K size limit), to cut and paste, and to use the full screen. It includes all the features of other Beagle drawing programs—fatbits, a powerful undo, patterns, fill—except color and printing. You can use *SuperFonts*, of course, for printing.

A final little goodie packed away inside *Paint* is the ability to use the AppleWorks clipboard to transfer graphics inside AppleWorks. At the moment, the only other application that supports this is *TimeOut*

Graph, a program we'll look at more in a moment. But you can actually use the clipboard to transfer graphics between these two applications. *TimeOut Paint* is included with current versions of both *Graph* and *SuperFonts*. If you have a paintless *SuperFonts* or *Graph* disk, Beagle Bros will update it for you for \$23.50.

Our next destination is Spreadsheet Center. *TimeOut Graph* (\$89.95) is one of three *TimeOut* disks of interest primarily to spreadsheet users. The others are *SideSpread* (\$49.95) and *SpreadTools* (\$59.95). To use any of the three you must have an AppleWorks spreadsheet active on your screen when you press open-apple/escape to reach the *TimeOut* menu.

Graph puts its own menu at the bottom of your spreadsheet. All you have to do is highlight the spreadsheet cells you'd like to see plotted, choose a graph style (point, line, high-low, bar, stacked bar, pie, exploded pie, or XY-scatter) and tell it you want to view the graph. You can add titles, labels, grid lines; you can change the scaling; you can plot your graph on top of a background picture; you can save the double-high-resolution results (or just the settings) to disk (the graphic can also be saved to the clipboard); and you can print your graph in three different sizes (if you don't have *SuperFonts*, you can use *Graph* to print graphics created with *Paint*). I've used *Graph* for plotting **Open-Apple** business statistics and for doing sixth-grade homework. Its interface is simple to learn and, like all *TimeOut* applications, it's fast.

SideSpread is kind of a SuperFonts for spreadsheets and databases. It prints all or part of a spreadsheet, using the Monaco or Courier fonts in a range of sizes from 6 to 24 points, sideways on your printer. Very wide spreadsheets can be printed on continuous paper. AppleWorks data bases can be printed using *SideSpread* by first moving the records you want to print to the spreadsheet and then printing. The *SideSpread* disk includes a *TimeOut* application, called *Data Converter*, that makes this easy. It flips clipboard data from spreadsheet format to data base format and vice-versa. Just copy one kind of data into the clipboard, select *Data Converter*, and then copy from the clipboard into the other kind of AppleWorks module. (*Data Converter* is included with all three of these spreadsheet-related programs.)

SpreadTools is a spreadsheet power user's dream come true. It includes three major and four minor tools. The minor tools are the just-discussed *Data Converter*; *Quick Columns*, which allows you to type in the column width you want as a number rather than as a series of open-apple/arrows; *Rows & Cols*, which copies up to 127 cells in one row into the column of your choice or vice-versa; and *Formula to Value*, which will "pound" (as we used to say in the *Visi-Calc* days, because then the command for this was "#") formulas into values.

The major tools are *Analyzer*, *Block Copy*, and *CellLink*.

Analyzer provides six different ways to scan a spreadsheet for errors. "Scan for Errors" finds unreferenced values, references to blank or label cells, forward references, circular references, and cells holding @NA or @ERROR. "Cell Cross Reference" creates a list of each cell in your spreadsheet that is referenced by a formula and shows the cell the formula resides in. "Track References" makes the cursor jump around the screen, pointing out the exact location of cells referenced in a formula. "Bird's Eye View" displays a map of your spreadsheet—each cell is one character wide (76 columns appear on the screen at once) and the map shows whether a cell holds a formula, value, label, repeated label, or is blank. "Adjust Column Widths" adjusts column settings so that when you press open-apple-Z(oom), you'll see entire formulas, not just their beginning. And "Show Cell Values" generates a list of all non-blank cells showing cell location, type (label, repeated label, value), layout specification, and contents.

Block Copy is a subtle command that seems to add a simple feature to AppleWorks but that actually packs a robust punch. The simple feature is the ability to copy two-dimensional blocks rather than either parts of rows or columns (standard within-spreadsheet copying) or entire rows (standard clipboard-based copying).

When you copy within the spreadsheet (instead of to or from the clipboard), *Block Copy* gives you three new copy options in addition to the standard "relative" and "no change". They are "column fixed", "row fixed", and "query off". "Column fixed" copying adjusts the row part of a cell reference as if you chose "relative", but adjusts the column part of the reference as if you chose "no change". It's useful

when you want to copy a sequence of formulas to a new row and column while leaving the data the formulas refer to in the same column. Likewise, 'row fixed' copying makes no change to a row reference but adjusts the column reference. 'Query off' tells the copy command to stop asking how to handle each cell reference and to handle them *all* as it handled the last one.

Copying from the clipboard has two new options in addition to 'formulas and values' and 'values only'. They are 'add values' and 'subtract values'. With these two options, any formulas in cells either on the clipboard or in the section of the spreadsheet about to be overwritten are converted to values (the formulas are lost). Then the cells on the clipboard are either added to or subtracted from the existing spreadsheet cells.

When copying using 'formulas and values,' formula references are always relative, as with AppleWorks' built-in row-copying from the clipboard. Unlike the built-in row-copying, however, block copying from the clipboard allows you to copy partial rows and to start the copy in any column rather than just the first. By selecting a 'block' that's one column wide, you can do column copying from the clipboard, which isn't possible otherwise. A final important capability of *Block Copy* from the clipboard is that it overlays any existing data. The standard copy-from-the-clipboard command always inserts new rows into your spreadsheet, which makes it difficult to add data to a standard template via the clipboard (you can't write formulas that point to rows that won't exist until they are copied into the spreadsheet).

The third major *SpreadTools* application, *CellLink*, updates up to 175 values in a spreadsheet with data residing in any number of other spreadsheets. You tell the 'importing' spreadsheet where to get the data you want by creating two columns on the right edge of your work area, one titled 'Imports' and one titled 'Links'. *CellLink* will use the 'Imports' column to return the values it finds. In the 'Links' column you specify where to get the data with cell/spreadsheet references such as 'B5(Jan sales)'. The number outside the parentheses is the cell location and the name inside the parentheses is the name of a spreadsheet (don't put a space between the cell location and the parentheses or the link won't work).

CellLink works fastest when the 'exporting' spreadsheets are already on the desktop, but you can also configure it to get values from spreadsheets stored on the current AppleWorks data disk. Any spreadsheet file can be an 'export' file—there is nothing special about them. However, it's best if you put the cells that data will be exported from near the top of your spreadsheet. If the export cells were at the bottom, adding rows would move them down, which would mean you'd have to update the cell/spreadsheet links in your import files.

It's also important that exporting spreadsheets be fully recalculated before you use *CellLink*. It doesn't recalculate exporting spreadsheets—if data has been changed without recalculation, you'll get the results of the formulas using the previous data. Importing spreadsheets are automatically recalculated. You can even specify how many times you'd like recalculation to occur (necessary for forward references, such as the ones you have when you put the exporting cells at the top of a spreadsheet). Importing spreadsheets can be chained together so that the results of one are then imported into another, with those results imported into another, and so on. *CellLink* opens up many new possibilities for summarizing data—monthly spreadsheets into quarterly and annual, for example, and for linking spreadsheet 'modules' into complete application packages.

Beagle Bros hasn't developed three disks for the AppleWorks database as it has for the word processor and spreadsheet, so we won't be going to Data Base Towers today. However, it does have three disks that work with the AppleWorks desktop, so our next stop will be at Desktop Shrine. The most incredible of these three desktop disks is *PowerPack*. The others are called *DeskTools* and *Son of DeskTools*. Er, no, that's not it. That last one is called *DeskTools II*.

PowerPack includes ten TimeOut applications. To begin with, *PowerPack* gives you three clipboards and three desktops. Only one clipboard and one desktop can be active at a time, of course. But *Triple Clipboard* gives you two storage areas that you can swap clipboard contents in and out of. *Triple Desktop* gives you two similar storage areas for the files on your desktop. You can move individual files from one desktop to another or swap two files between different desktops. *PowerPack* also includes an application called *Desktop Sorter* that allows you to alphabetize or otherwise arrange the order of

the files in your desktop index.

For word processor users, *PowerPack* includes *Line Sorter*, an application that will sort any set of lines you select inside a word processor document into A-Z or Z-A order, and *AWP to TXT*, an application that will save word processor data into text files without putting carriage returns where you didn't. *Line Sorter* can start in any column across your document.

For data base users, *PowerPack* includes *Category Search*. It allows you to specify a specific category to search in and consequently can be much faster than AppleWorks' built-in search, which always scans all categories. *Category Search* also provides single- and multiple-character wildcards and can suppress internal matches (finding 'Bob Astronaut' when you were looking for people named 'Ron').

File Librarian reads disk directories (pathname, filename, file type, file size (K or blocks), creation and modification dates and times) into AppleWorks data base files. You can then use the capabilities of the data base to locate a file and see what disk it's on, or sort by date to find which disk has the latest version. A big limitation of this application, however, is that it doesn't automatically read the contents of nested subdirectories. You have to specify each subdirectory you want to read by typing in its pathname. That stinks. It would also be much more useful if it automatically deleted old entries when reading a disk a second time.

Program Selector allows you to choose the next program you want to run. It warns you if you have any files on the active desktop that you haven't saved, then gives you a five-item menu. The first four items are specific programs you've configured *Program Selector* for, the fifth scans the current AppleWorks data disk for applications. Only System and Applesoft files can be selected. You select the program you want to run next and up it comes, no questions asked. When you leave that program (using the BYE command from Applesoft), AppleWorks will be started back up automatically.

Help Screens allows you to compile any text information you like into stand-alone *TimeOut* applications. Use it for your phone list or a help file for your macros or for anything you like. Screens can include MouseText and inverse characters.

ASCII Values is the tenth *PowerPack* goodie—it gives the binary, decimal, hexadecimal, ASCII, and screen equivalents of any number or character.

DeskTools and DeskTools II include eleven applications each. My favorites on the *DeskTools* disk are *File Encrypter*, which scrambles and unscrambles any type of AppleWorks file while it's on your desktop (don't forget your password!), and *Page Preview*, which gives you a condensed, double-high-resolution view of what a word processor document will look like when printed (three pages per screen, one character per pixel). *Word Count* is on this disk as well as on *Quick-Spell*. And there's a dangerous *Case Converter* that can modify your carefully edited document into all upper case in the flash of a twinkle. Also on this disk are a phone dialer, appointment calendar, calculator, notepad, envelope addresser, clock, and puzzle.

My favorite on *DeskTools II* is *DirTree*, which 'catalogs' any disk or drive and creates a list of all the subdirectories thereon and the files therein. You can even load AppleWorks files to the desktop by scrolling to them and pressing return. Another program, *File Search*, scans through AppleWorks word processor, spreadsheet, and data base files you select, looking for a search pattern up to 20 characters long and showing you what it finds. Also on this disk are an area code finder, a scientific/financial calculator, a clipboard viewer, a length/liquid/weight/time measurement converter, a disk bad-block tester, a printer management program, a screen blanker, a set of five stop watches, and a utility that lets you print any specified section of the current AppleWorks display.

We are now nearing the end of our *TimeOut* tour and I'd like to remind that your guide will accept gratuities as you leave the bus.

TimeOut FileMaster (\$49.95) is a disk and file management utility that you can access without leaving AppleWorks. It can copy disks, files, and subdirectories; compare and rename disks and files; format and erase disks; and lock, unlock and delete files. If you have enough desktop memory, it can copy disks in just one pass.

Finally, TimeOut UltraMacros (\$59.95) is a programming language for AppleWorks. You can use it to simply record keystrokes and play them back ('one keystroke is worth a thousand words,' according to the Beagle Bros catalog). Or you can use it with pre-pro-

grammed macros that allow you to do such things as jump to either end of a word processor line, find and delete returns, slide text to the next tab setting, tie two database files together to expand the number of categories, automatically print text in columns, and *hundreds* of other things. But it's far more powerful than that. With additional programs on *MacroTools* (\$25) and *MacroTools II* (\$25), it actually allows you to write menu-driven programs that have complete control of AppleWorks and all the *TimeOut* tools.

UltraMacros supports programming loops such as IF-THEN-ELSE; peeks and pokes to memory and the screen; "task files", which a user can run, that will start up AppleWorks and *UltraMacros* and run themselves; mouse control; and "sleeping" macros that wait till a specified time to continue an action. On the other hand, the biggest weakness of *UltraMacros* is the lack of detailed, comprehensive documentation. Most of the *UltraMacros* "literature" is in the form of sample macros. Things could be worse, but a few good articles giving an overview of *UltraMacros* programming are badly needed.

The only other difficulty I can think of, which applies to the *TimeOut* series as a whole, is the need to get the packages updated when Claris releases new versions of AppleWorks. Beagle is attacking this problem with its "Beagle Buddy" program. Under this program, Beagle sends automatic updates to a member of your local user group, who can then update your *TimeOut* disks for you. Your local Beagle Buddy is a good person to get to know.

This brings us, thank you, to the end of, thank you, our *TimeOut* Tour. As you step off, thank you, the bus, notice that just down the column is, thank you, a small curio shop, which I highly, thank you, recommend, run by Randy Brandt, author of *UltraMacros* (as well as *FileMaster* and *PowerPack*) and head of JEM Software (P.O. Box 20920, El Cajon Ca 92021). In JEM's shop you'll find three AppleWorks-related products, *PathFinder*, *Late Nite Patches*, and *PatchMania*; as well as a ligs paint program called *MiniPaint*.

PathFinder (\$20) replaces the "Format a blank disk" option within AppleWorks with a menu that lets you drop or add subdirectories to the current ProDOS pathname by "point and shoot" rather than by "try and remember". It also allows you to rename, lock, and unlock files.

Late Nite Patches (\$20) allows you to load text and DIF files using the standard AppleWorks file selection menu rather than by "Type the file's complete ProDOS pathname". It also includes patches for MouseText enhancements for AppleWorks, for a desktop-index mover, for making AppleWorks follow Apple's slot 3 RAMdisk protocol, for making the ligs keypad's Enter key work as a down arrow in the spreadsheet, and for making the current date appear in a corner of the screen. It also includes three *TimeOut* applications, one for changing the sound of the AppleWorks bell, one that reports some interesting AppleWorks statistics, and one that remembers up to 12 pathnames and allows you to select any of them as the current data disk pathname.

PatchMania (\$20) includes AppleWorks patches for increasing the number of copies you can print within AppleWorks from 9 to 255, for switching the insert and overstrike cursors, for tricking AppleWorks into thinking its running on a IIe or IIc when it's really on a IIGs, for avoiding preloading the program into memory, for remembering where the cursor was in word processor files the last time you saved them, for changing the order in which file types appear in the Add a file menus (make data base or spreadsheet files appear first, not word processor files), for allowing control-@ in printer codes, for automatically blanking the previous text when using the Find command, and for making dates appear in the international dd/mm/yy format.

MiniPaint (\$25) doesn't have anything to do with AppleWorks, but it's the cheapest ligs paint program on the market. It supports both 320 and 640 modes and switching between them, has scroll bars and full-page preview for easy full-page work, and is worth a \$15 credit in trade for "a future mega-feature Beagle Bros paint program."

Please consider coming on one of our tours again some day soon. We hope to be able to visit other *TimeOut* sights as soon as Beagle has finished blowing the vapors away from them. Upcoming sights are rumored to include a telecommunications program, an outliner, an accounting program, a statistics program, and a ligs-only graphing program.

Open-Apple becomes A2-Central

A new logo and name will officially reside at the top of this newsletter beginning with the February issue. It will start showing up on our envelopes and other business forms as our current supplies run out.

February will mark the beginning of our fifth year of publication. During the fourth year I've spent a lot of time pondering where we'd come from, what we'd become, and what we'll be when we grow up.

Four years ago, about two million Apple IIs had been manufactured and sold. If Christmas sales go as expected, Apple will sell its five millionth Apple II before our anniversary issue is in your mailbox. Four years and three million computers ago, industry pundits said the Apple II was dead, but I couldn't see any limit to the life of the Apple II then and I can't see any limit now. People often suggest that we unhook our wagon from the Apple II star, but we're still enjoying the ride, thank you. So I'd like to reaffirm something I said back in Vol. 1, No. 0:

This newsletter is dedicated to the Apple II. It will follow the advances Apple makes to this family and it will follow the advances users around the world make in pushing these machines to their limits. I want Open-Apple to be the world-wide gathering place for Apple II people.

If machines are to be pushed to their limits, it's critical that users exchange information. No one can discover everything alone. Open-Apple will be a clearinghouse for elegant tips, tricks, and procedures.

Four years ago, I saw myself as editor of a newsletter that would open up the inner workings of the Apple II to non-professional computer users. I wanted to "release the power" of the Apple II to everyone. Today, I see myself as the manager of an information hub that consolidates the discoveries of Apple II users everywhere into better Apple II technical support than Apple itself can provide.

In our efforts to open up the Apple II, we got sucked into the information void that exists between Apple and its customers. Apple sends its customers to its dealers for technical support, yet most of the people working in Apple dealerships are unable to answer any but the most elementary queries about the Apple II. Over the last four years, **Open-Apple** has become recognized as the place to go when you need more than elementary technical support.

A2-Central™



Our new logo

We fill this role with personal responses to mail inquiries, with articles and discussions in our newsletter, with the products we sell in our catalog, and with online support in the Apple II RoundTables on GEnie. Beginning in February we will add another product many of you have asked for, a 3.5 disk subscription, which will include the full text of the current month's issue of our newsletter as well as the latest software and data files provided by our users. In addition, we will offer a complete set of our back issues on disk, suitable for full-text searches. **Open-Apple** has grown into a world-wide exchange for Apple II technical support. I've decided now is the time to change our name to reflect that.

What my staff and I do today is not so much open up the Apple II for you as it is to consolidate and to archive your own "openings" in a central exchange we all can use. And your own discoveries create a base of Apple II information that goes well beyond what "Open-Apple" describes—you've created "**A2-Central: a journal and exchange of Apple II discoveries**".

Miscellanea

Apple has purchased the Apple Programmers and Developers Association's inventory and mailing lists from Apple Coop and intends to move the operation under its own wings in California under the name Apple Direct. Existing memberships will be honored.

New copies of Apple Writer are available from Sun Remarketing for \$25 + \$3.90 s/h. Sun Remarketing handles all of Apple's discontinued merchandise. (P.O. Box 4059, Logan, Utah 84321 801-752-7631)

Washington Apple Pi, one of the world's first and largest computer user groups, will celebrate its tenth anniversary December 16th and 17th. Featured speakers include the editors of A+ and Open-Apple, who will participate in a panel on the future of Apple. A bunch of famous Macintosh people will be allowed to speak, too. If you live in the Washington, D.C. area, stop by the Uniformed Services University of the Health Sciences in Bethesda on December 17. The action starts at 9 am. For more information, call the Pi office at 301-654-8060 between 10 and 2:30 Eastern Monday through Friday.

Cambridge Marketing, the company that puts on AppleFest, continues to push for "an increase in coverage of the Macintosh computer" at its shows. Tell your Macintosh friends that this is just a snow job to get their money. AppleFest is an Apple II show. Crowd attitudes toward Macintosh booths range from couldn't-care-less to openly hostile.

And in the local news—we had a cultural exchange with some of the people from Apple's Kansas City office in October. Their office, like ours, is actually in a booming area of Overland Park, Kansas called the College Boulevard corridor. Apple is on the 9th floor of an obsidian-like high-rise locally known as the Darth Vader building, while we're in "that office-ware-

house complex across the street from the Residence Inn'.

Apple's office is big enough for about 30 people, though they don't quite have that many here yet. Their office includes two computer labs for training and sales sessions. One of the two is full of Apple IIs. As part of the cultural exchange, we swapped valuable objects. Open-Apple came away with a Technology Planning Guide that Apple's education representatives make available to school districts. It outlines 26 steps, organized into six stages, that schools can take to plan their computer futures.

We also got a full set of Apple's Curriculum Software Guides. These books provide details about the highest-rated educational software packages. Each guide is divided into three major sections that allow you to locate software by curriculum objectives, package title, or publisher.

In the curriculum objectives section, packages are listed in tables with package names down the left side and program type and curriculum objectives listed across the top. Big dots are used to show which software packages address which curriculum objectives. This section is organized sequentially by grade ranges—K-3, 3-6, 6-9, 9-12.

The product description section is arranged alphabetically by title. It highlights information about each package such as publisher, type of software, grade range covered, price, major objectives, alternative objectives and uses, support materials, lesson time, and review sources.

A Purchaser Information Chart lists software by publisher and gives prices, number of disks, machine requirements, copyright date, backup policy, availability of licensing, and warranties. Publisher addresses are given in an appendix.

The guides are available for Reading, Writing and Language Arts (K-6 and 6-12); Mathematics (K-6, 6-12); Science (K-12); Foreign Languages (K-12); and English as a Second Language (K-12).



Ask (or tell) Uncle DOS

Laura Drittler, Head Firmware Engineer on the Apple IIc-Plus project, called to say that my description of the IIc memory expansion connector on last month's front page was inaccurate. The connector is the same as the one on earlier IIc models. However, Apple's cards built for those earlier machines won't operate at the higher speeds of the IIc-Plus.

The seventh line in the first column of last month's page 4.78 is supposed to end with two backslashes, as the first full paragraph in column two, same page, says. They were "shown" in my AppleWorks file, but one got eaten by a procedural bug between there and the printer.

In the "AppleWorks as copier.v2.1" patches shown on page 4.79, remove the T\$00 from each line. In AppleWorks 2.1, the file types of all the auxiliary AppleWorks files have been changed to BIN, which means you no longer need to enter a file type except when patching APLWORKS.SYSTEM, which remains a SYS file.

An introduction to SCSI

External hard disks for the Macintosh can be used with the Apple II. You need an Apple SCSI card (make sure you get the revision C ROM) for the II and the System Utilities software.

If you have a IIgs, the Finder won't be able to find your disk until you format it. I was able to format an Everex drive using Apple's latest Sys-

tem Utilities software (no longer carried on the GS/OS system disks, but still available on the ProDOS 8 system disk). Specifying the slot of your SCSI card produces a soothing whir from the drive and in less and 60 seconds the format operation is done. The drive has been reformatted from the Mac HFS with which it ships to ProDOS. After that the Finder displays the icon for a SCSI hard disk.

The GS/OS Advanced Disk Utility software, in combination with Apple's Rev C SCSI card, allows you to partition the drive into two or more volumes. You have great flexibility in setting the sizes of the partitions.

I also have a Chinook drive with the Chinook SCSI card. This card is not Apple Rev C SCSI-compatible. GS/OS seems to work flawlessly from this drive, but the Advanced Disk Utility is unable to partition it. Apparently the Chinook card looks more like a Smartport bus to GS/OS than a SCSI bus, because the Advanced Disk Utility's Get Info button returns a Smartport-like ".DEV1" name for the drive rather than the expected ".SCSI1".

External 20 meg hard disks for the Mac can be had for less than \$430 in the educational market. A version that stacks between the IIgs CPU and monitor is \$50 more. They come with cable and cable terminator. An Apple SCSI card has a suggested retail price of \$129.

The major drawback of using a Macintosh drive on an Apple II is that manufacturers choose to ignore that the Apple II exists and will not provide any support. I would rather buy from a manufacturer that is supporting the Apple II. But price and features are important and Chinook, C.M.S., and First Class Peripherals haven't yet come out with GS/OS-compatible interface cards.

Bruce Ristow
Rochester, N.Y.

You mention in last month's discussion of the Advanced Disk Utilities (page 4.77) that you hadn't been able to get the Partition Button activated. This program uses a unique DPM (Device Partition Map) not supported by third party SCSI host adapter cards. The partition button will appear dimmed unless the signature byte \$82

is found on the host adapter card, meaning Apple's own SCSI card is present.

Similarly, the change to multiple-block READs and WRITEs in GS/OS, which in itself is probably the greatest speed-up to file access on the IIgs, is typically not supported by third party adapters. Revision C of the Apple SCSI card also supports the High-Sierra format (via unique SmartPort CONTROL Commands), locking out any third party supplier that develops their SCSI adapter without fully "cloning" Apple's card. There are other less major annoyances with non-Apple cards, such as the missing or inaccurate "red thermometer" on startup and non slot-sequential GS/OS device mapping.

However, the Apple II SCSI Card will work with just about any integrated SCSI disk drive on the market, including most subsystems designed for the Macintosh. All the software you need to format, partition, and use the disk drive is included in System 4.0.

If you already own an Apple II SCSI hard disk, open up the unit and look at the drive. If it's a Seagate model ending in an 'N', such as the ST225N or the ST277N (CMS SD60), you're in luck. Replace the host adapter card that came with your unit with Apple's \$129 SCSI card. Other SCSI drives besides Seagate's will also work, but we've tested the Seagate drives and know they are fully compatible. If in doubt, find a dealer who will let you bring your subsystem down to the store and try it on an Apple SCSI card before spending the \$129 bucks. Also note that you will probably have to re-format your existing Apple II Subsystem in order to put down the proper partition maps, so make a full back-up before doing anything else.

With the Apple SCSI card and your subsystem in place, you'll now be able to use the partitioning feature of the Advanced Disk Utility, your thermometer and device mapping will work properly, and you'll be "CD-ROM ready" when Apple II compact disk software becomes available next year.

P.S. Try this: Boot a diskette containing GS/OS while holding down the ESC key. You'll see a text screen (instead of the "Welcome to the IIgs" splash screen) listing all of GS/OS's

internal tools and their revision numbers.

Joe Jaworski
Anaheim, Calif.

It's rapidly becoming apparent that the SCSI interface does for mass storage devices what the RS-232 serial interface did for printers and modems. The same SCSI hard drive will work on a Macintosh, an MS-DOS machine, or an Apple II. You do have to reformat the drive when you move it from machine to machine, but still, you buy flexibility when you buy SCSI.

If your choice of machine is an Apple II, you need a SCSI host adapter card. We know of four manufacturers who build SCSI cards for the Apple II—Apple, C.M.S., Cirtech, and Chinook. Apple's card sets the standard and can be used with Apple's CD-ROM drive as well as hard disks. The C.M.S. card is very different from the standard—it supports partitioning by moving jumpers on the card rather than by software. Likewise, Cirtech's card isn't up to standard yet, but if it gets there we'll have them, probably in \$89-\$99 price range. Chinook tells us it has decided to phase out its SCSI card and will be supplying Apple's card with its hard drives in the future.

Once you have a SCSI card, it's important to realize you can daisy chain as many as seven other 'devices' to it. Each SCSI card and each hard drive is a device. Each device has a unique ID number in the range of 0 to 7, usually set by attaching a jumper across one of eight pairs of pins. You have to make sure each of the devices you hook to a daisy chain has a different ID number, or your system won't work.

Your eight-device SCSI chain can include one computer and several storage devices. (GS/OS can deal with all seven. ProDOS 8 can only deal with two unless your SCSI card is in slot 5, in which case it will handle four—two of the four will appear to be in slot 2.) Or your chain can include several computers sharing one or more storage devices. The latter is called a 'SCSI-network' and requires special 'user partitioning' software so that users don't overwrite each other's files.

If you're interested in adding a SCSI hard drive to your Apple II, you have three possible ways to proceed—buy a plug-and-go system for your Apple II, buy a plug-and-go system for a Macintosh or other computer and figure out how to make it work on an Apple II, or buy the pieces of a SCSI system from electronics suppliers and put the system together yourself.

There are three choices for an Apple II-ready SCSI hard disk. Apple itself, C.M.S., and Chinook. Apple's price on a 20-meg drive with SCSI card and cable is \$1,228, which is extremely high. Or you can get a 40-meg drive from Apple for an even more ludicrous \$1,828.

C.M.S. makes a line of SCSI drives for the Apple II and we have a couple of them we like. A 20-meg drive is \$895; 30-meg, \$995; 43-meg, \$1095; 60-meg, \$1295. Though we like these drives, we're pretty confused about compatibility issues that arise with C.M.S. equipment. For one thing, the C.M.S. SCSI cards don't work with certain other cards in your computer—including cards as popular as Orange Micro's Grappler printer interfaces. And the last time we asked, the company said its drives wouldn't work with Apple's SCSI card. On the other hand, as Joe Jaworski mentions above, at least some of these drives use a Seagate mechanism that works fine when directly

connected to the Apple SCSI card.

Our first choice as supplier, Chinook, offers 20-, 30-, and 40-meg drives. As of December 1, Chinook will be selling through dealers rather than directly to users. Suggested retail dealer prices will be \$875, \$975, and \$1,075 for the three drives, although Apple II mail order houses will probably have them available for less.

If you're willing to throw warranties and caution to the wind, you'll probably be able to save money by buying a finished SCSI drive designed for a Macintosh or MS-DOS machine from one source and an Apple SCSI card from your Apple dealer.

Or you can go for bottom dollar by buying a hard disk subassembly, a disk drive cabinet with power supply, a cable, and an Apple SCSI card from separate sources and putting them together yourself. We just tried this and ended up with a 64-meg hard drive that cost just \$670 and several hours of shopping time.

In either case, start by spending some time looking through magazine ads. The magazine with the most ads of this type is **Computer Shopper** (\$29.97/yr, P.O. Box F, Titusville, FL 32781 407-269-3211).

The hard part of building your own drive is finding all the pieces. Actually assembling the pieces and connecting the cable takes nothing but a screwdriver and a couple of minutes.

As you scan the ads, you'll see lots of people selling 'MFM' and 'RLI' IBM-type drives. If you already have one of these, a company called Adaptec makes boards that will convert them to SCSI drives. Look at the Sunnyvale Memories ad for an example. Sunnyvale's price on the MFM to SCSI controller is \$135; RLI to SCSI is \$145.

If you don't already have a hard drive subassembly, the better choice would be to buy a SCSI drive to begin with. These are more difficult to find than IBM-type drives, but check out the ads from Sunnyvale Memories, Lycu Computer Marketing, and Hard Drives International for examples of what you're looking for. We were able to get a 64-megabyte Seagate ST-277N subassembly for \$460.

After you've picked out the hard drive subassembly, you'll need to get a disk drive cabinet to mount it in and a power supply. These are available already assembled as a unit from companies such as True Data Products and IB Computers. Going for absolute bottom dollar, we bought a half-height floppy drive cabinet and power supply for \$60, but if we had it to do over again, we would have paid the going rate of \$120-\$140 for a hard drive cabinet and power supply—this one gets too hot.

We got the cable we needed by calling Redmond Cable (17371-A1 NE 67th Ct, Redmond, WA 98052 206-882-2009). It cost \$30. And we got the SCSI card we needed, without cables, from an Apple dealer for \$129.

Once you get all this stuff put together, your next task is to format the hard disk. 'Format' has two distinct meanings. The first is properly described as 'low-level format'. It has to do with getting a drive to put magnetic markers on itself that define where each block is. The other meaning is 'operating system format'. It has to do with filling certain blocks with boot code, directories, and bit maps.

If you buy a finished hard drive, it will probably come 'pre-formatted', which means the low-level format has already been done for you. If not, or if you buy a bare hard drive sub-

assembly, you'll probably have to do the low-level format yourself. The only way we know of to do this that we're absolutely, positively sure works is to modify the Smartport program presented here in January 1987 (pages 2.89-2.93, with important corrections in February 1987, page 3.3).

The Apple SCSI card is compatible with Apple's Smartport interface standard. Smartport actually consists of two standards, one for the software interface and one for the 'bus'—the electronic signals that go over the wires that connect the devices to the computers. SCSI uses a different standard for the bus, but follows Smartport for the interface. The last few paragraphs on page 2.92 show how to make a control call. The SCSI format command uses a control call with a subcommand of 21. By next month we hope to have a few additional lines for that program that will give it the power to do low-level SCSI formats. In fact, I have those lines right here, but give me another month to test them before I publish them.

We've also heard, with varying degrees of certainty, that newer versions of **Copy II Plus**, the GS/OS **Advanced Disk Utility**, and the Macintosh system's **HDD Init/Test** utility will put low-level formats on SCSI disks.

If your disk comes pre-formatted, all you have to do is change the operating system format. Almost any ProDOS formatting program can take care of that for you.

If your drive is 32 megabytes or smaller, you're now ready to start filling it up. If it's larger than 32 megabytes, however, you'll have to 'partition' it, because ProDOS has a volume-size limit of 32 megabytes. We know of two programs that can do this. If you have a IIGs, use the **Advanced Disk Utility** from the GS/OS /SYSTEM.TOOLS disk. If you have another Apple, use the partitioning program that comes with the Apple SCSI card. Early versions of this program weren't able to handle drives larger than 40 megabytes, however, we understand that the current version can.

Chinook IIc hard drive

I would be interested in hearing from someone who gets a Chinook CT-20c for the Apple IIc in terms of how well it works. I don't want to be the first. I don't have enough technical expertise for debugging any hardware, firmware, or software problems.

David N. Walton
Bartlesville, Okla.

I've been using a Chinook CT-20c (20 megabyte) on my IIc for the last few weeks and it has worked flawlessly. All you have to do is plug one cord into the wall and the other into the back of your IIc (3.5 ROMS required). You can add a daisy-chain of UniDisk 3.5 or 5.25 drives by plugging them into the Chinook. The Smartport bus isn't able to transfer data as fast as a SCSI bus, so the CT-20c doesn't have as much speed as other hard drives, but it's faster than 3.5s. You can also plug this drive into the Smartport connector on a IIGs, thus adding a hard drive without needing an empty slot.

Other than speed, the only other difficulty I've encountered is that only the first device in a Smartport chain can be booted. If you hook up the CT-20c first, it is your boot drive. If you put a UniDisk 3.5 first, it is the boot drive. On the IIGs in particular, I'd like to be able to switch back and forth without having to unplug and reconnect the cables. There's nothing Chinook can do about this, however, it's a limi-

tation of the Apple Smartport firmware.

Chris Adams at Chinook tells me the CT-20c is a SCSI drive at heart with an additional logic board that makes it Smartport compatible. If you trade in your IIc later, Chinook can turn this drive into a regular SCSI drive for you. Suggested retail price on the CT-20c is \$850. (Chinook Technology, 601 Main St., #635, Longmont, CO 80501 303-678-5544).

Publish It! laser printing

Have you heard of any service that can take a Publish It! document, receive it via a modem, print it on a laser printer, and mail the copy to you?

Is TimeWorks planning on releasing a IIgs version of Publish It!? I have the current version, and I am impressed, but would like it to take advantage of the expanded memory on the IIgs.

Charles Cook
Miami, Fla.

We don't know of such a service, but it sounds like a reasonable idea. TimeWorks has an enhanced version of Publish It! coming. It won't be IIgs-specific, but it will use all the RAM you have on Apple-compatible cards.

4-meg RAM chips

Applied Engineering had been talking about 4 meg RAM chips then dropped the topic. Now you're starting to say things like 'forthcoming 4 meg chips'. What's the scoop?

J.M. Green
Pomona, N.J.

RAM chip sizes tend to quadruple from generation to generation. We're just now reaching a point where 1 meg chips are becoming cheaper per bit than the earlier 256K chip. The next generation will be 4 meg chips, although we haven't seen any yet. However, initial plans are finished and one of Cirtech's memory cards (the PK-16 standard slot card) was designed to be compatible with the new chips when they become available. If history repeats, it will be three to four years before they are price-competitive with 1 meg chips, however.

Anything to anything

After reading in your September issue about a subscriber's difficulty in transferring VisiFile to AppleWorks, I thought I should let you know about my service. I specialize in converting data files created with older Apple programs such as PFS, VisiFile, List Handler, Data Factory, and Data Handler to AppleWorks, IBM, or Macintosh applications. I can also deal with Apple III files and others. To make a quotation, I need to know the name of the program used to create the file and the number of disks, records, and fields in the file, as well as a sample copy of the data file. I have computers all over the house all connected together just waiting to be challenged.

Gerald Berkowitz
Burke Transfer Service
P.O. Box 515
Park Ridge, IL 60068
312-823-1357

Those who have daily needs to transfer data should also be aware of a Macintosh program, called **Apple File Exchange**, that can convert text files between Macintosh and ProDOS formats, using 3.5 disks. **Apple File Exchange** comes free on current Macintosh system disks. I've heard there are public domain modules for

this program that allow it to do direct conversions of AppleWorks files, but I haven't run across any yet.

If your need is to transfer data back and forth between AppleWorks and MS-DOS, you should look at **Cross-Works**. This package includes an eight foot cable you plug into the serial ports of your computers (the Apple end of the cable has IIc, IIc, and IIgs connectors; the IBM end both 25-pin PC/XT and 9-pin AT connectors) and disks for both your Apple II and your MS-DOS machine.

On the Apple side, **Cross-Works** specializes in AppleWorks files. On the MS-DOS side, it specializes in **WordPerfect** word processor files, **Lotus 1-2-3** spreadsheet files, and **dBase III+** data base files. Transfers can go in either direction (at 19,200 baud) and retain all formatting information (word processor files) and all formulas and cell formats (spreadsheet files).

The Apple II **Cross-Works** software uses a file card interface. You simply select the files you want to transfer from a menu—just like in AppleWorks. Plain ASCII files can also be transferred. **Cross-Works** also supports modem transfers. (\$79.95 + 3.50 s/h, SoftSpoken Co, P.O. Box 97623, Raleigh, NC 27624 919-878-7725).

Gap corrective, 2.1

I was pleased to see my letter about the text file to AppleWorks word-wrap bug in your September issue (page 4.60). Unfortunately, AppleWorks 2.1 has the same bug. Here's a fix for v2.1 users:

```
POKE 768 : REM original value is 61
BSAVE SEG.MI, A$300, LL, B$19B74
```

I wrote JEM Software's *Late Nite Patches*, which includes a patch that allows users to select text files from menus rather than by typing in a pathname. That patch also fixes the word-wrap bug, and Version 2.0 of *Late Nite Patches* works with either AppleWorks 2.0 or 2.1.

And *UltraMacros* 2.0 comes with a patch to change both AppleWorks and *UltraMacros* appropriately for the MouseText Return patch ('<find> mouse Return,' September, page 4.60).

Mark Munz
Fort Lewis, Wash.

Foreign accents, cont.

Using foreign language characters in AppleWorks on a IIgs is in some respects easier, in others trickier, than recent discussions in **Open-Apple** would suggest (October, page 4.71; November, page 4.80). I do not have any difficulty setting up most of the European languages to display and print using the IIgs control panel and ImageWriter printer codes, but there are some problems with French and some even more serious problems with Spanish that seem to me to warrant a completely different approach.

In AppleWorks, setting up a custom printer with printer codes to access the characters peculiar to each language is the way to start; but do not store these printer codes in characters-per-inch definitions—this will cause problems when you go to print. The problems can be solved by including additional instructions in your document, but why bother? Use the definition for 8 lines-per-inch and no problems will occur. You can store the printer codes for U.S.A. printing in the definition for 6 lines-per-inch if

you like.

On your IIgs, set the control panel under Options for the display language and keyboard layout corresponding to the printer codes you have given to the 8 lines-per-inch definition, and you have the following:

1. The keyboard layout appropriate to the language you have chosen (see your Owner's Manual for a diagram of the layout);
2. A screen display that shows you the new characters (unfortunately the "l" in the AppleWorks display will also be replaced by a strange symbol, but we can get used to this if we try; think of it as AppleWorks' way of keeping you posted on the status of your control panel);
3. Your printer will print the special characters. All you have to remember to do is to embed an open-apple-O(ptions) LI-8 at the beginning of your document and to choose your custom printer when you go to print.

If you need more than one language, it might be easier to have different copies of AppleWorks customized in this way for each. That way you don't have to bother remembering which option corresponds to which language—not all options work as neatly as LI. This method works beautifully for German, Italian, and Danish. I do not know enough about Swedish typography to say whether it works perfectly with Swedish, but I suspect that it's mostly O.K.

The problem with French is that there are 'letters' one wishes to print that are not available as complete characters. You have an 'e' with an acute accent and an 'e' with a grave accent, but no 'a' with a circumflex; for example. You do have an 'a' and a '^', however, so you can solve this problem by going back to your custom printer definition and assigning the printer code for backspacing to some option that you don't use very often but doesn't require too many keystrokes to access. If you have *TimeOut UltraMacros* or something similar you can devise a macro for each of the composite characters that you'll need. In the end you'll have a perfectly acceptable printout, but your screen display will be a little weird and your (own) memory will be at least slightly more taxed than in using this approach with the languages mentioned earlier.

Unfortunately, I don't know how to make the whole thing work with Spanish. 'Ñ' with tilde is available, along with the upside down exclamation and question marks, as is the 'e' with acute accent. But Spanish, unlike French, sometimes requires the acute accent mark with all vowels, not just 'e,' and there is no separate acute accent to be used with backspacing when vowels other than 'e' require the accent. Although one could design a downloadable font or pursue other possible homemade solutions, I think Spanish, unlike the other languages, will require a completely different approach, such as new software or a ROM designed for use in Spanish-speaking countries. Personally, I think the lack of an acute accent mark is a deficiency in the design of the computer.

Incidentally, you can print French just as efficiently (no less, nor more) by using the Italian printer codes—without having to put up with the rearrangement of letters as well as symbols in the French keyboard layout. The Italian marks are the best for general purpose use, if you need to insert diacritical marks or foreign characters into English text on an occasional basis.

I am extremely happy with *WordPerfect* for the Apple IIgs—it is a fast and powerful program if you take the time it requires to learn and configure, but I must report that it does not allow printing foreign characters with the type of coordination between keyboard, screen, and printer that AppleWorks does. You can print the alternate characters more easily than you can from AppleWorks, but the alternate characters will not be displayed on your screen the way they should be. Your have to remember what le gar\on est fatigu) means, and things like that.

Michael L. Janosek
Fort Wainwright, Alaska

For those who are new around here, we've covered custom printer setups for AppleWorks many times in the past. For example, see "AppleWorks vs chemistry" in the February 1987 edition, page 3.4. The ImageWriter control codes for international character sets were given in "Danish to go", July 1988, page 4.47.

Using the 8 lines-per-inch option works fine on short pieces, but if you do a multi-page document you'll find that AppleWorks won't put page breaks in the right places. Ah, but tell AppleWorks your paper length is 8.25 inches (when it's really 11)—that should solve that problem.

We're the authors of *EuroWorks*, the foreign-language patch to AppleWorks that you mentioned in your November issue (page 4.80). And lo and behold, we've suddenly started getting orders from your readers. That's great, we love orders, but the trouble is we're having to refuse about half of them because users don't have a configuration that *EuroWorks* can run on.

EuroWorks requires AppleWorks v2.0 USA or later and an ImageWriter-compatible printer.

This includes the Apple ImageWriter I, ImageWriter II, or Scribe; a Mannesmann Tally MT85 or MT86 with an Apple ImageWriter Interface Module; or a Seikosha SP-1000AP (the AP suffix is important).

Frank Wells
P.O. Box 7459
Beaverton, OR 97007

Write the fine print

If you need to squeeze lots of information into a small space, define a custom printer in AppleWorks. Under the printer configuration for 17 characters per inch, put the printer control characters for 17 characters an inch, subscript, and 9/144" lines. With an ImageWriter II, these codes would be:

```
ESCAPE Q ESCAPE y ESCAPE T09
```

This gives you 16 lines per inch, but you need good eyesight to read it.

Jim Low
Toronto, Ont.

Basic.system & AppleShare

In your October issue, Bob Sander-Cederlof wonders about the change in Basic.System 1.2 that causes it to ignore the total entries field (TOTENT) of a directory and to read until an end-of-file error occurs instead (page 4.66). This is a feature, not a bug. It was done on purpose to improve compatibility with AppleShare—in a network environment, the number of entries in a directory can change while the directory is being read. So the recommended practice these days is to ignore TOTENT completely.

David Lyons
North Liberty, Iowa

Basic.system and free blocks

We all know how easy it's supposed to be to determine the number of unused blocks available on a ProDOS disk from Applesoft; just open the directory like any other file and use INPUTs to read each line until you get to the footer, which has the desired information ready to be extracted with a few MID\$ and VAL functions. However, this falls flat on its face if you try it with the built-in ProDOS /RAM volume. And it takes a few seconds to read through the directory if all you're interested in is free space.

Here's another way to do it:

```
10 PRINT CHR$(4);"VERIFY /volume.name"
20 T=PEEK(48825) + PEEK(48826)*256
30 U=PEEK(48828) + PEEK(48829)*256
40 F = T - U
50 PRINT " Used Blocks = ";U
60 PRINT " Free Blocks = ";F
70 PRINT "Total Blocks = ";T
```

The VERIFY command performs a GET_FILE_INFO MLI call to verify that the specified file exists. When you use it with a volume name rather than a file name, ProDOS returns the volume size instead of the aux type and the number of blocks used on the volume instead of the number of blocks used by the file.

I've also discovered that the following bit of code will allow you to boot slot 6, drive 2 on a IIc with 3.5 ROMs:

```
300:A9 E0 A0 01 A2 60 4C 0B C6 N 300G
```

Jerry Kindall
Grove City, Ohio

IIgs may have a PAL after all

In regard to the November letter from Australia by John D. Smith (page 4.80), Apple Europe doesn't offer a PAL IIgs, either. Australia is looking at a modification to the IIgs (retrofitable) to give PAL output for all IIgs units.

The original decision was made to exclude PAL because the video quality of the IIgs was far higher than a standard TV would allow. In retrospect that did not allow for the possibility of video titling and multimedia applications, and as such that is why Australia is looking at the modification.

Your Australian subscribers should contact Frank Revill of Apple Australia for the latest on this modification.

Peter Sandys
Apple Computer, Inc.
Cupertino, Calif.

Reset vs GS/OS

The attitude of GS/OS towards reset annoys me to the utmost. Now even the *Apple Programmers Workshop* can be reset now. Can you imagine any reason why resets can't be controlled as they are in the eight-bit world?

Luca Accomazzi
Triuggio, Italy

We discussed reset and GS/OS with Mike Westerfield, author of the *Apple Programmers Workshop* as well as the *Orca* language series for the IIgs.

Westerfield says there are two issues with GS/OS and reset. The first is that reset cannot be intercepted by an application under GS/OS. Westerfield says the GS/OS development team told him they designed GS/OS this way because only a few software development systems were handling reset correctly under ProDOS 16, so they decided to take it away from everyone. Under GS/OS, hitting control/reset does a warm-boot of the system; just as open-apple/control/reset does under ProDOS 8.

This is intolerable on an Apple III! John Sculley said at AppleFest that the Apple II was like a stick-shift pickup. Harder to drive than other computers, perhaps, but more fun for the driver. One of the stick-shift features Apple II users have always had that many other computers lack is the ability to do a hard reset.

Programmers know that during software development, programs often get "hung" in unending loops. Reset is a needed development tool. Westerfield told us that in his opinion, "if the GS/OS team is going to take reset away, and I don't think they should, they **must** replace it with another effective way of interrupting a program in a development environment."

Westerfield said that a second, related problem with GS/OS is that any abnormal termination (reset, break, crash into the Monitor, power outage) while a file is open can leave the file's directory in a "damaged" state. Westerfield told us he hadn't figured out the problem completely, but it appeared that files in a "damaged" directory could be read but not written to. This may be related to some sort of multi-user flag that prevents an open file from being written to by another user. If that is indeed the situation it should be documented somewhere and there should be some utility that allows easy file recovery. If that's not the situation, GS/OS shouldn't leave the disk in such a precarious state.

Open-Apple

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