

# THE BEST OF OTTALINI #10

(ORIGINAL DISK NAME: THE BEST OF OTTALINI (AND OTHERS!) – 1995)

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This is the 1995 edition of WAP /// SIG Co-Chair Dave Ottalini's articles from the WAP Journal. Also includes articles from other authors and information about PD library additions. We hope you enjoy it and encourage your submission of programs to our PD library.

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WAP /// SIG PUBLIC DOMAIN LIBRARY

PDS NAME: BEST OF OTTALINI #10

DISK ID : 3WAP-11

BOOTABLE? Nonbootable

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May/June 1995

By David Ottalini, Apple /// SIG Co-Chairman

### BOB CONSORTI MOVES ON

It is with a great deal of sadness that I must report Bob Consorti has decided to retire as a programmer for our major Apple /// projects. Bob was the last true programmer we had and he will be sorely missed. What it really came down to was money, since Bob could not afford to spend the time to do projects for us at the price we were able to pay him:

***I'm getting about 1 real paying contract a year that's paying me about 12x what I could ever hope to get out of the /// for a similar project. With my time constraints I just can't do it anymore at that kind of compensation level.***

Later, Bob added to those thoughts:

***There was just no way I could afford to spend the time on a project just as big as BOS when there wasn't a guarantee of even minimum wage. Since my 'real-world' programming projects are paying me some 15x minimum wage I hope you understand the financial reasons why I simply can't continue doing large programming projects on the ///.***

Despite that, Bob DID leave the door open a tad for us:

***I do appreciate the efforts you've made on my behalf over the years and I will continue as time permits to do Apple /// things but for now I have to concentrate on what's going to be most profitable for me.***

On Compuserve, the announcement brought the most traffic the Apple /// board had seen in months. Jim Nichol wanted to know what programs Bob had been working on. Bob replied he'd been coding Apple // educational programs, but had also moved on to programming on the Macintosh:

***It was mainly software based for teachers for grading and computerized testing. I also did the Apple //e version of Destination:MARS! I just had to turn down a new Mac project (like CricketGraph) because I'm doing a different one. If I had the time I would have jumped through hoops to get it since it paid so well (\$60K), but they needed it done in less than 6***

***months which just wasn't feasible for me.***

Bob was also asked if he might consider releasing his special assembler for the ///, so that other programmers might work on some Apple /// projects. But Bob said:

***It was written for internal use only and to polish it up for release that wouldn't have to be supported would again be a huge waste of time. From my continual Apple /// support calls on products I DIDN'T WRITE, I'd hate to have to deal with the kinds of support calls I know I'd get for a non-released assembler - even if it was guaranteed that nobody would ever call me.***

And what about getting the source code to The Communications Manager so we could use that as the basis for a new communications program?

***I'm also afraid that the source code for the current version of TCM isn't going to be available, for basically the same reason. Tim did a poor job of commenting his source code and as we discussed the new comm project was basically going to be a rewrite for a number of reasons, not the least of which was undecipherable source and the fact that TCM used SOS. To get to the higher speeds required for in the specs for the new comm program it would be necessary to talk directly to the hardware, obviating much of the source that I could decipher.***

***I would love to sell WAP the source for TCM and make the cross-assembler available as it would help me recoup some of the time I've lost on BOS and other Apple /// stuff over the last couple of years. But I've come to the unmistakable conclusion that it would probably cost me more in support time if I released the assembler and the TCM source code than if I did the project myself. There are other assemblers that can be used on the Apple II to cross-assemble code for the Apple ///. The only problem is finding someone who knows SOS, Apple /// hardware, communications protocols, Apple /// assembly language and who has a hell of a lot of free time on their hands.***

Again back to Jim Nichol on CompuServe, who wondered if there might not still be some Apple /// programmers left from the old days. Bob replied that there weren't that many who knew how to write in assembly language:

***The problem was only a couple of people at Apple could program in Apple /// assembly language. Almost everyone else was writing bloated, incredibly slow programs in Pascal.***

Nichol then wondered if someone hadn't written Pascal itself in assembler. To which Bob said:

***Technically yes but the core of the P-code was ported from the Apple // version of Pascal. Very little machine specific code for the Apple /// exists in the 6502 assembly code. Once Apple got the kernel going on the ///, ALL the rest of the system the editor, the compiler, the***

*filer etc was all written in Pascal, compiled down to P-code which was run thru the P-code interpreter which sat on a port of the Apple II language system which was modified to work with the SOS operating system (in P-code) which eventually worked its way to assembly language. 3 or 4 layers later things ran so slow it made people cry. For those who remember the Apple /// (and Apple II) Pascal program compilation times, where the dots would stream across the screen indicating a line of code had been compiled (a couple dots a second) - those were the days!*

*Actually, it was good in a sense. Many of the people who watched those dots go by ended up sick of it and doing something different. Ruppert (now Bob) Lissner wrote a cross assembler on the old Lisa that compiled 6502 code which he used to create the first version of AppleWorks and /// E-Z Pieces (Apple /// version of AppleWorks). It was about 5 times as fast as the old Apple /// TLA (The Last Assembler) and he was quite productive with it. Rob Turner and myself wrote an Apple /// and later Apple IIGS assembly language assembler which was about 100x faster than TLA. Ahh, the good old days!*

Nichol wanted more on that:

*Did I understand you correctly that SOS started out in P-code (horrors!), and eventually was rewritten in assembler?*

To which Bob replied:

*No, SOS was written completely in assembly language on Apple II's by a group of very talented programmers who were way ahead of their time. Most of the Apple /// pascal language system was written in P-code, including most of what you would consider low level operating system stuff.*

#### AL BLOOM WEIGHS IN

Not to be forgotten, our good friend Al Bloom added his comments to Bob's announcement:

*We have a problem, children. Bob Consorti, the last active /// programmer to my knowledge (I've been known to update or correct my programs, but I'm not doing anything new), is dumping Sara. As he said on CompuServe these past couple days, he has time to program, but his other efforts pay lots better than his Apple /// stuff.*

*What the naughtyword is the matter with y'all? Bob's DAR is magnificent. As you may have noticed, I've tried to reinforce that evaluation by posting to NAMES in DAR format. Have you used DAR? Have you paid Bob his shareware fee?*

*I shed no tears for BC's giving up on an update to The Communications Manager. I didn't use it*

*much when the /// was my primary computer. I needed the VT-100 emulation provided by Access /// for routine work. I used Access /// routinely. But if I were in CompuServe, and if I needed to transfer a file with an error-free protocol, I'd invoke TCM (desk accessory) from within Access /// for an XModem transfer. BC did desk accessories on the /// beautifully. One of the things that kept me from more than looking at any other computer until the Mac II series emerged.*

*As I said, DAR is terrific. But it depends on binary file transfer. I asked Bob if he could implement the Mac standard "hqx" (binhex 4) text- encoding/decoding algorithm for the ///. John Jeppson's 1982 vintage text encoder/decoder is a piece of used food IMHO. Bob said he'd take a whack at it. As his second foray into /// shareware.*

*I haven't heard anything about that lately. Maybe Bob's first foray didn't yield much?*

*Durn, guys! If we don't support the folk who do useful work or magic on the ///, how do we expect anyone to do either on our behalf? Dumb. But that's the way it has been since at least 1982 -- when I started with Sara. No support from the user non-community.*

*No, I don't expect to make a difference with this note. I'm just raising hell with y'all. Again. And maybe explaining why you are not again getting something for nothing. I should rephrase that. You have already gotten a lot for nothing. Almost all of us who tried gave up. And finally released our wares as free -- if not in the public domain. But you want something new? Fool me once, shame on you. Fool me twice, shame on me.*

*BC has been fooled more than twice, as have some others of us, and he kept coming back with great products that weren't supported.*

*BC has gone the extra mile for more years than I could spell "Apple ///." If you're not going to support his efforts, at least send him a thankyou note.*

#### **BUT WAIT JUST ONE MINUTE....**

Before Bob made his announcement, he was working on a project that he has, in fact, just about completed (and may have available by the time you read this):

*I did pickup a new floppy controller card and it supports IBM style 5.25" 1.2 meg floppy and 3.5" 1.4/2.8 meg floppy drives. I even went so far as to order a set of drives to see if I could write drivers for it but time has been short and I didn't get the correct cable with the drive so it's going to have to wait a bit also. The card/drive should be nice since it has a ProDos program that allows you to copy from/to the IBM formatted disk. I won't do a conversion program for the /// but when it's done it should be a nice backup option.*

## BOS UPDATE

I am happy to announce that we have now sold out of our first set of BOS disks! It took somewhat longer than we had hoped, but there was a steady trickle of sales (thank you Paul!) which helped. I'm also happy to say that we've reached an agreement with Bob Consorti to buy 10 more copies of the program at a discount, so that our Software Development Fund will bring in a little bit more in return.

We decided to go ahead with this because I've found that we gain a new member with just about every purchase of BOS, so the return for us and the club is excellent. It's nice that ///ers who want BOS have to come to us to get it.

## INTERNET NEWS

As I've mentioned in previous articles, the site for the Apple /// discussion group on the Internet is located at West Virginia University. It's address is APPLE3-L@xxx.xxx.EDU. There's also an FTP site there (names.wvu.edu/pub/apple3), which is where you can download Apple /// files, articles and other information. There are some 30 to 35 active members who keep things going, just for the love of the Apple ///.

I also told you previously about Kevin Lund (kevin@xxx.xxx), who wrote an Apple // emulator for the MAC called "Stop the Madness." He messaged recently that he remains interested in doing a similar project for the ///, provided he can get the information (which we are working on to provide). He wrote:

***I've written an Apple II emulator (for macs). It loads most of its stuff up at runtime from external modules (lets see, the modules are: 6502 emulation, video, speaker, paddles, keyboard, language card, floppy drives...I think that's it...).***

***I mention this not to gloat, but because I've always had these secret wishes (well, ok, not \*so\* secret) to make it into a /// emulator. The central architecture is pretty general - it should be possible to rework some of the external modules to be ///-like, and voila!***

***The problem is that I don't know doodly-squat about the internals of a ///. I suspect that the biggest problem to deal with will be supporting the paged memory; depends how byzantine it is (I've refrained from doing //e emulation for this reason).***

***So anyway, there it is, and I can't do anything more with it for lack of knowledge. Questions, comments, suggestions?***

***BTW, you can pick up an older version of the emulator (loads the I/O modules from internal resources) from cassandra.ucr.edu in pub/apple2 if you want to check it out...***

Kevin mentioned that his /// is in his closet right now - despite his interest in the emulation program. Jeff Fritz (JFRITZ@xxx.xxx), who oversees the Apple /// site at West Virginia University says he's in a "similar boat":



*My /// is boxed up and sitting a closet as well. If I had room, I'd set it up and use it regularly. Probably be better for it than gathering dust and turned off. Of course, if I had the room my Lionel trains wouldn't be in boxes either. Sigh! We need bigger houses and more room. (Maybe I can get the kids to move out early!)*

*I wonder how many people are in a similar situation. I wonder what we can do about it. Should we form the FATFC (Free Apple Three's From Closets) movement. Oh well. Great machine, sad state of affairs.*

*I guess I shouldn't moan too much. Sitting in the box next to my /// is my old Mac Plus.*

*Depressing.*

Jeff Marraccini (jeff@xxx.xxx.EDU) had one solution:

*Heh, I agree that we could use larger houses!*

*If it helps, my /// is still used regularly. I keep business records on it, and the family uses it as a word processor. The /// still has the best keyboard I've ever used, so it's still popular at home for word processing, even if it can't do all of the page layout features of today's computers. It suffices quite well for most jobs.*

### A3 TECH NOTES

We're in the process of transferring over a number of Apple /// technotes obtained from EWorld, Apple's on-line service. Since EWorld is strictly for Macintoshes, I had to read each file with the Apple //GS's Teach program (a basic text editor that can read Mac text files if the HFS FST is loaded into the GS), save it, read it into Appleworks, then save to disk so that each file could be pulled into 3EZPs. It does take time - I am still working on the project. BUT once done, we'll have a neat new PD disk for our library.

Now, what kinds of things might you find? Some are simple and short, like this comment about RGB color in //+ emulation mode:

**The Apple III's RGB color video outputs do NOT generate a color signal for High-Resolution Graphics in the Emulator. Apple II High-Resolution images are available only on the NTSC black and white and color video outputs.**

**On the left border of the high-resolution graphics screen, the dots flicker uncontrollably.**

And there are more detailed items like this note, detailing underlining problems with AppleWriter:

**Whenever a word to be underlined is the first word in a line, a problem occurs if the previous line ends exactly at the rightmost margin: the backslash to start underlining is ignored, and**

underlining begins instead at the next backslash--the one that should mark the END of the underline. To work around this problem, alter the text before the first backslash to prevent the previous line from ending exactly at the right margin.

A problem also occurs if the word or phrase to be underlined has a period or comma right after it. Remember that the backslash that toggles underlining generates a space--so if you type

`\Underline this phrase\, but not this one...`

you'll end up with a space before the comma. The only way to prevent this problem is to type

`\Underline this phrase,\ but not this one...`

which, unfortunately, underlines the comma too.

The technotes cover a wide range of subjects, that I think you'll find interesting. They will also be uploaded to the WAP TCS once the disk is complete (we'll do it in DAR binary format).

## FILE TRANSFERS

Poor ///er Andrew Sweet! He had his SARA stolen over the holidays - something hard to believe given the fact that our SARA is more than 10 years old. But luckily for him, his data disks were NOT taken and now:

*The only files I care about are in Apple Writer III format - which uses ascii with escape codes. What can I do to transfer my data to another computer - preferably IBM - but Mac would be fine too. Is it possible to hook up the 5.25" Apple III external drive to a Mac and copy the files?*

Ray Merlin (on CompuServe) had this suggestion:

*Anyway, Apple Writer III files are readily readable by any ProDOS version of Apple Writer. So, what you need to do is find someone with an Apple // who can print the files to a 3.5" disk, and the files can be directly imported into a Mac, then transferred to an MS-DOS formatted disk. Or, you can skip the printing to disk step, and transfer the ASCII TXT files directly to a 3.5" disk on an Apple //, then go to the Mac with them, and remove the dot-commands and other formatting commands on the Mac or IBM. In either case, an Apple // computer must be involved, as the IBM cannot read Apple /// disks, and it's doubtful you will find a Mac capable of reading Apple // 5.25" disks.*

And then there was Greg Putrich, who was having troubles of his own:

*I got a /// a while back and got it up & running with the AppleColor RGB monitor, two*

*external disk drives (plus the internal), and a 5MB profile. All was well until I decided to plug my SilenType into the port on the back, just as the manual said I could. Ever since then, all the thing does when it comes on is displays a screen with random bizarre characters. It won't boot, it won't do anything. I opened it up and reseated all the chips, but to no avail. Obviously I blew something, but I saw no visible damage anywhere inside.*

*Does anyone just happen to know what chip(s) I might have blown?*

*I'd kinda like to get it going again, especially since I have some (not much) software for it.*

This time it was Bob Consorti who offered some thoughts and suggestions:

*I've never seen a SilenType blow up anything inside an Apple ///. It might just be a coincidence, however with the > 100 chips inside the machine it's a real bear to check. Sometimes the prom chips just give up and give the type of pattern you're describing. Also, check to see that keyboard light is still on.*

*If it burns out a weird pattern will come up on your monitor and won't go away until you replace the light.*

#### **WILL WONDERS NEVER ....**

Someone mysterious left a package for our old friend Tom Linders out in California a few months back. It turns out to have been Apple /// software - a virtual treasure trove of material. There was a lot of source code listings - including System Utilities 1.2, Backup /// and many drivers. In addition, there was a new 1.3 version of Business Basic (the SOS.INTERP file was created on 6/9/83)! I've already uploaded it to the TCS (as a DAREd binary file) and you'll be able to get it in our PD library in the near future. It runs fine, but unfortunately, there's no documentation, so it's unclear exactly what improvements were made.

#### **FINALLY**

I intend to continue making sure at least one or two articles about our SARA get into the Journal every issue. BUT time constraints are making it more and more difficult for me to put out a regular Trail column. SO, all I can promise you is we'll keep trying. YOU can help by writing your own articles about our SARA what you do with her, how you maintain her, what part she's played in your life. What kind of flowers you grow in her (ok - a little joke). Anyway, you get the idea. IF you can help, that will make sure there are a steady flow of articles we can all enjoy over the next year or so. Thanks!

## APPLE /// RESOURCES

### **\*Repairs/Software/Hardware**

Bob Consorti (xxx@xxx.COM)  
xxxxxx  
Brookline, MA. 02148  
(617) xxx-xxxx

### **\* Software**

On Three c/o Joe Consorti  
1174 Hickory Ave.  
Tehachapi, CA. 93561  
(805) 822-8580

### **\* Software/Hardware/Repairs**

Sun Remarketing  
PO Box 4059  
Logan, UT. 84321  
(800) 821-3221

### **\* Repairs**

Sleepy Hollow Corp.  
PO Box 969  
Woodland, Ca. 95695  
(916) 668-5637  
(Note - WAP gets a rebate on repairs done by these folks!)

### **\* Repairs/Software/Hardware**

WM Enterprises  
1932-D Lincoln Drive  
Annapolis, MD. 21403  
(301)-268-4242

### **\* Repairs and Hardware**

Tom Linders (xxx@xxx.Com)  
xxxxxx

Saratoga, CA. 95070  
(408)xxx-xxxx

**\* Repairs/Hardware/Software**

B&R Computer Services  
PO Box 7195  
San Diego, CA. 92167  
(619) 225-8281

Apple /// Internet Address : APPLE3-L@WVNVM.WVNET.EDU  
Apple /// Internet Listserver : LISTSERV@WVNVM.WVNET.EDU

**\* Repair Info (Apple ///)**

Electronics Shop BBS  
(612)-789-2149

Apple User Group Connection  
(800) 538-9696, ext. 500

Apple User Assistance  
(800) 767-2775 (they answer Apple /// calls)

July/August 1995

By David Ottalini (Dave.Ottalini@xxx.ORG), Apple /// SIG Co-Chairman

### IS SARA HEADED FOR THE MAC?

It's still too early to say it will happen - but I've been having some interesting talks with Kevin Lund <kevin@xxx.edu>, author of "Stop the Madness" - the Apple // emulator for the Macintosh. As I wrote in a past Trail column, he has expressed a strong interest in helping SARA make the transition. Last April, Kevin messaged via the Internet that:

***"I just got out STM v0.88r, which I intend to be the last version with a pre-determined memory map (i.e., 64K with the upper 12K special-cased for the language card, etc). After a brief respite (and getting some real work done, the kind they pay me for), I plan to do a more generalized memory model, which would pave the way to an Apple /// emulation."***

To help convince Kevin that doing the emulation is worthwhile, your /// SIG recently sent a huge care package that included a set of Apple /// manuals, software and video. Kevin says he didn't realize there was so much material available for the ///:

***"You stunned me into silence! I've begun work on memory banking in STM; I'm kind of hitting the limitations of Symantec's compiler, though. No matter - I'm sure it can be worked around. Then I've got to figure out where the /// keeps its ROMs, and get 'em transferred...but it's all doable, especially with the manuals you sent (haven't watched the video yet)."***

***Of course, now that I'm all enthused about the project, my 2nd year paper is looming. But I'm on the case; I'll keep you posted on it. And, as I seem to have forgotten to say this till now, thanks!"***

Kevin's comments reminded me that back in February, 1991, Daryl Anderson of DA Datasystems fame commented about Apple /// emulation on a Mac or Amiga. Here's what he said at the time:

***"I still DO think a software emulation of a /// on a faster CPU such as a 68020 or 68030 is technically feasible - it seems to me you'd have about a 10 to 1 effective instruction speedup so, in principle, you could take 10 68030 instructions to emulate one 6502 one. In fact almost all 6502 instructions could be emulated in 1 or 2 680x0 instructions and clever design could keep a lot of the action in the 680x0 registers for MAX speed and even take advantage of CPU-cache if available (figuring 16 32-bit registers to simulate 3 8-bit ones (!) lots of room to fool***

*around...*

*Course the real bear is gonna be simulating the "machine specific" stuff, e.g. specially the VIDEO... that's where a single 6502 instruction could take 10 or even 100 680x0 instructions to emulate - Storing a value to memory-mapped Apple /// video ram would have to be mapped to a bunch of code that adjusted colors, text, scrolling, etc. Writing directly to an I/O peripheral controller chip addressed register would require similar complexity. BUT all of these are essentially "FINITE-STATE Machines" and emulatable via software. It's simply the performance hit that would be open-ended. And, of course, on video you cannot really spare that piece...*

*You know, I think the key point is the counter to the argument that "Apple couldn't (wouldn't) do the ][ emulator or Mac in Software so it must not be doable; I.E. that the "special" features of the ///, Text vs. Graphics orientation, HardDrive vs Floppy, Application vs (copy-protected) games – all make a /// emulation more doable. Modularity of SOS and the /// filesystem also make it doable. Besides, I figure Apple just avoided a SW- only ][ emulation because then it'd just get pirated around - their little card for*

*the Mac is the ultimate "dongle"."*

Daryl, by the way, estimated back then, that it would take about 3 months or so to do the whole emulation - working full time. We'll be happy to support Kevin if he decides to go forward with the project in any way we can. BUT he has already kindly refused to let us help with some money from the Software Development Fund.

## ON THE SOUND FRONT

In another article this issue, I wrote about // programmer Philip Lamb (p.lamb@xxx.ac.nz) who has an Apple // program called IISound:

*"If you own an Apple II, and wondered why it was designed with poor sound capabilities (not a IIGS!), then wonder again. The Apple II (right from the II+ up) can play digitized sound and music, and reproduce speech quite accurately, without adding any hardware. I have written a program to do this. It is a pretty nifty program."*

I've messaged him about the possibility of doing a /// version - but what do you think? IS this something that might be worth using some funds from our SDF on? Although the /// handles sound differently than the //, it would seem logical (according to Mr. Spock anyway!) that a version for our SARA should be possible. Seems to me it's worth asking about anyway. So stay tuned - hopefully we'll have an update on the next Trail. By the way - it should work just fine in Emulation mode - we'll try to get a copy and check it out that way to see what it can do!

## AL BLOOM and MLM

Dr. Al Bloom has, and remains, a legendary supporter of our Sara. In fact, in our newly reorganized PD Library, we honored him by creating a separate category to hold his great articles and software. Among that software is a whole series of utility disks for Mail List Manager (PD disks 3BLM-07 to 10). A few months ago, Al came up against a problem, however, that even he couldn't solve:

***"When my dad quit as secretary of the 459th Bomb Group Assn (A WWII alumni group) and asked if I could convert his Apple /// MLM file to a format that could be used by the incoming secretary. Sure. Happy to.***

***The first thing I noticed was that he had a NAME field, consisting of FIRST/INITIAL/LAST NAME. MLM is probably the only data base program for any platform that recognizes NAME in that format. And will sort on last name that way. So OK, split his NAME into FIRST NAME and LAST NAME with MLMCNVT (One of Uncle Al's MLM Utilities -- in WVU's MLMUTIL folder) using its "name" split (better than Apple's, IMHO), then use MLMCNVT to split the FIRST NAME into FIRST NAME and INITIAL. Then export the sucker with MLMASCI (Another of Uncle Al's MLMUTIL toys).***

***MLMCNVT depends on a valid pre-defined MLM output file. So I used MLM to create a new file based on the existing BG459 file. I replaced NAME with LAST NAME and FIRST NAME in the new record description. But I forgot to change the first SORT FIELD from NAME to LAST NAME. NAME doesn't exist in the new file, yes? The naughtywording Apple program accepted it. My MLMCNVT program blew up. Ain't no NAME field to sort on. Oh naughtyword.***

***There is nothing for it, I fear. If you use MLMCNVT, you must ensure that the target MLM file is accurately described -- especially that the new file's sort field names actually exist. MLMUTIL is freebies nowadays. I have zero incentive to do anything but fix egregious program errors. And that is due to pure pride. I have some left."***

## THE YEAR 2000

The Apple /// shares a problem with many other makes of computers (both MS-Dos and Macs) - their clocks won't recognize that we will be passing into a new century. There have already been a ton of articles about the problem - especially about how insurance claims and other business transactions will likely be thrown into chaos because the computer will reject anything with the year 2000 or later on it.

Given its pioneering nature, you'll not be surprised that this is actually a problem the /// Community has been talking about for a long while. Here was one solution from 1986 I found in a file on our New Member Disk:

***"For those of you who are rather disturbed by the fact that in 14 years the Apple /// will be somewhat obsolete since the SOS was only configured to have 20th century records for***



*recording when files were created and modified, and programs such as Calendar Pak, and the clock chips only work until Dec. 31, 1999, I have figured out a way to increase the life of the system by 40 years.*

*When the year 2000 comes we can reset the date to (19)10. This date starts on a Saturday like Jan 1, 2000, ends with a 0 for easy reference and is NOT a leap year. Sometime in the 18th century in an effort to make calendars more accurate, it was determined that every 400 years there should not be a leap year (this is true) and 2000 will be the first such occasion. After the year 2000 ends, reset the date to (19)61. This is the earliest date that ends in a "1", starts on a sunday and is 3 years away from the next leap year. Hope this information helps justify shelling out thousands of dollars for computer equipment and programs now, since the computer is good for at least another 54 years."*

On Three's Bob Consorti at one point talked about fixing this problem with BOS3, but he was never able to implement it. IF we can find any other work-arounds, we'll publish them here on the Trail.

#### **APPLESOFT TO AN APPLE /// TEXT FILE**

This was a question asked sometime back - what's an easy way to move an Apple // AppleSoft Basic program to an Apple /// text file. The answer was printed in the old TAU (Third Apple Users) Newsletter (author unknown):

*"There are a couple of ways. Write the Basic program to text file, then use the text file conversion program in AppleWriter Utilities to convert to SOS disk format text file or, use a conversion program in SOSTRAN, a great system of programs from Sun Data (disk 3UTL-06 in the WAP PD). These programs provide all sorts of conversions.*

*Another program to use is APPLECON (disk 3BSB-09 in the WAP library). It will directly convert an Apple ][ Applesoft program to Business Basic. You will have to do some work to fine tune the programs, however, as some Applesoft commands or their equivalents do not exist in Business Basic and vice versa. However, APPLECON does note conversion problems in REM statements. NOTE: Applecon will work on Dos 3.3 formatted disks ONLY and not on ProDos. If you want to convert an Applesoft program on a ProDos disk, you will have to port it over to Dos 3.3 using the ProDos utilities program, Copy //+ or some other // copy program (64K or more)."*

Disk 3BSB-09 (by the way) also has some excellent support files for anyone looking to convert Applesoft to Business Basic.

### **APPLE /// PARTS**

If you are looking for a source of Apple /// parts - quickly try Bill Gross (bgross@xxx.com) who has long supported the Macintosh folks. He decided to expand into the Apple // family last May but quickly became disillusioned and decided to get out. It's unfortunate, since we need all the sources of parts and repairs we can get. In any case, give him a hollar and see if he still has anything left. Email him, or write: Dr. Macintosh; 7937 E. Frontage Rd. ; Overland Park, KS 6620. Phone number is : (913) 962-HELP (4357) and Fax number is: (913) 385-5503

### **PD LIBRARY NOTE**

I'm thrilled to announce that I have finally finished our long-term project to reorganize the /// SIG PD Library. With the strong support of John Ruffatto, I was able to rework the library so it reflects 1995 realities. There are new categories, information updated, addresses fixed, files replaced. We've even added a few new disks. With this project nearly complete (there are always a few strings to take care of), I'll be able to start adding more disks again.

Beth in the office has a complete listing of all the disks with old and new numbers. Look in the back of the WAP Journal for the latest numbers. I'll also upload an ASCII version to the WAP TCS and on the Internet for folks to use. We appreciate your support by purchasing our disks!

### **FINALLY**

I want to say thank you to all who supported me for the WAP BOD. I finally won! Now I can really represent you over the course of the next year - one that continues to offer challenges and opportunities for our club. Let me (and the other BOD members) know what you think our course should be in the future - your input, after all, is what we count on to help the club grow and prosper.

### **APPLE /// RESOURCES**

Bob Consorti  
xxxxxx  
Brookline, MA. 02148  
(617) xxx-xxxx

On Three c/o Joe Consorti  
1174 Hickory Ave.  
Tehachapi, CA. 93561  
(805) 822-8580

Sun Remarketing  
(800) 821-3221

Paul Campbell  
xxxxxx  
Detroit MI. 48219  
(313) xxx-xxxx

Tom Linders  
xxxxxx  
Saratoga, CA. 95070  
(408) xxx-xxxx

Allan M Bloom, PhD CDP  
xxxxxx  
Blacksburg VA 24060

Apple Technical Support  
(800) 767-2775

Apple User Group Connection  
(800) 538-9696, ext. 500

Apple User Assistance  
(800) 767-2775

*by Dale Warnke*

**Includes data & quoted text from a Review in TAUTALES, May 1987 by Chris Acreman.**

"Apple Writer ///(i)" is an enhanced version of Apple Writer /// 2.0 and is thought to have been originally used only internally by some Apple Computer personnel. It has been available to user groups for many years. This (i)nternal version is called Super Apple Writer, sometimes Apple Writer /// 4.0 and here, a terse "AW". It is not a released version and there is no official documentation. There are some "bugs" introduced into AW 4.0 which were absent in AW 2.0. However, the enhancements clearly outweigh these "bugs" which are merely nuisances.

Some of the bugs were corrected in AW 4.1 and AW 4.2. My Super Apple Writer /// 4.1 is the disk version with the single page print problem fix and my AW 4.2 is AW 4.1 plus the hard disk patch so it will look in .PROFILE/AW for the system files instead of in the built-in drive.

Apple Writer /// 2.0, has significantly enhanced features and much improved documentation over Apple Writer /// 1.0. The Apple Writer 2.0 Package consists of three manuals: A tutorial for inexperienced word processor users which introduces the general concepts used in word processing, an excellent, experienced user manual, and a WPL manual on this unique and powerful utility. It also includes a file conversion utilities disk, two product training disks and a keypad template.

#### **A. THE MAIN NEW FEATURES IN APPLE WRITER /// 4.0:**

1. Variable Column Display Width (1-255 columns)  
Convenient for wide column printers or small pitch.
2. Variable Memory Specification (1-15 32K Banks)  
Convenient to optimize to your configuration and to load and view documents larger than 64K.
3. Flashing Cursor  
Easier to spot in the text.
4. Prompts with last used, text string on the Save, Load and Find input line.  
Saves typing a new word or pathname each time you want to find string of text or load/save a file. The user can type/edit over the the last used text if new text is desired.
5. Not Copy Protected  
Backup and customized disks can be made with the System Utilities Disk; and AW 4.0 can be patched for use on a hard disk.

## B. VARIABLE COLUMN WIDTH

There are two additional commands on the SOS COMMANDS Menu ([O]). Command I "Select Display Column Width", lets the user specify the width of the screen, from 1 to 255 characters. By setting the column width to the same as the printed width, the user can approximate the appearance of the finished document. If the user specifies a width greater than 79 characters, the screen scrolls horizontally as the user moves the cursor. This feature is convenient when working on files originally intended for 132-column line printers or more than 79 characters per inch.

## C. VARIABLE MEMORY BANKS

The other new command on the SOS COMMANDS menu is Command J, "Select Memory Size". After entering [O]J, the user is informed:

3 32k banks are now in use.  
Enter new value (1-15) :

The memory size refers to Apple /// internal memory to be used for your document. Two banks (32k each, 65536 total bytes) is standard and the maximum for a 128k Apple ///. The value in the range (1-15) depends on the size of the computer being used. If a value is selected that is too large for your Apple ///, Apple Writer will automatically set in the maximum allowed:

A 128k Apple /// is allowed up to 2 banks( $2 \times 32 \times 1024 = 65,536$  bytes),  
A 256k Apple /// is allowed up to 7 banks( $7 \times 32 \times 1024 = 229,376$  bytes) and  
A 512k Apple /// is allowed up to 14 banks( $14 \times 32 \times 1024 = 458,752$  bytes).

The selection, with [O]J allows larger Apple ///s a choice of loading very large documents or having the speller in memory at the same time that Apple Writer is in memory.

## D. FLASHING CURSOR

When Super Apple Writer is ready to accept a character, the cursor flashes at the location where the new character will be received. When the user is entering text, the flashing cursor is in the text. When the screen is split, the cursor in the active half of the screen is flashing and the cursor in the inactive half is solid. When the user is naming files to be [L]oaded or [S]aved or when the user is using the [F]ind command, the cursor in the text becomes solid and the cursor in the prompt line flashes. When Super Apple Writer is actually loading or saving files, i.e. When it is not ready to receive a character from the keyboard, the cursor is solid. When the cursor resumes flashing, Super Apple Writer is again ready to receive input from the keyboard.

## E. PROMPTS with last used, text string on the [S]ave, [L]oad and [F]ind input line.

Whenever one of these commands is called, a default value appears on the prompt line at the bottom of the screen. When a file is to be [S]aved or [L]oaded, the name of the file in memory is shown as the default. If the name is to be accepted as is, then entering an "=" and a return will save or load the file in memory. If an entirely new file is to be named, simply writing over all or part of the default name will change the file name. When the return is entered, everything to the right of the cursor is truncated.

When the [F]ind command is invoked, the last string(s) used in a [F]ind command is shown as the default value. If they are to be used as is, the cursor must be moved to the right of the string(s), for everything to the right of the cursor will be truncated. New string(s) can be written over the default value.

## **F. CAUTION NOTES and NUISANCE "BUGS" in Apple Writer /// 4.x**

1. There is a problem in the single page print function in version 4.0; This problem is fixed in version 4.1. Note that there is no display on the Apple Writer screens indicating which version (4.0, 4.1 or 4.2) you are using.

2. Memory Size Selection [O]J.

Only three banks can be allocated if Apple speller is to be called from within AW on a 256k Apple ///.

The system prefix must be set to the directory which contains the AW 4 SOS.INTERP. This means that if the user has used [O]H to change to a working prefix, the prefix must first be changed back (via [O]H) to the directory containing SOS.INTERP. Then use J to change the memory size and finally, use H to change back to the working prefix.

3. There is a printing problem for large documents. Even though three banks will provide 96k of memory, only 64k of the document can be printed in a single document. The rest is just left in memory and never gets to the printer. But the TAU disk includes a WPL program (BIGPRT) with documentation (BIGPRT.DOCS) to divide the larger document into smaller portions and print them in sequence.

4. After an error in all operations involving a file name, the name of the file, which normally appears at the upper right corner of the screen, is lost. The file is in memory and the prefix is intact, but the file name is lost. The next time the file is saved, the name must be re-entered. (Also in AW 2.0).

5. When the print menu is called within a macro, there is a display problem. The original GLOS.KEYPAD of Apple Writer /// 2.0 has a very handy macro (glossary) keypad(KP) definition; KP- gave the [P]? command which resulted in a "clean" print menu. In Super Apple Writer, the KP- macro does not clear the screen and gives only part of the menu. Although functionally ready for input, the print menu display looks confusing; For a clear menu, press KP- again. i.e. Tap KP- twice.

6. Long prefix name problem ([O]H). If the name is short enough, then a catalog of the prefix can be had by simply entering: [O] a return. If the name is too long, then entering [O] a return

results in a SOS error but entering [O] a <filename> return works fine.

7. Super Apple Writer lacks documentation. It has many help screens that are instantly available, but there is a wide variety of subtle but powerful details that are covered only in the 2.0 manuals.

Apple Writer /// 2.0 has excellent documentation. Users of AW 4.x are well advised to buy it. This recommendation is especially for the user who is not familiar with earlier versions of Apple Writer; The reference manual is superb for the experienced user too!

## **G. WORD PROCESSING LANGUAGE (WPL).**

Apple Writer is not a WYSIYG (What You See Is What You Get) word processor, but a pre-processor word processor. Such commands as paragraph indentation, left and right margins, justification, page numbering commands, page headers and footers, etc., are embedded in the text and that "raw" file is shown on the screen. To see what the finished product will look like, the user can "print" it to the screen.

A feature that makes Apple Writer unique among word processors is WPL, word processing language. WPL is a way to rapidly execute a pre-determined sequence of keystrokes. It has the power to execute loops within a program, compare strings and branch execution based upon the comparison. It has limited arithmetic abilities, mostly for counting loops. WPL programs can use subroutines. WPL programs cannot be nested, but they can be chained, i.e., one program can call another, but control will not return to the calling program.

WPL programs can be written by the user to tailor to specific needs. WPL programs can merge mailing lists and form letters (Quick File /// has a special provision to facilitate this). WPL programs can present menus for the selection of tab setting files, format files, standardized texts, etc. WPL programs can search the document and make repeated complex replacements.

## **H. FINAL NOTES.**

Users of AW 4 are advised to buy AW 2.0 for the excellent documentation.

I use Apple Writer because it was the first word processor for the Apple /// and I use AW 4.1 exclusively over AW 2.0. AW has three, useful, unique features: macros that do complex commands with one keystroke, WPL for customization and automation and embedded codes to control printers.

Yet, AW is still difficult to use (especially for formatting and paging) and I recommend /// E-Z Pieces for new users. Although it is less versatile, it is easier to learn and use and is more "WYSIYG". With its windows-like desktop, /// E-Z Pieces is more modern and it is functionally identical and has compatible data files to Appleworks for Apple IIs so there are more folks who can help. Also recommended is Word Juggler which works more like professional word processors than AW and /// E-Z Pieces.

Super AppleWriter 4.1, 3-dec-84, is in the WAP PD library (3WDP-01). This version has the single page

print problem removed and is setup for a hard disk so it will look for the system files on the hard disk instead of defaulting to .d1, the built-in drive. The disk is two-sided and includes all files necessary to use Super Apple Writer and several helpful WPL files.

Sun Systems Remarketing, P.O. Box 4059, Logan UT 84323-4059, Phone 1-800-821-3221, has Apple Writer /// 2.0 and Apple Speller /// listed in their August, 1995 catalog at \$20 each +s/h.

For repair, configuration and tutoring on your Apple ///, call Dale Warnke, (714) xxx-xxxx.



*By Dale Warnke*

There appears to be a memory management problem with the Macro Manager. At the 5th or 6<sup>th</sup> macro-map, the macro system fails. (5th macro-map for 256K system, 6th macro-map for 512K system).

**SOLUTION:**

One way around this problem is to skip the 5th or 6th macro-map and add or go on to the next. See the examples below.

Never SELECT the bad macro-map. (6th map for the 512K system).

**Notes:**

This bug in the MACRO.MAPS file may be due to a Memory Bank Boundary in the Apple /// where the list of MAP names and other info get divided or something and thus hashed.

The Solution is to find which map NOT TO USE and spare it out as shown below.

The number of this "BAD" map depends upon the size of the Apple /// memory and, maybe, upon the size of the Driver.

Just add the "BAD" map and immediately add another map or switch to a good map. Never, never leave (ESCAPE) the MACROS back to the application with the Bad Map selected or you will be sorry!!!

Leaving the MACROS with the "BAD" map selected will turn on the recorder (listen for the key click; use SA-8 to turn it off). Also, when you call the MACROS (via SA-4) the next time/there-after, the MACRO.MAP will be scrambled. I don't know how to fix it.

So make a backup of the last working MACRO.MAP:

First set the prefix to .profile/desktop. And

Copy	MACRO.MAPS	to
	ZMACRO.MAPS	and start over

Then, when things go bad, delete the mis-behaved MACRO.MAP. And

Copy	ZMACRO.MAPS	back to
	MACRO.MAPS	

## Examples

For 256K Apple /// (M256.MACRO.MAP"):

MacroMap Selection Menu  
Press \*? For Options Menu

```
-----  
ACCESS ///  
BLANK  
BASIC  
Apple Writer  
#5 BAD, Never Use me!  
MISC
```

For 512K Apple /// (M512.MACRO.MAP"):

MacroMap Selection Menu  
Press \*? For Options Menu

```
-----  
ACCESS ///  
Pascal/Basic  
EZP  
BASIC  
blank  
#6 Bad, Never Use Me!  
Misc
```

*By Dave Wagner  
WAP # 19538*

## **Beginnings**

If someone would have told me 6 months ago what I'd be doing today, I'd tell them they were crazy!

It all started when a friend of the family gave me a small but good Magnavox Stereo. I remembered another friend, who had a computer. Out of curiosity, I called to see if he would be interested in trading even up. You see, the computer was just taking up space. It had no cables, no wires, no nothing! And no one in the house knew anything about the machine. Well you know what my friend said!

So there I was, sitting in my basement with this thing called an Apple /// + and not a bit (smile) of experience with anything like it. I DID have some electronics experience, however. You see, about 5 years ago while I was taking some extra Algebra classes at the local Adult Education Center, I saw an ad for an electronics school. Two years later, I was the proud owner of a diploma. This all added to my enthusiasm for the computer which from now on I'll call "SARA". I had a small work shop in my basement and now a computer to work on.

## **Searching for Information**

My first step was to call Apple Computer and find out what I needed to know and take off, as it were. An Apple sales representative told me: "We haven't done anything with that computer in years but here are a few telephone numbers you can call. By the way, you need a Boot to start it." WHATS A BOOT?

After Apple, came a jumble of other phonecalls, trying to get information. I remember calling Egghead Software, InaComp and Quality Computers. Finally I started getting names of real people that knew people that had or at one time had had an Apple ///. Then finally I hit paydirt - the number for Washington Apple Pi!

During this time I went to Radio Shack and bought every connecter and cable that "looked like it might fit." Real scientific, huh? Then (WAP /// SIG CO-Chair) Paul Campbell told me about ON THREE. I ordered their intro disk for beginners.

## **Finding the On Switch**

So finally, here I was, on the threshold of personal history, ready to fire up my first computer. I plugged it in, made sure that all the wires and cables were hooked up, pushed the disk in and.....huh, isn't something supposed to come on the screen? "Let's look around here". I lifted it up, looked at the back, tipped it on the side and what do you know, I heard something crash around inside.

My experience with electrical things told me that something was loose so I proceeded to inspect the power supply and CPU. I quickly discovered that the power supply wasn't the original. It didn't align with the hold down screws. In fact, it didn't even HAVE any screws. The CPU? Water or soda pop stains in the corners. Resistors eroded off their solder points. What did I get myself into this time? My wife was a bit more blunt. She wanted to know what I was spending all my money on.

A phone call to Paul Campbell took care of the problem. He took my CPU and gave me a 256k loaner. I also walked away with my Profile filled with programs I'd never heard of and more telephone numbers of people I could contact.

### **The Search Continues**

I found more answers to my questions by heading West by phone to talk with ///er Tom Linders. I don't remember the conversation but it lasted a lot longer than 5 minutes. Two weeks later I had in front of me more information about the Apple Three than I could have hoped for, including a fotostat of the original copyright request for SARA.

With this info and the picture in my mind of Paul Campbells "Set up" of printers, modems, color monitors and computer, I wanted it all. I got the bug as they say.

### **Why I Got to This Point**

I'm kind of lucky in a way. Actually several ways. You see, I drive a bus for the City of Detroit. On November 3rd of last year, someone tried to stop my bus by shooting 6 bullets through my windshield, inches from my head and chest. A passenger wasn't so lucky - being hit in the head and thigh. The next day I was on Workman's Comp with a diagnosis of Delayed Stress Syndrome. Until I can go back to work, I've got plenty of time to play with my, or should I say now, our computer.

As luck would have it a friend gave me a facsimile machine and Paul needed one for work so we traded one fax for one Apple ///. Now I've one SARA that works and one that doesn't. Actually, I finally did get the Three Plus to work - until I tried to plug the Profile in the RS-232 plug. Oh-no!

### **More Sources**

It became harder and harder to connect with Paul so Dave Ottalini became a source of information for me. Then WAP /// SIG member Dave Jernigan sent me some Pascal Books that he had and gave me a modem. WOW! Now I've got to get more software. By now I also have catalogs coming in from all over the country. ON-THREE has been an excellent source for me. Not only in software but Bob Consorti will take my call anytime in the evening and help me through ANYTHING that's happening. But I can say the same about Dave Ottalini, who is always there when I need him. Actually every person I've had the pleasure of talking to in this organization has been just fantastic. I only pray I can give back what I've received.

### **Time To Read the Instructions**

Finally I had an Apple /// Computer from Paul, an external drive and original Apple Spiral book on "how to do it", a Panasonic printer, a Profile, and a modem. I was set! Or at least, that's what I thought.

All my life I've always tried to put things together without reading instructions. Please, if anyone is contemplating trying this DON'T. Read First, It will save a lot of time and problems in the end.

When Paul first loaded a number programs into my Profile, he also installed my copy of BOS3. All the programs were public domain. So I started trying to figure out what I had. Moving this here, looking at this and that not knowing that in some programs I was erasing things and in others, just plain messing things up. What's a Subdirectory? Or better yet what's a prefix Ah who cares. I'll figure this thing out.

I hope Paul can forgive me for all the phone calls! At least 1 a day. Try to imagine the key to my problems (Paul) working 1 full time job, 2 part-time jobs, and trying to help others like myself get up and running. And the other guy (me) with nothing but free time to play with the computer. Needless to say I became frustrated. that's when I decided that if I was ever going to get this right I'd probably end up doing it myself.

Out came the books. And a few more calls to people at Washington Apple Pi. I started to make some headway. Read, Read, and Read. Things finally started working. That made me feel pretty good.

At this point, I should also mention Beth at the WAP office. She listened to my frustrations more than once on the phone, but always had positive things to help me keep going.

### **The End To Frustration?**

The biggest thing was trying to get my printer to function. I ended up going through 1 bad UPIC board, and 1 bad cable but it's up and running now.

At this point, SARA and all her little devices are now working fine, (KNOCK ON WOOD). I'm now even running 2 Profiles. But sometimes there are still problems - for example, the other day I was running On Three's DDFF /// (Disk Directory/File Fixer ///), which I do every 4 days or so. I stopped thinking for 5 seconds and erased more than 400 files on one of the Profiles. Well.....

But you know what? It doesn't matter. Because I love working with this computer, and I know there's an awful lot of people at a place called Washington Apple Pi that I can talk to about it on the phone or on the TCS. And they're the Best. THANKS TO ALL OF YOU!

And in the future, if anyone has any electrical hardware problems, call me. I can't fix everything but there is an awful lot I can. I have an agreement with Dave Ottalini that a percentage of the repair bill will be donated to the Pi. Paul Campbell has seen my shop so you can ask him if I'm legitimate. This is my way of giving back a little.

You can reach me by calling 1-313-xxx-xxxx or my address is xxx xxxxxx Detroit, Michigan 48228

*Edited by Dave Ottalini, WAP /// SIG*

NOTE: The following Q and A comes from a few years ago but is still relevant today for those SARAsaurs interested in learning more about how to print in Apple // emulation mode.

Originally taken from the Apple /// forum on CompuServe's MAUG - the Micronetworked Apple Users Group.

---

**Q - Help!!!! I am running some business programs in Apple // emulation. How do I get the information to the printer? A screen dump would help, but some of the data is more than one page long. I have an Okidata 83A attached to the serial port. Do I need a driver added in the emulation mode or what?**

*A1 - Basically emulation pretends that there is a serial card in slot-7 (but occasionally in slot-5 with some programs). Try doing a pr#7 and then typing a few characters followed by a return and see if your printer works there. I'm talking about doing it right out of Applesoft Basic in emulation. Then the question is: do your business programs have a printer setup menu to tell them what to send to. Many of them will allow all sorts of options.*

*A2 - Perhaps the "parallel" printer card needs to know exactly how many characters are to be put onto a line (with commands such as "^I80N"). Serial cards seem to just not care one way or the other.*

*I had a CCS 7710 card with a DECwriter IV serial printer for years, and I recently switched to Epson FX-286 and Grappler+ when I bought the //e. A dip switch on the Grappler sets the card to "transparent" mode, whereby it will apparently ignore all line length statements; at any rate, I haven't had to use a line length statement yet. I don't do any graphics work, so I'm not sure if the "transparent" mode matters or not (I did print one graphics page when I first got the card).*

*A3 - Right now I have used both Print Shop and Newsroom in emulation (natch) with the Imagewriter II (serial) with no problems at all. They have a printer setup menu. The one program I can't get to work right with it is the 64K version of Gutenberg Sr. The old (48K) version had a setup menu that included the /// serial port but the guy who wrote the new version didn't know about the ///+[ board so didn't include that option.*

**Q2 - You must understand I am new at this. I needed a program which would compute amortization and I bought an Apple // public domain disk that did this. I found out about entering pr#7 and tried it. All I got on the printer was garbage. I hate to think about resetting the switches inside my Okidata 83A every time I use emulation. Is that what I need? Also, is there an Apple /// program in the public domain that will compute amortization?**

*A2 - Try Visicalc or Advanced Visicalc (native ///) (Editor's Note - even better - 3EZ Pieces), there is a*

*great paperback book called VISICALC (Advanced Version) Worksheets for Business by Van Wolverton out of VisiPress that has all that stuff and more in worksheet form. That is, it contains all the working formulas for specific business spreadsheets. It is very well done, but I'm sure it is not the only book on such things. The only hitch is that I'm not sure it is published anymore; but as I said, other books may serve (even one for the Apple ][ version would do).*

***(Editor's Note: In the WAP /// SIG PD see our 3EZ Pieces/AppleWorks Templates - there are a number of files there that can help with amortization computations.)***

## DOWNLOADING APPLE /// CHARACTER SETS

---

*Edited by Dave Ottalini, WAP /// SIG*

NOTE: This article originally appeared on CompuServe's Apple /// forum, which is part of the Micronetworked Apple Users Group or MAUG as we call it. You'll also find it on /// SIG PD disk 3UTL-22 - our Apple /// FONTS disk.

---

One of the powerful features of the Apple /// is the ability to change the character set used to display characters on the screen easily from a program. A program can define its own characters to perform special effects such as drawing graphics on the text screen. A good example is the System Utilities program which uses custom characters to draw boxes around things and display arrows as they appear on the keyboard to help the user. However, any program which changes the system character set should be careful to restore it before exiting so that other programs can use the normal character set. This isn't very difficult to do, but it requires the use of assembly language, and is thus a bit tricky.

For purposes of this discussion, let's use Pascal. Similar techniques can be used with other languages. To begin with, we need to have a TYPE for character sets:

```
Type Charset = Packed Array [0..127, 0..7] of 0..255;
```

A character set consists of 128 characters (numbered 0 through 127), each consisting of 8 rows. Next, we need a procedure to download character sets. Referring to the Standard Device Drivers manual, pages 70 and 169-171, the following procedure will do the trick:

```
Procedure LoadCharset (C:Charset);
Var RequestCode: Packed Record
    Channel: 0..1;
    Stat_or_Ctrl: 0..1;
    Request_Num: 0..255;
    Reserved: 0..63;
Begin
    End;
Begin { LoadCharset }
RequestCode.Channel := 0;
RequestCode.Reserved := 0;
RequestCode.Stat_or_Ctrl := 1;
RequestCode.Request_Num := 16;
UnitStatus (1,C,RequestCode);
End { LoadCharset };
```

This just performs a UnitStatus to the .CONSOLE driver with a request code to download a character set. So far, so good; now for the tricky part: restoring the system character set. To do this, we need to copy



the system character set before we download our own; restoring it when we are done is as easy as another call to LoadCharset. The current character set is stored in system memory at locations \$C00-\$FFF. The .CONSOLE driver stores the new character set here as well as loading it into the character generator so that the .GRAFIX driver can use it for drawing characters onto the graphics screen. Note that anyone can read this character set, but only the .CONSOLE driver should modify it so that it remains consistent with the character set displayed on the text screen. Copying data from system memory to Pascal memory can be done only from assembly language. For the convenience of programmers not proficient in assembly language in the Apple ///, here is a complete assembly language procedure which copies the character set.

```
; Assembly procedure to copy the system character set to a user
variable

; Pascal interface:  Procedure SysCharset(Var C:Charset);

; Some standard macros
    .MACRO  POP
    PLA
    STA     %1
    PLA
    STA     %1+1
    .ENDM

    .MACRO  PUSH
    LDA     %1+1
    PHA
    LDA     %1
    PHA
    .ENDM

; Some zero page temporaries
Return    .EQU    0E0           ;To save return address
Ptr       .EQU    0E2           ;Pointer to user's variable
SysSet    .EQU    0E4           ;Pointer to system charset

    .proc    SysCharset,1

    POP      Return             ;Save return address
    POP      Ptr               ;Get location to put charset
    LDA      #00               ;Set up pointer to system
                                charset

    STA      SysSet
    LDA      #0C
    STA      SysSet+1
    LDA      SysSet+1601        ;Save old X-byte
    PHA
    LDA      #8F               ;System charset is in system
                                bank
    STA      SysSet+1601
```

```

        LDY      #0
NxtChr  LDA      (SysSet),Y          ;Copy a character
        STA      (Ptr),Y
        INY
        BNE      NxtChr             ;Do next one
        INC      Ptr+1
        INC      SysSet+1
        LDA      SysSet+1           ;See if done (if we reached
                                     $1000)
        CMP      #10
        BCC      NxtChr

        PLA
        STA      SysSet+1601         ;Restore X-byte for Pascal
        PUSH     Return
        RTS

.END

```

The code is straightforward for those familiar with assembly code; the only tricky part is saving the X-byte of the variable we use to access system memory (SysSet) and restoring it before returning so that Pascal will not get confused. To use it, copy it into a file, assemble it, and then link it into your program. It defines a procedure called SysCharset which copies the current character set into a Pascal variable. Here is an example program to demonstrate its use:

```

Program TestCharset;

Type Charset = Packed Array [0..127, 0..7] of 0..255;

Var SysSet: Charset;
    C: Char;
    S: String;
    F: File of Charset;

Procedure SysCharset(Var C:Charset); External;
    { The assembly language program to get the system character set }

Procedure LoadCharset(C:Charset);
{ Loads the character set C into the character generator }
Var RequestCode: Packed Record
    Channel: 0..1;
    Stat_or_Ctrl: 0..1;
    Request_Num: 0..255;
    Reserved: 0..63;
End;
Begin { LoadCharset }
RequestCode.Channel := 0;
RequestCode.Reserved := 0;
RequestCode.Stat_or_Ctrl := 1;
RequestCode.Request_Num := 16;

```

```

UnitStatus(1,C,RequestCode);
End { LoadCharset };

Begin { Main program }
{ First, save the system character set in SysSet }
SysCharset(SysSet);

{ Ask the user for a file with a new character set }
Write('Character set to load: ');
Readln(S);
Reset(F,S);

{ Load the user's character set and close the file }
LoadCharset(F^);
Close(F);

{ Put some characters on the screen to show off the new character set }
}
For C:=' ' to '~'
Do
    Write(C);
Writeln;

{ Wait until the user is ready to exit }
Write('Press return to exit. ');
Readln;

{ Restore the old character set before exiting }
LoadCharset(SysSet);
End.

```

## EXERCISES

1. It is often not necessary to download a complete character set. The System Utilities program, for example, downloads only a few characters so that it can draw boxes and arrows. Explain how to do this.
2. Write an Invokable module for Business Basic so that programmers can write Basic programs which use custom fonts but restore the system font before exiting.

*(Edited by Dave Ottalini)*

## SARA AND CPM

Having something so close to a DOS prompt on my Apple does invoke nightmarish thoughts. It's bad enough having a DOS monster on the same desk as my SARA!

But in reality, I own about 3 or 4 CP/M cards and a few programs as well. In addition to WordStar, I think there may be an audio training cassette around here. By the way, there are 3 checks in the mail for BOS (should be there now), one for an electronics repairman, one for a law firm, and another for a systems analyst. I'll be sending another when this next SARA goes out the door (not MINE of course!). Then there is a friend who bought a /// a year or so ago but is getting discouraged by running everything from floppies, so I was going to give her a profile if she will buy BOS. Good deal, huh? Need another profile card though...

## SARA VS. IBM (AGAIN)

Here's another Motorcity update; A co-worker and I were given the same task (oooh I LOVE these situations) to create a database application for exporting data to create graphs. Our Field Support Engineering workgroup is split, one side installs computers, the other troubleshoots and repairs, and I was given the more active group. My co-worker racked up 36 hours of overtime putting a simple database together to compile the data. So I sat down at my desk, booted my Apple ///, and started my stopwatch. The results are posted below.

System	OS	Time H:M:S	Results
IBM 386	Windows	36:00:00	unsuccessful
Apple ///	BOS	00:02:52	successful

The initial database creation took 1 minute, 7 seconds, with the rest going to field renaming and screen layout. When my partner found out that my database was done and working, he suggested that we do the project on the ///. My boss nixed that idea, so the data was transferred to Lotus 123 to be compatible with the rest of the people who like doing things the hard way.

I thought for sure that Lotus would import a DIF file... it wouldn't, just ASCII files. On top of not reading DIF, Lotus also could not read labels AND values (even though it said it could), but that left just 3 columns that had to be entered manually. That's what the name's for, right? (I)t's (B)etter (M)anually?

Actually, Lotus is ok, the commands and formulas are the same as Visicalc, but the Lotus menu bar is a lot more helpful. While we are on the subject, here's a neat test: Load your Lotus version 2.4 on a

mighty Pentium and run a sort test. Then run the same test on an Apple /// with EZP, and the Pentium will lose! They are only one second apart in this test, so the biggest difference between the two is that the Apple /// spreadsheet will ALWAYS be accurate... (oops, that was below the belt, or at least below double precision!)

## **BOB CONSORTI**

Well, what to do now.... I guess irony has come full circle; the computer that was orphaned for the sake of money loses her last programmer for the same reason. I was really looking forward to burning up the phone lines at 9600, and was still hoping that we would get a new word processor.

Despite the circumstances we have a lot to be thankful for:

- The Apple /// has enjoyed the most remarkable staying power of any orphan computer. A brand-new OS... 13 \*years\* after her intro and a decade after being discontinued by Apple Computer?
- SARA has quadrupled in performance and is more than a match for 386 Intel-based PCs. You say I don't have any evidence to shoot your way? Go ahead, make my day! :)
- The /// has something that MS-DOS based systems will never have; personality. Our SARA has never been, and never will be, an ugly white box. And she will never leave anyone at a stupid DOS prompt.
- Space prohibits getting into the best keyboard of all times, device independence, PowerKeys and DTM, macros without program barriers... etc. The list goes on and on. For me and many others, the /// was our gateway into the world of computing and even our present careers.

Will I pull the sheet over SARA's screen and unplug the power cord tonight? I could. There are 3 MS-DOS computers in this house which I know quite well, the newest is only 2 months old. But you see... there's these reports I have to knock out, and Microsoft Access crashed my database form definitions today, and there's a stack of papers 3 inches thick that need to be input into 3EZP, and the Monkey3 virus is spreading at work and can't be detected by the network shield, and Lotus 123 has lousy printer control, and Windows Print Manager is still a bottleneck, and nobody REALLY understands DOS memory mismanagement, and WordPerfect isn't, and.....

*Adapted by Dave Ottalini from an article by Gareth Tucker*

### PART 1: GETTING STARTED

Welcome to AppleWriter! This article is the first of two that will explore the program a bit, provide some of the basics and offer a few hints and tips. It does NOT go into depth. But it DOES offer a great way to get started with this super Apple family program, or to brush up if you are interested.

AppleWriter ///, originally written by Paul Lutus and published by Apple Computer, will run on any Apple /// or ///+. The /// version is virtually identical to the Apple // version save for a few features and the way that the two machines handle printing. The /// version does NOT have a communications program (for use with a modem) for example.

I will assume that you have been able to load the program and run it. It will boot automatically from the internal disk drive or, from the BOS3, Selector or Catalyst menus, provided they are set up properly.

When AppleWriter /// starts up, it looks for two other files which should be in the same directory, SYS.PRT and SYS.TAB. These contain the default setting for margins, tabs, etc., and you will get strange and unwanted results if these files are not present. You can create your own files, as explained below, if these are missing.

AppleWriter /// next looks for a file called STARTUP, which would contain any other commands that you might want to execute at the beginning. For example, you might want to display a menu of choices for the user, or load a special file of commands to control your printer.

For example, here's a STARTUP File that /// SIG CO-Chair Dave Ottalini uses:

```
Startup
PND
PPR
PPR
=====
PPR                                Dave's WPL STARTUP Program
PPR
=====
QH/p/character.sets/standard
QE/p/programs/applewriter3/glos.keypad
QM/p/programs/speller3
QC/p/programs/applewriter3/letterform
PPR
OI77
PPR
PQT
```

Note that it loads a glos.keypad file included with AppleWriter 2.0 and 4.1 that allows you to use your keypad keys as "macros" to accomplish many basic tasks (like loading, saving, etc.) with just one keypress.

If STARTUP is found, these commands are executed, and AppleWriter /// finally displays the document editing screen.

The editing screen is blank, with a single line at the top, as follows (except with black characters on a white background):

```
>   Z      Mem:46165      Len:      0      Pos: 0      Tab: 0 File:
```

This is the "data line", and it tells you about the document in memory. As you create the document, you will see this data line change. The data line tells you how much free memory you have remaining (Mem), the number of characters in your document (Len), the position of the cursor, counting the number of characters from the start of the document (Pos), the number of characters since the start of the current paragraph (Tab), and the name of the file you are working with. The filename will be blank until you have loaded or saved the document.

The Z symbol means that the program is set to automatically "wrap" words, so that you do not have to press Return at the end of each line. The > symbol is explained later, in the section on Control Commands.

You are now ready to create a new document, or to load a document that has been saved on the disks.

## Using Disks

The 2.0 and 4.1 versions of AppleWriter /// can work with very large documents, limited only by the computer's memory. You set this up by getting into the SOS Commands menu (Command O) and going to "J" - Select Memory Size. Tell AppleWriter /// how many 32k banks of memory you want to use. One problem - IF you use more than 4, you will not be able to use AppleSpeller from within AppleWriter /// to spellcheck the file (one bug that was never fixed). BUT you can always save the file to disk and run Applespeller as a stand-alone program to do the spellchecking.

Remember that when the computer's power is turned off, all the information stored in the computer is lost. To save your document for later use, you will need to save it on a disk. You should always save your work, unless you are certain you will never need to use it again.

A document stored on a disk is called a "file". Each disk has a list of the files stored on it, called a catalog or directory.

Before we can load or save a file, we must tell the computer the name of the directory which contains the file, as well as the filename. This is called the "pathname". For example, the pathname of the file named NOTE.1, which is stored in the FILES directory on the disk named /WP.32, would be:

```
/WP.32/FILES/NOTE.1
```

OR .D2/FILES/NOTE.1 (or whatever volume you're saving to)

First we give the name of the disk or the volume, then the name of the directory, and finally the name of the file. The names are separated by slash marks "/", and the name of the disk (or "volume") always begins with a slash mark.

In a pathname, everything which comes before the name of the file is called the "prefix". In the above example, /WP.32/FILES is the prefix, and NOTE.1 is the filename. Usually, when we start using the word processor, the computer will check to see which disk we are using and it will automatically attach the prefix whenever we tell it a file name. When we tell the computer to load the file named NOTE.1, it will try to find it on the disk we were using most recently. But if we have inserted a different disk, we need to tell the computer which disk to use. We do this with the PREFIX command, described below. Once you have done this, the computer will continue to use this disk for saving and loading files, and you will only need to tell it the filename.

### Using the SOS Commands

We can display a menu which lets us do several things with the disks. Control-O (hold down the Control key while pressing the O key) will display the following menu:

- A. Catalog
- B. Rename File
- C. Lock File
- D. Unlock File
- E. Delete File
- F. Create Subdirectory
- G. Set Date & Time
- H. Set Prefix
- I. Select Display Column Width
- J. Select Memory Size

Pressing A will cause the computer to ask you for the name of the catalog (directory) to display. You can type in the pathname of any directory you would like to see, or you can simply press Return, which will cause the computer to display the "current" directory, that is, the one the computer was already using.

The other choices have the following effects:

- (B) - Changes the name of any file. The computer will ask you for the old name and the new name.
- (C) - Locks the file so that it cannot be changed.
- (D) - Unlocks the file.
- (E) - Deletes the file from the disk.
- (F) - Creates a new sub-directory.
- (G) - Sets the Date and Time
- (H) - Sets the prefix to a selected disk.
- (I) - Allows you to change the display column width (1-255 columns).
- (J) - Allows you to change the amount of memory allocated for use by AppleWriter (1-15 32k)



blocks).

Most of these you will rarely need to use, but you will use Control-O A (to catalog the disk) and Control-O H (to set the prefix) quite often. By the way, to bring a disk catalog into memory, simply type a "#" after the pathname from the Control-O A setting : ".d2#". The catalog will be in memory, ready for editing at the whirl of the diskdrive.

### **Creating a Document**

Typing a document into the computer's memory is similar to using a typewriter: you press the keys, and the characters are stored into memory, and displayed on the screen. The memory can hold many more characters than the computer can display on the screen at once, however. The screen can display 23 lines of 80 characters each. When you type enough characters to fill the screen, all the lines are shifted upward one line, so that the top line is no longer visible.

Typed characters are inserted at the location of the "cursor", which is a blinking white square. You can move the cursor within the document to any location you choose by using the arrow keys on the bottom row of the keyboard. This lets you go back and insert words, or entire paragraphs, that you may have left out.

### **Carriage Return**

Unlike a typewriter, the computer does not require you to press Return at the end of each line. It will automatically move down to the next line, and will move words around so that they are not broken at the right margin. You do need to press Return to end a paragraph and begin a new one.

### **Deleting Letters**

If you make a typing mistake, you can delete it by placing the cursor to the right of the mistake and pressing the Delete key (on a ///+, or <Control>+H on a ///), at the upper right corner of the keyboard. The Delete key will take out one character each time you press it. The Delete key, like all keys on the keyboard, will rapidly repeat if you hold it down. There are several other ways to correct and edit a document, which are discussed in the section on Editing.

### **Loading Paragraphs**

You can also create a document by loading sections of it from the disk. For example, you could type part of a document, then place the cursor at the end of the document and tell the computer to load a file from a disk. The file would be inserted at the cursor location and would become a part of your document. This ability lets us save certain standard paragraphs on the disk, so that you will not need to retype them whenever you want to include them in a document.

## Automatic Document Creation

Another way to create a document is to program the computer (using WPL) to ask you questions about which paragraphs to load. Based on your replies, the computer will load paragraphs from the disk and will then display the complete document. This is a very powerful feature, but is not described in this file.

## Editing and Correcting

One method of correcting errors, mentioned previously, is to place the cursor to the right of the error, use the delete key to remove the incorrect text, and then type in the correct text. However, there are many commands available which will let you make more extensive changes. For example, you can delete entire words or paragraphs, and re-insert them at other locations. You can automatically search for words and phrases, and replace them with other words.

## Control Commands

Most of the editing features are used by entering "control commands". For example, by holding down the Control key while pressing the B key, you can cause the cursor to jump to the beginning of the document. This is called a "Control-B", and these instructions will print this as ^B. There is a control command for each of the alphabetic characters:

<b>^B</b>	<b>Jump to the beginning of the document.</b>
<b>^C</b>	<b>Change case. After entering ^C, you can use the right and left arrow keys to change all the characters the cursor passes over to upper case. Press ^C twice to convert characters to lower case. Pressing any key other than the arrow keys turns off this command.</b>
<b>^D</b>	<b>Change direction. When you search a document for a phrase, the search is done from the cursor toward the end of the document, or toward the beginning. This key chooses the direction. The direction chosen is displayed by the &gt; symbol on the data line. Also, this command determines whether words or paragraphs are deleted or inserted when you use the ^W and ^X commands, described below.</b>
<b>^E</b>	<b>Jump to end of document.</b>
<b>^F</b>	<b>Find a string of characters. ^F/x/ will find the first occurrence of "x". ^F/x/y/ will replace the first occurrence of "x" with "y", and will then ask whether to continue searching for other occurrences of "x". F/x/y/a will replace all occurrences of "x". The search will begin at the cursor position, and will proceed in the direction of the &lt; or &gt; arrow at the top left corner in the data line.</b>
<b>^G</b>	<b>Define or use a glossary. This is an advanced feature which allows you to specify a phrase which will be inserted each time you press ^G and a key. For example, you could set the program to insert the phrase "Sincerely yours," whenever you pressed ^GS.</b>

<b>^H</b>	Backspace, same as right arrow (deletes character to the left).
<b>^I</b>	Tab, same as tab key.
<b>^J</b>	Jumps to character(s) as they are typed.
<b>^L</b>	Load a file at the cursor position.
<b>^M</b>	Carriage return.
<b>^N</b>	Erase memory - to start a new document.
<b>^O</b>	Display the disk command menu.
<b>^P</b>	Print the document (type "NP" and Return at the prompt).
<b>^Q</b>	Additional functions menu.
<b>^R</b>	Replace mode. The normal mode is the "insert" mode, in which characters to the right of the cursor are pushed to the right when you enter a new character. Choosing this mode causes new characters to replace the old characters, rather than pushing them to the right.
<b>^S</b>	Save the document to disk.
<b>^T</b>	Set tab stop at the cursor position, or clear the tab stop that is at the cursor position.
<b>^U</b>	Same as right arrow, moves cursor forward.
<b>^V</b>	Control character insert mode. Allows Control characters to be inserted in documents, rather than treated as commands. Toggles off.
<b>^W</b>	Deletes the word to left of cursor, if the direction arrow is pointing to the left, and saves the word in a separate area of memory. If the direction arrow points to the right, the word is recalled from the special memory.
<b>^X</b>	Similar to ^W, except paragraphs are deleted, recalled. Good for swapping location of paragraphs, items in a list, etc. ^W and ^X have separate memory areas, each 2048 characters long.
<b>^Y</b>	Splits screen. Allows you to display two sections of the document.
<b>^Z</b>	Toggles word wrapping. Normally, you will want the computer to automatically move a long word down to the next line, rather than breaking it in the middle, but you can turn off this feature if you wish to control word breaks manually.

In addition to using these commands to edit the text of a document, you can also insert special commands into the text of the document you are creating. These commands will not be printed, but will control the way the document will be printed. For example, you can insert a command which will change the left margin, so that a paragraph will be indented. These commands are explained in the section below called "Dot Commands".

## **PART 2: SAVING AND PRINTING DOCUMENTS**

This is the second of two articles exploring AppleWriter ///. This time around we look at ways to save and print documents, and touch a bit on WPL, Word Processing Language.

### **Saving a Document**

Once a document has been created and edited, you need to save it on the disk for later use. In fact, it is a good idea to save a document several times as you work on it; a power failure could cause you to lose all the information in the computer, but information on the disk is safe.

Before saving a document, you will need to tell the computer which disk to store the file on. Use the Control-O H command to set the prefix. To save a file named CONTRACT, you would type Control-S (hold down the Control key while pressing the S key). The computer will display, at the bottom of the screen

```
[S]ave:
```

and will wait for you to enter the name for the file. You would type

```
contract
```

and press Return. If the correct disk is not in the disk drive, the computer will tell you that the volume was not found, and you will have to insert the correct disk and try again. If you wish, you can enter the full pathname after the Save prompt, in which case the default prefix will not be changed. For example,

```
[S]ave:      .D2/LETTERS/LETTER.TO.MOM or  
            /MY.DISK/LETTERS/LETTER.TO.MOM
```

After you have saved a file, you can continue working with it and adding to it. The next time you tell the computer to save it, by entering Control-S, the prompt displayed by the computer at the bottom of the screen will show whatever name (or pathname) you used to save the file, such as:

```
[S]ave:contract
```

The cursor will be located just after the colon. The computer is displaying the name you used when you last saved the file, and asking whether to use the same name. If you want to use the same name, you can type an equals sign (=) and press Return, in which case the same name will be used.

Filenames cannot be more than 15 characters long. They must start with letters, and they can only

contain letters, numbers or periods.

## Loading a Document

Loading a document into the computer's memory from a disk is simple: First, tell the computer which disk to use, by using the Control-O H prefix command. Then type Control-L and the computer will display the following prompt at the bottom of the screen:

```
[L]oad:
```

It will wait for you to type in the name of the file to be loaded, and, after you press Return, it will attempt to load the file from the disk. If the correct disk is not in the disk drive, or if you have not spelled the filename correctly, it will tell you that the file was not found, and you will have to try again.

You can load a file into the middle of a document that is already in memory. Simply place the cursor at the location where you want the file to be loaded and use the Control-L command as explained above. This allows you to add paragraphs that you have saved into a new document, so that you do not have to type them again.

## Printing

When you are ready to print the document, you need to decide what size paper you want to use, and tell the computer about the margin widths and paper length so that it does not print on the wrong part of the paper. For example, when I print letters we use a left margin width of 9 characters, and the right margin is in the 78th column.

These margin setting can be changed individually, or you can save them in a file (such as the SYS.PRT file mentioned above), which can be loaded into memory whenever you wish to use that particular format. Control-O will display the Additional Functions menu, which allows you to save and load print files.

You can examine and change the current margin settings by typing Control-P. The computer will display the following prompt:

```
[P]rint/Program :
```

You can do three things at this prompt:

- (a) you can type np, and press Return. "np" means "new print", and the computer will begin printing the document if the printer is turned on. "np" means that this is a new printing job, and that any page numbering should start with page number one;
- (b) you can type ?, and press Return. This will display a list of the current format settings, as shown below; or
- (c) you can press any other key, and press Return, which will cancel the print command and let

you continue editing the document.

The list of format settings looks like this:

```
Left      Margin      (LM) = 9
Paragraph Margin      (PM) = 0
Right     Margin      (RM) = 78
Top       Margin      (TM) = 1
Bottom    Margin      (BM) = 1
Page Number      (PN) = 1
Printed Lines      (PL) = 60
Page Interval      (PI) = 66
Line Interval      (LI) = 0
Single Page      (SP) = 0
Print Destination  (PD) = .printer
Carriage Return    (CR) = 1
Underline Token    (UT) = \
Print Mode (LJ,FJ,CJ,RJ) = LJ
Top Line          (TL) :

Bottom Line       (BL) :
```

Press RETURN to Exit

[P]rint/Program:

When this display is shown, you can change any of the format settings. For example, to change the left margin width from 9 to 15 characters, you would type LM15, and press Return. The changed setting is immediately shown on the display, and will remain in effect until you change it.

The settings have the following meanings:

**Left Margin:** the number of character-widths from the left edge of the paper at which printing will begin.

**Paragraph Margin:** the position at which the first line of a new paragraph will begin printing. If this is set to 0, the left margin setting will be used. You can use a value different from the left margin width, however. Using a value greater than the left margin will cause the first line of a paragraph to be indented. A number less than the left margin setting will create "hanging paragraphs"; that is, the first line will begin farther to the left than the rest of the lines in the paragraph. This is sometimes a useful effect.

**Right Margin:** The right-most column of print. Any words which would extend past this column will be "wrapped around" to the next line.

**Top Margin:** the number of lines to skip on each page before printing the top line.

**Bottom Margin:** the number of lines to leave blank at the bottom of each page.

**Page Number:** the number to begin counting with, when automatic page numbering is used.

**Printed Lines:** the number of lines on a page, excluding the number of lines left blank by the Top Margin and Bottom Margin settings.

**Page Interval:** the total number of lines on a sheet of paper. This setting tells the computer how far to advance the paper when it is set to print on continuous forms.

**Line Interval:** this tells the computer whether to single, double, or triple space the printed lines. A setting of 0 means single space, since no blank lines will be inserted between printed lines. (Note: if you are using a GS, your control panel settings will override this.)

**Single Page:** this tells the computer whether you are printing on continuous forms. We usually use single sheets at the office, so this is set to 1, meaning True. A setting of 0 (False) would cause the printer to automatically eject the paper when it reached the end of a page, and begin printing on a new page.

**Print Destination:** normally, this is ".Printer", the default printer (as set up in your SOS.Driver file). But it could also be set to, for example, ".SPOOLER" if you are using BOS3 and wish to spool the file to disk before printing. Making the print destination ".Console" will "print" the file to your monitor. Or try making it (for example) ".D2/Myfile" and you will get a formatted version of your file saved to disk in text (ASCII) format.

**Carriage Return:** this is set to 1, to tell the program to automatically insert a carriage return at the end of each line as it sends the lines to the printer.

**Underline Token:** this is set to the "back slash" character \, which tells the printer to begin underlining every character following the back slash, until another back slash character reached. Any other character could be used instead. Note that to get a continuous underline between words, you'll need to "link" them with an underline ("\_"):

```
\This_is_an_example_of_how_to_underline_an_entire_line.\
```

**Print Mode:** tells the computer to align the left edge of the lines (Left Justification), to add spaces between the letters so that both left and right edges are even (Fill Justification), to position the text lines in the center of the page (Center Justification), or to align the right edge of the lines (Right Justification). Usually, we use left justification. When printing Wills, however, we use fill justification. Center justification is used for section headings, titles, etc.

**Top Line:** this lets you specify a header to be printed at the top of each page. You can select whether the text will be printed aligned at the left margin, centered, or aligned at the right margin. A common use is to number pages. When you use the # symbol in the specified top line, the # symbol will be replaced with the page number on each page. For example, you might specify a top line as follows:

```
TL/page #//
```

This would cause "page 1" to be printed at the top left corner of page one. The / symbols are delimiters which specify whether the text should be at the left, center or right. If your top line had been

```
TL//Page #/
```

then "Page 1" would be centered at the top of the first page, and

```
TL///Page #
```

would cause "Page 1" to be printed at the top right of the page.

**Bottom Line:** this works the same as the Top Line command. I generally prefer to number pages at the bottom, in the center, by using the following command:

```
BL// -Page #-/
```

When you have set the format, you can save the settings in a file for later use with the Control-Q D command. For example, if I have set the margins for printing a letter, I can save that format with the following command:

Control-Q D

```
Enter File Name:letters
```

The program asks me for the file name, and I entered "letters". The program then saves the file with the suffix .PRT, as LETTERS.PRT. When I want to use it later, I can use the Control-Q C command. The program will prompt me for the file name, I will enter "LETTERS", and the margins will be reset to the values I had saved.

## Printing Steps

To summarize the steps involved in printing:

- (1) load the file to be printed into memory, if it is not there already.
- (2) decide what kind of paper you want to use.
- (3) put the paper in the printer and turn the printer on.
- (4) set the format, either by loading a format file or Control-P ? to set the format manually.
- (5) type Control-P np, and press Return.

The computer will start printing. If the document is more than one page long and the Single Page format setting is set to 1 (True), the computer will pause after it prints each page to give you a chance to load a new sheet into the printer. When you are ready, press Return, and the printing will continue.

When the printer is through printing, it will stop, and the cursor will flash on the screen. You can now work on other documents.



## Indenting Paragraphs

These print formats control the way the entire document will be printed. Sometimes, however, you will want to make temporary changes of margin width, or you may want to single space a part of a document that is otherwise printed in double space. You can insert "dot" commands into the text which will change these format specifications.

## Spell Checking

If you have Apple Speller, you can automatically check a document in memory. You must first tell AppleWriter where Apple Speller is. You can do it from the Additional Functions Menu by pressing Control+Q and then, "M" (or simply add this to your Startup file as above). Then, Control+Q and "K" will automatically run Apple Speller. When you are done, Apple Speller will return you to Apple Writer automatically.

*NOTE:* You cannot have more than 2 32K banks of memory allocated to do this! It is a major bug that could cause you to lose your work. If your document is large, you can either run Apple Speller separately, split up your document and spell check it or use StemSpeller (from On Three (805)-822-8580).

## Dot Commands

Whenever a period occurs at the left margin, the computer will try to interpret that line as a special command, instead of printing it. If you are typing a letter and the left margin is set to column 9, and you want to indent a paragraph to column 15, you could place the following command on a separate line just before the paragraph to be indented:

```
.lm15
```

This would change the left margin to 15, and the new left margin setting would remain in effect until you included the command

```
.lm9
```

to change the margin width back to 9. You can do the same with any of the print format commands. For example,

.rm90	would set the right margin to 90,
.lm+10	would set the left margin to 10 more than it was previously,
.li1	would cause the line interval to be set to 1 (double space)
.cj	would cause the following text to be centered
.lj	would turn off centering and resume left justification

There are other useful "dot" commands:

`.ep0`      The "enable printer" command stops printing the document, if a "0" follows the `.ep`, and starts printing if a "1" follows the `.ep`. This is useful if you only want to print part of a document: you would put a `.ep0` at the beginning of the document, and put a `.ep1` just before the part you wanted to print, and another `.ep0` just after the part you wanted to print. When you print the document, only the part between the `.ep1` and the `.ep0` will be printed.

`.ff`      The "form feed" command causes a page break and forces the printer to move on to the top of the next page (be sure you are using fanfold computer paper.)

You can also use a variation of this command, by placing a number after the `.ff`. For example, `.ff10` will cause the printer to skip to the next page only if there are fewer than 10 lines remaining on the page being printed. This lets you avoid breaking apart lines of text that should be printed together.

`.pm`      The "paragraph margin" command is similar to the left margin command, but it affects only the first line of a paragraph. You can use the `.lm` and `.pm` commands to indent paragraphs but leave the first lines hanging out toward the left. For example, the following commands would indent the paragraphs ten spaces, but leave the first lines alone:

```
.lm+10
.pm-10
```

(1)      This is the first line of a long paragraph which is not a very good example of much of anything.

(2)      This is the second line, which is not much of an improvement. However, the third line is somewhat more optimistic, probably due to birth order.

```
.lm-10
.pm0
```

When the above text is printed, it will appear as follows:

(1)      This is the first line of a short paragraph which is not a very good example of much of anything.

(2)      This is the second line, which is not much of an improvement. However, the third line is somewhat more optimistic, probably due to birth order.

## Wildcards

The Control-F Find command normally uses the "/" delimiter to indicate the start and end of the text string to find. However, you may wish to search for text containing carriage returns, and it is not possible to enter a

[illegible]

*From: The Apple Technical Information Library*

Many times it is desirable to have a program send selective, processed output to the printer. Both Business BASIC and Pascal have the commands to handle this chore; however, none of the language reference manuals provide an example for printing to a printer where the syntax of the commands is illustrated.

When directing output to the printer, it is important to remember that Apple III's Sophisticated Operating System (SOS) treats everything as a file. In this sense, any output, whether to a printer or diskette, is handled identically:

1. Programs pass data to SOS as files.
2. In SOS, the SOS File Manager passes the file to the appropriate device driver.
3. The device driver passes the output to the selected device.

The device driver does the job of transmitting the output in the fashion that the device requires it. Input data follows the same path, only in reverse. Understand these passes of files through the operating system. SOS and the device drivers can handle the details; you must handle the concept.

Here is an example of printing to both screen and printer from a Business BASIC program. Without the delay subroutine in line 100, everything would appear to happen at once, so we have it in the program only to improve the sense of sequence during execution.

```
10  OPEN#1, ".printer": REM Declare the printer as a file.
20  PRINT "This is a test.": GOSUB 100
30  REM Output goes to the screen.
40  PRINT#1 "This is a test.": GOSUB 100
50  REM Output goes to File #1, the printer.
60  PRINT "This goes to the screen.": GOSUB 100
70  REM Without file specification
80  PRINT#1 "This goes to the printer."
90  CLOSE#1: END: REM Close the file ".printer" and end.
100  FOR delay = 1 to 2000: NEXT delay: RETURN
```

The program could also use ".silenttype" for the printer device driver.

The separate statements OUTPUT#x and PRINT can be used in succession to direct output to device x.

For instance, to simply list a program to the printer, the following commands can be entered at the keyboard in direct mode.

```

OPEN#1, .printer  (Notice, no quotes are needed in direct mode.
OUTPUT#1          (Routes all subsequent output to File #1)
LIST
CLOSE             (CLOSE in place of CLOSE#1 will close all
                  files instead of ".printer" -- with no other
                  files open it's just easier to type.)

```

There are other useful commands using this concept which are variations of other familiar BASIC commands besides PRINT. They are GET#1, INPUT#1, READ#1, and WRITE#1. The Apple III can have as many as ten files open for input and output at one time, so, where "#1" is used in the examples, it could be "#7", and so on.

The following is an example of how to print both to the screen and printer from a Pascal program. Again, the delay procedure is not necessary.

```

program PRINT_OUTPUT;
  var OutFile: text;

  procedure DELAY;
    var Count: integer;
  begin
    for Count := 1 to 2000 do
    end; {Delay}

begin
  rewrite (OutFile, '.printer'); {Declare the printer}
                                {as a file.}
  writeln ('This is a test. '); {Output goes to the screen.}
  DELAY;
  writeln (OutFile, 'This is a test. '); {Output goes to}
                                         {the printer.}

  DELAY;
  writeln ('This goes to the screen. ');
  DELAY;
  writeln (OutFile, 'This goes to the printer. ');
  close (Outfile) {Close the file ".printer" and end.}
end. {Print_Output}

```

The Apple III can have as many as ten files open for input and output at one time; "OutFile" is only one. Additional files can be declared with additional REWRITE statements.

To simply list a program to the printer, go to the Filer and transfer the text file to .PRINTER (for the Apple III) or to PRINTER: (for the Apple II and Apple IIe).

Since Pascal treats output as a file, both of these examples work with both Apple II and Apple III Pascal.

*By David Ottalini, WAP /// SIG Co-Chair*

It's BIG and BLUE and plenty NEW all over. It's the WAP /// SIG PD Library - under extensive reconstruction for the past two years or so - and now, finally, the wraps can come off. With the help of John Ruffatto, we have tried to make the PD library more useful to you - while updating and fixing files, as well as adding the new WAP address to each disk.

We've also added a few new disks for you too: Paul Campbell's updated version of the great Star Trek game (**3GAM-06**), another new word processing program, "Write Now" (**3WDP-08**) and the Best of Ottalini, Disk 09 (**3WAP-10**) (for 1994) are all available for you now.

And HEY! You Apple // users out there - there are a number of disk in this PD that you can enjoy too! ALL the Appleworks/3EZP Templates are "plug and play" on the // - just load them into Appleworks. You can use any Apple // word processor to read all those past Journal articles - see the "WAP Articles" category. All the Information category files are there for you too. And how about my favorite disks in "Miscellaneous": the Le Grayhaven Cookbook Plus, BBQ Recipies and Bread Recipies (**3MSC-10, 11** and **12**). All are directly readable on any Apple // family machine.

Please see the back for a complete rundown of all our PD disks - but here's the list of what each category is, and what it offers:

**ACCOUNTING**

Accounting-Specific Software for the Apple ///.

**APPLE SOFTWARE**

Formerly commercial software for the /// or third-party software that doesn't fit elsewhere.

**3EZP/AW TEMPLATES**

3EZ Pieces and Appleworks Templates.

**BLOOM PROGRAMS**

The compiled works of Dr. Al Bloom.

**BUSINESS BASIC**

Information and programs dealing with Apple /// Business Basic.

**DA DATASYSTEMS**

The Library of DA Datasystems (Daryl Anderson) and other

**DISK CATALOG - ASCII**

The /// SIG PD Catalog - ASCII Version.

**DISK CATALOG - 3EZ PIECES**

The WAP /// SIG PD Catalog - 3EZ Pieces Version.

**EMULATION**

Apple /// Emulation programs and information.

**FONTS**

Apple /// Font Programs and Fonts.

**GAMES**

Apple /// Games.

**GRAPHICS**

Apple /// Graphics/Draw Programs and Fotofiles.

**INFORMATION**

Apple /// Information - for new users and beyond.

**MISCELLANEOUS**

Apple /// Disks we had a hard time putting anywhere else!

**PAIR SOFTWARE**

The library of Pair Software (Frank Moore) and other related information.

**PASCAL AND OTHER LANGUAGES**

Pascal and other languages (Fortran for example), programs, etc.

**REPAIRS & DIAGNOSTICS**

Information about how to diagnose and fix a sick /// or ///+.

**SHAREWARE**

Apple /// Shareware Programs.

**SOURCE CODE**

This category provides the source code, where available, of Apple /// programs and drivers.

**SYSTEM SOFTWARE**

Apple /// System Software.

**TELECOMMUNICATIONS**

Telecommunications Programs and Information for the Apple ///.

**UTILITIES**

Utility Programs for the Apple ///.

**WAP ARTICLES**

Compilation of many articles published in the WAP Journal and elsewhere about the Apple ///.

## **WORD PROCESSING**

Word Processing programs and utilities for the Apple ///.



```
+-----+
|           Accessing The Internet By E-Mail           |
| Doctor Bob's Guide to Offline Internet Access        |
|           4th Edition - June 1995                   |
+-----+
```

*Copyright (c) 1994-95, "Doctor Bob" Rankin*

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## **How to Access Internet Services by E-mail**

If you don't have direct access to the Internet through your BBS or online service, you're not alone. About half of the 150 countries with Internet connections have only e-mail access to this world-wide network of networks.

But if you think that sounds limiting, read on. You can access almost any Internet resource using e-mail. Maybe you've heard of FTP, Gopher, Archie, Veronica, Finger, Usenet, Whois, Netfind, WAIS, and the World-Wide Web but thought they were out of your reach because you don't have a direct connection.

Not so! You can use simple e-mail commands to do all of this and much more on the Internet. And even if you do have full Internet access, using e-mail services can save you time and money. If you can send a note to an Internet address, you're in the game.

I encourage you to read this entire document first and then go back and try out the techniques that are covered. This way, you will gain a broader perspective of the information resources that are available, an introduction to the tools you can work with, and the best methods for finding the information you want.

## **Finding the Latest Version**

This document is now available from several automated mail servers. To get the latest edition, send e-mail to one of the addresses below.

To: listserv@ubvm.cc.buffalo.edu (for US/Canada/etc.)

Enter only this line in the BODY of the note:

**GET INTERNET BY-EMAIL NETTRAIN F=MAIL**

To: mail-server@rtfm.mit.edu (for Eastern US)

Enter only this line in the BODY of the note:

**send usenet/news.answers/internet-services/access-via-email**

To: mailbase@mailbase.ac.uk (for UK/Europe/etc.)

Enter only this line in the BODY of the note:

**send lis-iis e-access-inet.txt**

You can also get the file by anonymous FTP at one of these sites:

Site: ubvm.cc.buffalo.edu

**get NETTRAIN/INTERNET.BY-EMAIL**

Site: rtfm.mit.edu

**get pub/usenet/news.answers/internet-services/access-via-email**

Site: mailbase.ac.uk

**get pub/lists/lis-iis/files/e-access-inet.txt**

### Other Translations of This Document

Several readers have graciously volunteered to translate this text into languages other than English. The list below shows the status of the translation work that has been done or is in progress. You can obtain any of the completed texts by sending e-mail with

Subject: send accmail.xx (where "xx" is as shown below)  
To: BobRankin@mhv.net

- Chinese (In progress)	Filename: accmail.tw
- Danish (Complete - 4th Edition)	Filename: accmail.dk
- Dutch (Complete - 3rd Edition)	Filename: accmail.nl
- French (Complete 4th Edition)	Filename: accmail.fr
- German (Complete - 3rd Edition)	Filename: accmail.de
- Hebrew (In progress)	Filename: accmail.il
- Hungarian (In progress)	Filename: accmail.hu
- Indonesian (Complete 4th Edition)	Filename: accmail.id
- Italian (Complete 4th Edition)	Filename: accmail.it
- Japanese (In progress)	Filename: accmail.jp
- Norwegian (Complete - 4th edition)	Filename: accmail.no
- Portuguese (Complete - 2nd Edition)	Filename: accmail.pt
- Romanian (Complete - 4th Edition)	Filename: accmail.ro
- Russian (Complete - 4th Edition)	Filename: accmail.su

- |                         |                      |
|-------------------------|----------------------|
| - Spanish (In progress) | Filename: accmail.sp |
| - Swedish (In progress) | Filename: accmail.se |

Please contact the author if you would like to assist in the translation of this document into another language.

### **Acknowledgements**

This document is continually expanding and improving as a result of the daily flood of comments and questions received by the author. The following individuals are hereby recognized for their contributions. (If I forgot anyone, let me know and I'll gladly add you to the list.)

Roddy MacLeod - Engineering Faculty Librarian, Heriot Watt University  
George McMurdo - Queen Margaret College  
Jim Milles - NETTRAIN Moderator, Saint Louis University  
Glee Willis - Engineering Librarian, University of Nevada  
Sylvain Chamberland - Enthusiastic contributor

Alberto Barengols - Spanish translation  
Vadim Fedorov - Russian translation  
Stefan Greundel - German translation  
Thorsten Bo Hansen - Danish translation  
Roland Ljungkvist - Swedish translation  
Isamar Maia - Portuguese translation  
Vidar Sarvik - Norwegian translation  
Jeene van der Hoef - Dutch translation

The DELRINA CORPORATION, makers of WinComm Pro, Internet Messenger and other fine software products is also proud to be a corporate sponsor of this effort.

### **A Short Aside... "What is the Internet?"**

Many introductory texts on the Internet go into excruciating detail on the history, composition and protocol of the Internet. If you were looking for that, you won't find it here, because this is a "how to" lesson, not a history book.

When you buy a new car, they don't make you read "The Life and Times of Henry Ford" before you can turn the top down and squeal off the lot. And when you get a new computer, nobody forces you to read a text on logic design before you fire up Leisure Suit Larry or WordPerfect.

So if you're the type that wants to short-circuit the preliminaries and just dig in, you've come to the right place. I'm not going to bore you with the gory details. Instead, I'll just offer up my Reader's Digest condensed definition of the Internet, and encourage you to read more about the Internet in one of the many fine Internet books and guides listed in the "Suggested Reading" section. Some of them are even free and accessible directly from the Internet!

***Internet (noun) - A sprawling collection of computer networks that spans the globe, connecting government, military, educational and commercial institutions, as well as private citizens to a wide range of computer services, resources, and information. A set of network conventions and common tools are employed to give the appearance of a single large network, even though the computers that are linked together use many different hardware and software platforms.***

## **The Rules of The Game**

This document is meant to be both tutorial and practical, so there are lots of actual commands and internet addresses listed herein. You'll notice that when these are included in the text they are indented by several spaces for clarity. Don't include the leading spaces when you try these commands on your own!

You'll also see things like "<file>" or "<name>" appearing in this document. Think of these as place holders or variables which must be replaced with an appropriate value. Do NOT include the quotes or brackets in your value unless specifically directed to do so.

Most e-mail servers understand only a small set of commands and are not very forgiving if you deviate from what they expect. So include ONLY the specified commands in the Subject or body of your note, leaving off any extraneous lines such as your signature, etc.

You should also ensure that you have one blank line between the note headers and the body of your note. And do pay attention to upper/lower case in directory and file names when using e-mail servers. It's almost always important!

## **FTP BY E-MAIL**

FTP stands for "file transfer protocol", and is a means of accessing files that are stored on remote computer systems. In Internet lingo, these remote computers are called "sites". Files at FTP sites are typically stored in a tree-like set of directories (or nested folders for Mac fans), each of which pertains to a different subject.

When visiting an FTP site using a "live" internet connection, one would specify the name of the site, login with a userid & password, navigate to the desired directory and select one or more files to be transferred back to their local system.

Using FTP by e-mail is very similar, except that the desired site is reached through a special "ftpmail server" which logs in to the remote site and returns the requested files to you in response to a set of commands in an e-mail message.

Using FTP by e-mail can be nice even for those with full Internet access, because some popular FTP sites are heavily loaded and interactive response can be very sluggish. So it makes sense not to waste time

and connect charges in these cases.

To use FTP by e-mail, you first need a list of FTP "sites" which are the addresses of the remote computer systems that allow you to retrieve files anonymously (without having a userid and password on that system).

There are some popular sites listed later in this guide, but you can get a comprehensive list of hundreds of anonymous FTP sites by sending an e-mail message to the internet address:

mail-server@rtfm.mit.edu

and include these lines in the BODY of the note.

```
send usenet/news.answers/ftp-list/sitelist/part1
send usenet/news.answers/ftp-list/sitelist/part2
... (lines omitted for brevity) ...
send usenet/news.answers/ftp-list/sitelist/part18
```

You will then receive (by e-mail) 18 files which comprise the "FTP Site List". Note that these files are each about 60K, so the whole lot will total around a megabyte! This could place a strain on your system, so first check around to see if the list is already available locally, or consider requesting just the first few as a sampler before getting the rest.

Another file you might want to get is "FTP Frequently Asked Questions" which contains lots more info on using FTP services, so add this line to your note as well:

```
send usenet/news.answers/ftp-list/faq
```

After you receive the site list you'll see dozens of entries like this, which tell you the site name, location and the kind of files that are stored there.

```
Site:      oak.oakland.edu
Country:   USA
Organ:     Oakland University, Rochester, Michigan
System:    Unix
Comment:   Primary Simtel Software Repository mirror
Files:     BBS lists; ham radio; TCP/IP; Mac; modem protocol info; MS-DOS; MS-Windows;
           PC Blue; PostScript; Simtel-20; Unix
```

If you find an interesting FTP site in the list, send e-mail to one of these ftpmail servers:

ftpmail@sunsite.unc.edu	(USA)
ftpmail@census.gov	(USA)
bitftp@pucc.princeton.edu	(USA)
bitftp@vm.gmd.de	(Germany)
ftpmail@ftp.uni-stuttgart.de	(Germany)
ftpmail@ftp.luth.se	(Sweden)

ftpmail@src.doc.ic.ac.uk (UK)  
ftpmail@cs.uow.edu.au (Australia)

It doesn't really matter which one you choose, but a server that is close may respond quicker. In the body of the note, include these lines:

```
open <site>
dir
quit
```

This will return to you a list of the files stored in the root directory at that site. See the figure below for an example of the output when using "oak.oakland.edu" for the site name.

```
+-----+
|
|  -r--r--r--  1 w8sdz   OAK          1255 Nov  9 16:32 README
|  drwxr-xr-x  3 w8sdz   OAK          8192 Feb 25 05:17 SimTel
|  d--x--x--x  3 root    system      8192 Jan 19 20:26 bin
|  d--x--x--x  5 root    system      8192 Dec 30 05:15 etc
|  drwxrwx---  2 incoming OAK          8192 Feb 25 11:05 incoming
|  drwxr-xr-x  3 w8sdz   OAK          8192 Jan 30 17:37 pub
|  drwxr-xr-x  2 jeff    OAK          8192 Apr 17 1994 siteinfo
|
+-----+
```

In your next e-mail message you can navigate to other directories by inserting (for example)

```
chdir pub
```

before the "dir" command. (The "chdir" means "change directory" and "pub" is a common directory name, usually a good place to start.) Once you determine the name of a file you want to retrieve, use:

```
get <name of file>
```

in the following note instead of the "dir" command. If the file you want to retrieve is plain text, this will suffice. If it's a binary file (an executable program, compressed file, etc.) you'll need to insert the command:

```
binary
```

in your note before the "get" command.

Tip: Many directories at FTP sites contain a file called 00-index.txt, README, or something similarly named which gives a description of the files found there. If you're just exploring and your "dir" reveals one of these filenames, do a "get" on the file and save yourself some time.

OK, let's grab the text of The Magna Carta. Here's the message you send to ftpmail@census.gov (or another ftpmail server):

<b>open ftp.spies.com</b>	(The name of the FTP site)
<b>chdir Gov/World</b>	(The directory where the file lives)
<b>get magna.txt</b>	(Sign here please, John)
<b>quit</b>	(Bring it on home)

Here are the commands you would send to to get a file from the Simtel Software Repository that was mentioned earlier.

<b>open oak.oakland.edu</b>	(The name of the FTP site)
<b>chdir SimTel/msdos/disasm</b>	(The directory where the file lives)
<b>binary</b>	(Because we're getting a ZIP file)
<b>get bubble.zip</b>	(Sounds interesting, anyway...)
<b>quit</b>	(We're outta here!)

Some other interesting FTP sites you may want to "visit" are listed below. (Use these site names on the "open" command and the suggested directory name on your "chdir" command, as in the previous examples.)

ocf.berkeley.edu	Try: pub/Library for documents, Bible, lyrics, etc.
rtfm.mit.edu	Try: pub/usenet/news.answers for USENET info
oak.oakland.edu	Try: SimTel/msdos for a huge DOS software library
ftp.sura.net	Try: pub/nic for Internet how-to documents
quartz.rutgers.edu	Try: pub/humor for lots of humor files
gatekeeper.dec.com	Try: pub/recipes for a cooking & recipe archive

Remember that you can't just send e-mail to ftpmail@<any site>, rather you send the "open <site>" command to one of the known ftpmail servers.

You should note that ftpmail servers tend to be quite busy so your reply may not arrive for several minutes, hours, or days, depending on when and where you send your request. Also, some large files may be split into smaller pieces and returned to you as multiple messages.

If the file that is returned to you ends up looking something like what you see below, (the word "begin" with a number and the filename on one line, followed by a bunch of 61-character lines) it most likely is a binary file that has been "uuencoded" by the sender. (This is required in order to reliably transmit binary files on the Internet.)

```
begin 666 answer2.zip
M4$!#;!`H`!@`. `/6H?18.$-Z$F@P```@?```, ````5$5,25@S,34N5%A480I[
M!P8;!KL,2P,)!PL).PD'%@.(!@4.!P8%-@.6%PL*!@@*.P4.%00.%P4*.`4.
```

You'll need to scrounge up a version of the "uudecode" program for your operating system (DOS, OS/2, Unix, Mac, etc.) in order to reconstruct the file. Most likely you'll find a copy already at your site or in your service provider's download library, but if not you can use the instructions in the next section to find out how to search FTP sites for a copy.

One final point to consider... If your online service charges you to store e-mail files that are sent to you

and you plan to receive some large files via FTP, it would be wise to handle your "inbasket" expeditiously to avoid storage costs.

## ARCHIE BY E-MAIL

Let's say you know the name of a file, but you have no idea at which FTP site it might be lurking. Or maybe you're curious to know if files matching a certain naming criteria are available via FTP. Archie is the tool you can use to find out.

Archie servers can be thought of as a database of all the anonymous FTP sites in the world, allowing you to find the site and/or name of a file to be retrieved. And using Archie by e-mail can be convenient because some Archie searches take a LONG time to complete, leaving you to tap your toes in the meantime.

To use Archie by e-mail, simply send an e-mail message to one of the following addresses:

archie@archie.rutgers.edu	(USA)
archie@archie.sura.net	(USA)
archie@archie.unl.edu	(USA)
archie@archie.doc.ic.ac.uk	(UK)
archie@archie.au	(Australia)
archie@archie.luth.se	(Sweden)
archie@archie.kuis.kyoto-u.ac.jp	(Japan)

To obtain detailed help for using Archie by mail, put the word

**help**

in the subject of the note and just send it off. You'll receive e-mail explaining how to use archie services.

If you're the "just do it" type, then enter the command:

**find <file>**

where "<file>" is the name of the file to search for, in the BODY (not the subject) of the note.

This will search for files that match your criteria exactly. If you want to find files that contain your search criteria anywhere in their name, insert the line

**set search sub**

before the "find" command. Some other useful archie commands you might want to use are:

<b>set maxhits 20</b>	(limit output, default is 100 files)
<b>set match_domain usa</b>	(restrict output to FTP sites in USA)
<b>set output_format terse</b>	(return output in condensed form)



When you get the results from your Archie query, it will contain the names of various sites at which the desired file is located. Use one of these site names and the directory/filename listed for your next FTP file retrieval request.

Now you've learned enough to locate that uuencode utility mentioned in the last section. Let's send e-mail to [archie@archie.rutgers.edu](mailto:archie@archie.rutgers.edu), and include the following lines in the message:

<b>set match_domain usa</b>	(restrict output to FTP sites in USA)
<b>set search sub</b>	(looking for a substring match...)
<b>find uuencode</b>	(must contain this string...)

Note: You'll be looking for the uuencode source code, not the executable version, which would of course be a binary file and would arrive uuencoded - a Catch 22! The output of your archie query will contain lots of information like this:

```
Host ftp.clarkson.edu      (128.153.4.2)
Last updated 06:31  9 Oct 1994

Location: /pub/simtel20-cdrom/msdos/starter
FILE      -r-xr-xr-x      5572 bytes  21:00 11 Mar 1991  uuencode.bas

Location: /pub/simtel20-cdrom/msdos/starter
FILE      -r-xr-xr-x      5349 bytes  20:00 17 Apr 1991  uuencode.c
```

Now you can use an ftpmail server to request "uuencode.bas" (if you have BASIC available) or "uuencode.c" (if you have a C compiler) from the [ftp.clarkson.edu](http://ftp.clarkson.edu) site.

It should be noted that the latest version of uuencode can be found at the SimTel repository. Send e-mail to [listserv@SimTel.coast.net](mailto:listserv@SimTel.coast.net), including any or all of these commands in the BODY of the note, and the requested files will be returned to you by e-mail.

```
get uuencode.bas
get uuencode.c
get uuencode.doc
```

## GOPHER BY E-MAIL

Gopher is an excellent tool for exploring the Internet and is the best way to find a resource if you know what you want, but not where to find it. Gopher systems are menu-based, and provide a user-friendly front end to Internet resources, searches and information retrieval.

Gopher knows where things are, thanks to the many volunteers who spend time creating pointers to useful collections of 'Net resources. And Gopher takes the rough edges off of the Internet by automating remote logins, hiding the sometimes-cryptic command sequences, and offers powerful search capabilities as well.

When visiting a Gopher site using a "live" Internet connection, one would specify the name of the site, navigate through a series of hierarchical menus to a desired resource, and then either read or transfer the information back to their home system.

Using Gopher by e-mail is very similar, except that the desired site is reached through a special "gophermail server" which gophers to the remote site on your behalf and returns the requested menu, submenu or file to you in response to a set of commands in an e-mail message.

Although not every item on every menu will be accessible by "gophermail", you'll still find plenty of interesting things using this technique. Down to brass tacks... let's send e-mail to one of these addresses:

<b>gophermail@calvin.edu</b>	<b>(USA)</b>
<b>gopher@earn.net</b>	<b>(France)</b>
<b>gopher@dsv.su.se</b>	<b>(Sweden)</b>
<b>gomial@ncc.go.jp</b>	<b>(Japan)</b>

You can optionally specify the address of a known gopher site on the Subject line to get the main menu for that site instead. Here are some interesting gopher sites you may like to explore at your leisure.

**cwis.usc.edu**  
**gopher.micro.umn.edu**  
**english-server.hss.cmu.edu**

Let's be bold and skip the HELP stuff for now. Fire off a note to one of the gophermail servers and specify

Subject: cwis.usc.edu

You'll get a message back from the server that looks something like the text in the figure below.

```
+-----+
|
| Mail this file back to gopher with an X before the items you want. |
|
|   1. About USCgopher/ |
|   2. How To Find Things on Gopher/ |
|   3. University Information/ |
|   4. Campus Life/ |
|   5. Computing Information/ |
|   6. Library and Research Information/ |
|   7. Health Sciences/ |
|   8. Research and Technology Centers/ |
|   9. Other Gophers & Info Resources/ |
|
| You may edit the following numbers to set the maximum sizes after |
| which GopherMail should send output as multiple email messages: |
|
| Split=27K bytes/message <- For text, bin, HQX messages |
|
```

```
| Menu=100 items/message <- For menus and query responses |
| # |
| Name=About USCgopher |
| Numb=1 |
| Type=1 |
| Port=70 |
| Path=1/About_USCgopher |
| Host=cwis.usc.edu |
| # ... (some lines deleted) ... |
| Name=Other Gophers and Information Resources |
| Numb=9 |
| Type=1 |
| Port=70 |
| Path=1/Other_Gophers_and_Information_Resources |
| Host=cwis.usc.edu |
| |
+-----+
```

To proceed to a selection on the returned menu just e-mail the whole text of the note (from the menu downwards) back to the gopher server, placing an "x" next to the items(s) you want to explore. You'll then receive the next level of the gopher menu by e-mail. Some menu choices lead to other menus, some lead to text files, and some lead to searches. In the example above, let's select

x 9. Other Gophers & Info Resources

and mail the whole shebang right back at the gophermail server. You should then get a menu with a number of interesting selections including "Gopher Jewels". You'll find a LOT of good stuff along that path. The Gopher Jewels project is probably the best organized collection of Internet resources around.

If a menu item is labelled "Search" you can select that item with an "x" and supply your search words in the Subject: of your reply. Note that your search criteria can be a single word or a boolean expression such as:

**document and (historic or government)**

Each of the results (the "hits") of your search will be displayed as an entry on yet another gopher menu!

Note: You needn't actually return the entire gopher menu and all the routing info that follows it each time you reply to the gophermail server. If you want to minimize the size of your query, you can strip out the "menu" portion at the top and include only the portion below that pertains to the menu selection you want.

Just remember that if you use this approach, you must specify "get all" on the Subject line. (Exception: for searching, specify only the search terms on the Subject line.) The example below is equivalent to selecting "option 9" as we did earlier.

```
Split=0K bytes/message
Menu=0 items/message
#
Name=Other Gophers
```

**Numb=9**  
**Type=1**  
**Port=70**  
**Path=1/Other\_Gophers\_and\_Information\_Resources**  
**Host=cwis.usc.edu**

If this looks like nonsense to you, here's a human translation:

**Connect to PORT 70 of the HOST (computer) at "cwis.usc.edu", retrieve the sub-menu "Other Gophers", and send it to me in ONE PIECE, regardless of its size.**

Note: Sometimes gophermail requests return a blank menu or message. This is most likely because the server failed to connect to the host from which you were trying to get your information. Send your request again later and it'll probably work.

## **VERONICA BY E-MAIL**

Speaking of searches, this is a good time to mention Veronica. Just as Archie provides a searchable index of FTP sites, Veronica provides this function for "gopherspace". Veronica will ask you what you want to look for (your search words) and then display another menu listing all the gopher menu items that match your search. In typical gopher fashion, you can then select one of these items and "go-pher it"!

To try Veronica by e-mail, retrieve the main menu from a gophermail server using the method just described. Then try the choice labelled "Other Gopher and Information Servers". This menu will have an entry for Veronica.

You'll have to select one (or more) Veronica servers to handle your query, specifying the search words in the Subject of your reply. Here's another example of where using e-mail servers can save time and money. Often the Veronica servers are very busy and tell you to "try again later". So select 2 or 3 servers, and chances are one of them will be able to handle your request the first time around.

## **A Gophermail Shortcut:**

The path to some resources, files or databases can be a bit tedious, requiring several e-mail messages to the gophermail server. But here's the good news... If you've done it once, you can re-use any of the e-mail messages previously sent in, changing it to suit your current needs. As an example, here's a clipping from the Veronica menu you would get by following the previous instructions. You can send these lines to any gophermail server to run a Veronica search.

<b>Split=64K bytes/message</b>	<- For text, bin, HQX messages (0 = No split)
<b>Menu=100 items/message</b>	<- For menus and query responses (0 = No split)
<b>#</b>	
<b>Name=</b>	Search GopherSpace by Title word(s) (via NYSErNet)
<b>Type=7</b>	

**Port=2347**  
**Path=**  
**Host=empire.nysernet.org**

Specify the search words in the Subject line and see what turns up! You can use boolean expressions in Veronica searches. For a guide to composing Veronica searches, send these lines to a gophermail server:

**Name=How to Compose Veronica Queries**  
**Path=0/veronica/how-to-query-veronica**  
**Host=veronica.scs.unr.edu**

## **USENET BY E-MAIL**

Usenet is a collection of over 5000 discussion groups on every topic imaginable. In order to get a proper start and avoid embarrassing yourself needlessly, you must read the Usenet new users intro document, which can be obtained by sending e-mail to:

mail-server@rtfm.mit.edu

and include this line in the BODY of the note:

**send usenet/news.answers/news-newusers-intro**

To get a listing of Usenet newsgroups, add these commands to your note:

**send usenet/news.answers/active-newsgroups/part1**  
**send usenet/news.answers/active-newsgroups/part2**  
**send usenet/news.answers/alt-hierarchies/part1**  
**send usenet/news.answers/alt-hierarchies/part2**

To get the FAQ (Frequently Asked Questions) file(s) for a given newsgroup, try a command like this:

**index usenet/<newsgroupname>**

(Substitute dots for dashes if they appear in the newsgroup name.)

If any FAQ files are available, they will be listed in the returned info, and you can request them with a command like:

**send usenet/<newsgroupname>/<faqfilename>**

Once you've handled the preliminaries, you'll need to know how to read and contribute to Usenet newsgroups by e-mail. To read a newsgroup, you can use the gophermail service discussed earlier in this guide.

To obtain a list of recent postings to a particular newsgroup, send the following lines to one of the gophermail servers mentioned previously. Specify "Subject: get all" and include only these lines in the message body.

(You must replace "<newsgroup>" below with the name of the Usenet newsgroup you wish to access. eg: alt.answers, biz.comp.services, news.newusers.questions, etc.)

```
----- begin gophermail message (do not include this line)
Name=<newsgroup>
Type=1
Port=4324
Path=nnTP ls <newsgroup>
Host=pinchy.micro.umn.EDU
----- end gophermail message (do not include this line)
```

If this doesn't work, you can try another Host by specifying Port=4320 (instead of Port=4324) and substituting one of the lines below.

```
Host=phantom.bsu.edu
Host=teetot.acusd.edu
Host=infopub.uqam.ca
Host=gopher.ic.ac.uk
Host=info.mcc.ac.uk
```

Note that many of these sites carry only a limited range of newsgroups, so you may have to try several before finding one which carries the newsgroup you're looking for. When the newsgroup does not exist, gophermail sends something like "'nnTP ls <newsgroup>': path does not exist". When a site does not accept outside requests, gophermail sends something like "Sorry, we don't accept requests outside campus".

If successful, the gophermail server will send you a typical gopher menu on which you may select the individual postings you wish to read.

Note: The gophermail query in this example is the greatly edited result of many previous queries. I've pared it down to the bare essentials so it can be tailored and reused.

If you decide to make a post of your own, mail the text of your post to:

```
group-name@cs.utexas.edu
group.name@news.demon.co.uk
group.name@charm.magnus.acs.ohio-state.edu
group.name@undergrad.math.uwaterloo.ca
group.name@nic.funet.fi
```

(For an updated list send e-mail to mg5n+remailers@andrew.cmu.edu)

For example, to post to news.newusers.questions, you might send your message to either of:

**news-newusers-questions@cs.utexas.edu**  
**news.newusers.questions@news.demon.co.uk**

Be sure to include an appropriate Subject: line, and include your real name and e-mail address at the close of your note.

### **Another Usenet->E-mail Method!**

See the section "World-Wide Web by E-Mail" for an even easier method of retrieving Usenet posts by e-mail! This method is limited to the set of newsgroups carried at the CERN server, but the selection seems to be quite comprehensive.

### **A Defunct Usenet to E-mail Server**

*Please note that "listserv@cc1.kuleuven.ac.be" is no longer in service. Please do not send Usenet requests to this address.*

### **WAIS SEARCHES BY E-MAIL**

WAIS stands for Wide Area Information Service, and is a means of searching a set of over 500 indexed databases. The range of topics is too broad to mention, and besides, you'll soon learn how to get the topic list for yourself.

I recommend that you send e-mail to "waismail@sunsite.unc.edu" with HELP in the body of the note to get the full WAISmail user guide. But if you can't wait, use the info below as a quickstart.

A list of WAIS databases (or "resources" as they like to be called) can be obtained by sending e-mail to the waismail server with the line

**search xxx xxx**

in the body of the note. Look through the returned list for topics that are of interest to you and use one of them in the next example.

OK, let's do an actual search. Send e-mail to:

**waismail@sunsite.unc.edu**

with the following commands in the note body:

**maxres 10**  
**search bush-speeches lips**

This will tell WAISmail to search through the text of the "bush-speeches" database and return a list of at most 10 documents containing "lips".

A successful search will return one or more "DOCid:" lines, which identify the location of the matching documents. To retrieve the full text of a matching document, send one of the returned "DOCid:" lines (exactly as is) in the body of your next message to WAISmail.

(Note: The WAISmail server at "quake.think.com" is defunct. The server listed above still had a few bugs as of this writing, so if it doesn't work, try the WAIS via gophermail method described next.)

A list of WAIS databases can also be obtained by sending e-mail to gophermail@calvin.edu with "Subject: get all" and these lines in the message body:

```
Type=1  
Name=WAIS Databases  
Path=1/WAISes/Everything  
Host=gopher-gw.micro.umn.edu  
Port=70
```

Look through the returned list for topics that are of interest to you and select one to search. Specify your search term(s) on the Subject line, and clip out just the section of the returned gopher menu that corresponds to your target database. For example:

```
Type=7+  
Name=bush-speeches.src  
Path=waissrc:/WAISes/Everything/bush-speeches  
Host=gopher-gw.micro.umn.edu  
Port=70
```

You will (hopefully) receive a gophermail menu in response listing the matching "documents". To retrieve the full text of a matching document, just make a selection from the returned gopher menu, and the referenced file will be sent to you.

In my testing, WAIS by gophermail was not reliable. Often a blank menu was returned but repeated attempts did eventually meet with success.

## **WORLD-WIDE WEB BY E-MAIL**

The World-Wide Web is touted as the future of Internet navigational tools. It's a hypertext and multimedia system that lets you hop around the Net, read documents, and access images & sounds linked to a source.

Have you ever heard someone say, "Wow, check out the cool stuff at <http://www.somewhere.com/blah.html>" and wondered what the heck they were talking about? Now you can retrieve WWW documents by e-mail using the Agora WWW-mail server server in Switzerland.



All you need to know is the Uniform Resource Locator (or URL, that long ugly string starting with "http:", "gopher:", or "ftp:") which defines the address of the document, and you can retrieve it by sending e-mail to:

**agora@mail.w3.org**

In the body of your note include one of these lines, replacing "<URL>" with the actual URL specification.

**send <URL>**

This will send you back the document you requested, with a list of all the documents referenced within, so that you may make further requests.

**deep <URL>**

Same as above, but it will also send you the documents referenced in the URL you specified. (May result in a LOT of data coming your way!)

To try WWW by e-mail send the following commands to **agora@mail.w3.org** :

**www**

**send http://www.w3.org**

You'll receive in due course the Agora help file and the "WWW Welcome Page" from Cern which will include references to other Web documents you'll want to explore.

Note: The URL you specify may contain only the following characters: a-z, A-Z, 0-9, and these special characters `/:._+@%*()*?~`

As mentioned earlier, you can also get Usenet postings from the WWW mail server. Here are some examples:

**send news:comp.unix.aix** (returns a list of recent postings)

**deep news:comp.unix.aix** (returns the list AND the postings, this can be a LOT of data!)

There is another WWW-mail server whose address is:

**webmail@curia.ucc.ie**

This server requires commands in the form:

**go <URL>**

## **WWW SEARCH BY E-MAIL**

There's a lot of great stuff out on the Web, but how do you find it? Well, just like Archie and Veronica

help you search FTP and gopher sites, there are several search engines that have been developed to search for information on the Web. But until now, you had to have direct Internet access to use them.

After a bit of research, I have found that it is possible to use several WWW search mechanisms by e-mail. Here are some sample queries that you can use to search via Lycos, WebCrawler and the CUI W3 Catalog. Any of these lines can be sent to the [agora@mail.w3.org](mailto:agora@mail.w3.org) address to perform a search. If you're not interested in spam or frogs, then by all means feel free to use your own search keywords.

For Lycos, append a dot to your keywords to force an exact match, or you will get a substring search by default. Separate words with a "+" sign.

```
http://query1.lycos.cs.cmu.edu/cgi-bin/pursuit?spam  
http://query1.lycos.cs.cmu.edu/cgi-bin/pursuit?spam.  
http://query1.lycos.cs.cmu.edu/cgi-bin/pursuit?frog.+dissection.
```

For WebCrawler searches you must separate words with a "+" sign. All searches are exact, no trailing dot required.

```
http://webcrawler.cs.washington.edu/cgi-bin/WebQuery?spam  
http://webcrawler.cs.washington.edu/cgi-bin/WebQuery?frog+dissection
```

For CUI W3 Catalog searches you must separate words with "%20" as below. All searches are exact, no trailing dot required.

```
http://cuiwww.unige.ch/w3catalog?spam  
http://cuiwww.unige.ch/w3catalog?frog%20dissection
```

## **MAILING LISTS**

There are literally thousands of discussion groups that stay in touch using e-mail based systems known as "mailing lists". People interested in a topic "subscribe" to a "list" and then send and receive postings by e-mail. For a good introduction to this topic, send e-mail to:

```
LISTSERV@vm1.nodak.edu
```

In the body of your note include only this command:

```
GET NEW-LIST WOUTERS
```

### **Finding a Mailing List**

To find out about mailing lists that are relevant to your interests, send the following command to the same address given above.

```
LIST GLOBAL /keyword
```

(Of course you must replace "keyword" with an appropriate search word such as Marketing, Education, etc.)

Another helpful document which details the commands used to subscribe, unsubscribe and search mailing list archives can be had by sending to:

**LISTSERV@ubvm.cc.buffalo.edu**

In the body of your note include only this command:

**get mailser cmd nettrain f=mail**

### **New in These Parts?**

If you're new to the Internet, I suggest you subscribe to the HELP-NET list where you're likely to find answers to your questions. Send the command:

**SUBSCRIBE HELP-NET <Firstname Lastname>**

in the BODY of a note to **LISTSERV@VM.TEMPLE.EDU**, then e-mail your questions to the list address:

**HELP-NET@VM.TEMPLE.EDU**

### **FINGER BY E-MAIL**

"Finger" is a utility that returns information about another user. Usually it's just boring stuff like last logon, etc., but sometimes people put fun or useful information in their finger replies. To try out finger, send e-mail with

**Subject: FINGER jtchern@headcrash.berkeley.edu.**  
**To: infobot@infomania.com**

You'll receive some current sports standings! (The general form is FINGER user@site.)

Just for kicks, try finger using a combination of gopher and WWW. Send the command:

**send gopher://<site>:79/0<user>**

to the WWWmail server mentioned earlier.

## "DIRECTORY ASSISTANCE" BY E-MAIL

"WHOIS" is a service that queries a database of Internet names and addresses. If you're looking for someone or you want to know where a particular Internet site is located, send e-mail with

**Subject: whois <name>**  
**To: mailserv@internic.net**

Try substituting "mit.edu" or the last name of someone you know in place of "<name>" and see what comes back!

Another alternative name looker-upper is a database at MIT which keeps tabs on everyone who has posted a message on Usenet. Send e-mail to "mail-server@rtfm.mit.edu" and include this command ONLY in the BODY:

**send usenet-addresses/<name>**

Specify as much information as you can about the person (lastname, firstname, userid, site, etc.) to limit the amount of information that is returned to you. Here's a sample query to find the address of someone you think may be at Harvard University:

**send usenet-addresses/Jane Doe Harvard**

NETFIND is another more powerful search engine that uses a person's name and keywords describing a physical location to return a bunch of info about the person (or persons) who fit the bill.

Let's say we want to find someone named Hardy at the University of Colorado in Boulder. Our Netfind query will be addressed to [agora@mail.w3.org](mailto:agora@mail.w3.org) and will contain the only line:

**gopher://ds.internic.net:4320/7netfind%20dblookup?hardy+boulder+colorado**

Netfind works in two phases. First it displays a list of internet domains that match your keywords, then it looks for the person in the domain you select. Netfind by e-mail is very similar, in that you'll receive a listing of matching domains from which you must make one or more selections.

Each selection is numbered and there are corresponding "gopher://" commands at the bottom of the listing. Let's pick the selection for

**cs.colorado.edu computer science dept, university of colorado, boulder**

which means that our next command to [agora@mail.w3.org](mailto:agora@mail.w3.org) will be:

**gopher://ds.internic.net:4320/0netfind%20netfind%20hardy%20cs.colorado.edu**

If all goes well, you'll receive a list something like this:

**full\_name: HARDY, JOE** (not a real person)

**email: CrazyJoe@Colorado.EDU**  
**phone: (303) 492-1234**  
**address: Campus Box 777**  
**department: COMPUTER SCIENCE**

Note that if you know the person's domain name already, you can jump right in with a query like the latter one above.

You can also try the "Four11 Online User Directory", a free directory of users and their e-mail addresses. Send e-mail to [info@four11.com](mailto:info@four11.com) for details on how to search the Four11 directory.

### **ADDRESS/NAME SERVER INFO BY E-MAIL**

This is a little on the technical side, but anyway the Mail Name Server ([dns@grasp.insa-lyon.fr](mailto:dns@grasp.insa-lyon.fr)) offers some useful services by e-mail. Some of the commands you can send in the BODY of your note are:

<b>Help</b>	(full details)
<b>ip host.foo.bar</b>	(get host's addresses)
<b>name ip#</b>	(get host name from address)
<b>ns host.foo.bar</b>	(get host's name servers)

### **TELNET BY E-MAIL**

Sorry, it can't be done. Actually it CAN be done, but apparently nobody has done it. I'd love to be proven wrong on this!

### **A FEW NET-GOODIES**

Here are some other interesting things you can do by e-mail. (Some of them are accessible only by e-mail!)

#### **\* WEBSTER BY E-MAIL**

Don't have your dictionary handy? Send e-mail to [infobot@infomania.com](mailto:infobot@infomania.com) again, but this time make the subject WEBSTER TEST and you'll get a definition of the word "test" in reply.

#### **\* ALMANAC, WEATHER & THE SWEDISH CHEF**

Infomania offers a bunch of other services by e-mail! Almanac (daily updates), Weather, CD Music Catalog, etc. Send e-mail to [infobot@infomania.com](mailto:infobot@infomania.com) with subject HELP for full details.

#### **\* THE USENET ORACLE**

A cooperative, anonymous and humorous exchange of questions and answers. Send e-mail to [oracle@cs.indiana.edu](mailto:oracle@cs.indiana.edu) for more information.

**\* SENDING A FAX BY E-MAIL**

Free faxing via the Internet? You bet. For details, send the line below to [mail-server@rtfm.mit.edu](mailto:mail-server@rtfm.mit.edu) (in BODY of note)

**send usenet/news.answers/internet-services/fax-faq**

**\* THE ELECTRONIC NEWSSTAND**

The Electronic Newsstand collects articles, editorials, and tables of contents from over 165 magazines and provides them to the Internet. To get instructions on e-mail access, send a message to [gophermail@enews.com](mailto:gophermail@enews.com)

**\* U.S. CONGRESS AND THE WHITE HOUSE**

Find out if your congressman has an electronic address! Just send mail to the address [congress@hr.house.gov](mailto:congress@hr.house.gov) and you'll get a listing of congressional e-mail addresses.

You can also contact the President ([president@whitehouse.gov](mailto:president@whitehouse.gov)) or Vice President ([vice.president@whitehouse.gov](mailto:vice.president@whitehouse.gov)), but don't expect a reply by e-mail. Messages sent to these addresses get printed out and handled just like regular paper correspondence!

**\* OTHER SOURCES OF US GOV'T INFO:**

Send the lines below to [mail-server@rtfm.mit.edu](mailto:mail-server@rtfm.mit.edu) (in BODY of note)

**send usenet/news.answers/us-govt-net-pointers/part1**

**send usenet/news.answers/us-govt-net-pointers/part2**

**\* INTERNET PATENT NEWS SERVICE**

Send e-mail to [patents@world.std.com](mailto:patents@world.std.com) for more information on this service.

**\*THE INTERNET MALL**

To get a copy of this long list of net-connected businesses, send e-mail to [taylor@netcom.com](mailto:taylor@netcom.com) with Subject: send mall

#### \*FINDING E-MAIL ADDRESSES

For a guide to finding someone's e-mail addresses, send the line below to mail-server@rtfm.mit.edu (in the BODY of the note)

**send usenet/news.answers/finding-addresses**

#### \*SENDING MAIL TO VARIOUS NETWORKS

For a guide to communicating with people on the various networks that make up the Internet, send the line below to mail-server@rtfm.mit.edu (in the BODY of the note)

**send usenet/news.answers/mail/inter-network-guide**

#### \*SENDING MAIL TO FAMILY MEMBERS

Family Internet MailCall is a fee-based service that helps you keep in touch via a private mailing list. Details: family-info@mailcall.com

#### \* USENET SEARCHES

A new service at Stanford University makes it possible to search USENET newsgroups for postings that contain keywords of interest to you. You can even "subscribe" and receive a daily list of newsgroup postings that match your search criteria. Send mail to netnews@db.stanford.edu with HELP in the body of note for full details.

#### \* MOVIE INFO

To learn how to get tons of info on movies, actors, & directors, send mail to movie@ibmpcug.co.uk with HELP in the body of note for details.

#### \* STOCK MARKET REPORT

Send e-mail with subject STOCK MARKET QUOTES to martin.wong@eng.sun.com and you'll receive a rather lengthy stock market report (every day until you ask Martin to stop sending them)! Please note that this is not an automated server, so be sure to include a word of appreciation for this useful service.

#### \* STOCK MARKET QUOTES

If you want to get a current quote for just 1 or 2 stocks, you can use the QuoteCom service. They offer this free service along with other fee based services. For details, send e-mail to "services@quote.com" with a subject of HELP.

**\* THE CONTRARIAN ADVISOR**

A stock newsletter focusing on out-of-favor stocks. To subscribe, send e-mail to choyt@Interactive.net with Subject: Subscribe Contrarian

**\* ANONYMOUS E-MAIL**

The "anon server" provides a front for sending mail messages and posting to Usenet newsgroups anonymously, should the need ever arise. To get complete instructions, send e-mail to help@anon.penet.fi

**\* NET JOURNALS LISTING**

I highly recommend "The Internet Press - A guide to electronic journals about the Internet". To get it, send e-mail with Subject: subscribe to ipress-request@northcoast.com

**\* MUSI-CAL**

Send e-mail to concerts@calendar.com to retrieve a help message that tells how to use the Musi-Cal online concert calendar service.

**\* ASK DR. MATH**

Have a math question? No problem's too big or too small for The Swat Team. Write to dr.math@forum.swarthmore.edu

**\* SCOUT REPORT**

Scout Report is a weekly featuring announcements of new and interesting resources on the Internet. To subscribe, send e-mail to majordomo@is.internic.net with "Subscribe scout-report" in the body.

**SUGGESTED READING**

There are lots of good books and guides to help you get started on the Internet, and here are some that I recommend. The first few are free (FTPmail commands listed below), and the others can be found in most bookstores that carry computer-related books.



"Zen and the Art of the Internet", by Brendan Kehoe

```
open ftp.std.com
chdir obi/Internet/zen-1.0
get zen10.txt
```

"There's Gold in them thar Networks", by Jerry Martin

```
open nic.ddn.mil
chdir rfc
get rfc1402.txt
```

"Unofficial Internet Book List", by Kevin Savetz

```
open rtfm.mit.edu
chdir pub/usenet/news.answers/internet-services
get book-list
```

"The Whole Internet User's Guide and Catalog", by Ed Krol

Publisher: O'Reilly and Associates

ISBN: 1-56592-063-5

Price: \$24.95

"The Big Dummy's Guide to the Internet", by Adam Gaffin

Publisher: MIT Press

ISBN: 0-262-57105-6

Price: \$14.95

"The Internet Guide For New Users", by Daniel P. Dern

Publisher: McGraw-Hill

ISBN: 0-07-016511-4

Price: \$27.95

## **CONTACTING THE AUTHOR**

"Doctor Bob", also known as Bob Rankin, welcomes your feedback on this guide and can be reached at the following addresses. Send corrections, ideas, suggestions and comments by e-mail. I'll try to include any new e-mail services in future editions of this guide.

Internet: BobRankin@Delphi.com

US Mail : Doctor Bob / P.O. Box 39 / Tillson, NY / 12486

## MORE PUBLICATIONS FROM DOCTOR BOB!

Announcing ...

```
+-----+
| "100 COOL THINGS TO DO ON THE INTERNET!" |
| Doctor Bob's Internet Tour Guide |
| Over 100 places you *must* visit in cyberspace |
+-----+
```

This is the guide I wanted when the Internet was new to me. Just a quick overview of the "tools of the trade" and a list of "cool things to do". Not 300 pages... And not \$39! This information could save you money, hours of valuable time, or lead you to a new career.

There's a goldmine of information, software and services out there just waiting to be discovered! It can be yours, but it's not easy... That's why you must have this informative report which gives you the lowdown on:

- |                           |                               |
|---------------------------|-------------------------------|
| * Online databases        | * Electronic Library Catalogs |
| * Shopping in Cyberspace  | * Job Postings Online         |
| * Vast software libraries | * ALL FREE!                   |

You'll learn the basics of TELNETing, FTPing and GOPHERing to the information you want, with specific instructions and the "secret keys" you need to unlock all the doors on the way!

```
+-----+
| Doctor Bob's Internet Business Guide |
| An Introduction to Good |
| Old-Fashioned Capitalism In Cyberspace |
+-----+
```

There are those who say that the Internet should be free of capitalism, commerce, advertising and anything that smells like "business".

But there ARE ways to conduct business on the 'Net without raising the ire of the inhabitants of the electronic domain. You can lower costs, make money and even get thanked for providing your service if you know how to do it right!

I can't promise that you'll make lots of money selling your product or service, but I'm certain that after you've read this guide, you will have a better understanding of:

- |                                |                                   |
|--------------------------------|-----------------------------------|
| * Internet Tools & Techniques  | * Business Resources on the Net   |
| * Setting Up Shop on the Net   | * Avoiding Net Marketing Pitfalls |
| * What business are on the Net | * Getting paid for your product   |

To get your copy of:

**"100 COOL THINGS TO DO ON THE INTERNET!"**

- or -

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Send just \$5 each (cash, check or money order) plus a self-addressed, stamped envelope to:

--> DOCTOR BOB  
--> PO BOX 39, DEPT U4  
--> TILLSON, NY 12486 USA

Note: For e-mail delivery (preferred) you can skip the envelope but make sure to send your e-mail address along with your order.

Outside the USA: Skip the stamp, but please add \$1 for postage. If it's too difficult to get US funds, send 12 International Postal Coupons in lieu of cash. And if all else fails, send your own (paper) currency, estimating the conversion factor. I cannot accept checks or money orders drawn on non-US institutions.

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**Persons wishing to summarize this document in other publications may do so, but please include the instructions herein for obtaining the full document. I also request that you kindly supply me with a copy of the article when published.**

**###**

*By Dave Ottalini*

As you saw in the last WAP Journal, our SARA can do the Internet if you give her just half a chance. Actually - with our new series of PD disks now available from the PI Office, we're going to give you a FULL chance to try it out for yourself.

Unfortunately, you CAN'T do it - yet - as a TCS Explorer (but we're working on that). There are some local alternatives, tho (free or cheap) that can get you started. It's all explained in the first three disks of our new Internet category for the Apple /// Public Domain Library. We even include the communications program to get you going quickly and easily.

The rest of the disks are chock full of information about the Internet and how to use it. There are a total of 15 disks for you to take a look at. All together, we call them the Apple II Family Internet Starter's Kit:

#### **DISK 3INET.01**

This disk contains the software you'll need to surf the Internet. It also includes some basic information about telecomputing on your /// and the world-famous Apple /// Internet FAQ ("Frequently Asked Questions") file.

#### **DISK 3INET.02**

##### **SIDE ONE**

GETTING.STARTED                      (Directory)

A number of files that are aimed at Apple II and /// users who want to use their machine to surf the Internet.

SURFING.INET                      (Directory)

A wonderful 2-part guide to the Internet by Jean Armour Polly. We provide a number of guides in these series of disks - but this one is well written and easy to understand.

##### **SIDE TWO**

INET.STARTUP

Another tutorial on getting started on the Internet

BEST.A2.SITES

Some of the best Apple II Internet sites

**DISK 3INET.03**

**SIDE ONE**

Public.Dialups (Directory)

From CAPACCESS to SAILOR - where you can find the cheapest ways to get your /// on the Internet.

**SIDE TWO**

FAQS.1 (Directory)

A series of "FAQs" - Frequently Asked Questions files – about the World Wide Web, the Apple II and ///, Getting Information by Using Email Only, and much more.

**DISK 3INET.04**

**SIDE ONE/TWO**

FAQS.2

FAQS.3

More "FAQs" - Frequently Asked Questions files – about the World Wide Web, the Apple II and ///, Getting Information by Using Email Only, and much more.

**DISK 3INET.05**

**SIDE ONE**

ZEN.1 (Directory)

"Zen and the Art of the Internet" - Another great tutorial about the Internet.

KIDS.INET

A little info about the wealth of information on the Internet for Kids.

**SIDE TWO**

ZEN.2 (Directory)

## MODEM.TERMS

All the terms you wished you knew about dealing with your modem and its use.

HTML (Directory)

Some basic information about Hypertext Markup Language - the page language of the World Wide Web.

### DISK 3INET.06

#### **SIDE ONE/TWO**

BIGSURF.1 (Directory)  
BIGSURF.2 (Directory)

A tremendous resource of World Wide Web sites you can surf for all kinds of great information. Note that addresses change – sometimes often - so while this is a pretty good compilation as of October, 1995 - some listings have likely gone away or already changed.

### DISK 3INET.07

#### **SIDE ONE/TWO**

BIGSURF.3 (Directory)  
BIGSURF.4 (Directory)

We continue our surfing guide to the WWW!

### DISK 3INET.08

#### **SIDE ONE/TWO**

BIGSURF.5 (Directory)  
BIGSURF.6 (Directory)

We continue our surfing guide to the WWW!

### DISK 3INET.09

#### **SIDE ONE**

BIGSURF.7 (Directory)

We finish our surfing guide to the WWW!

URLS.1 (Directory)

## **SIDE TWO**

URLS.2 (Directory)

"URLS" are the "pathnames" the Internet needs in order to send you to the location you want to go. They actually stand for "Universal Resource Locators." This directory (Folder in GS parlance) lists tons of great URLs - a compliment to the BIGSURF Guide listings.

## **DISK 3INET.10**

### **SIDE ONE**

ROADMAP INTERNET TUTORIAL BY DON CRISPIN

From WWW to Spamming, Don Crispin's wonderful Roadmap series is one of the best ways to learn about the Internet in easy-to-learn lessons. But watch out for the Pop Quizzes.

ROADMAP.1 (Directory)

### **SIDE TWO**

ROADMAP.2 (Directory)  
POPQUIZES (Directory)

## **DISK 3INET.11**

We continue with our Roadmap Tutorials.

### **SIDE ONE**

ROADMAP.3 (Directory)

### **SIDE TWO**

ROADMAP.4 (Directory)  
POPQUIZES (Directory)

## **DISK 3INET.12**

### **SIDE ONE**

USENET.GROUPS.1                      (Directory)

A compilation of Usenet Groups you'll find on the Net (Part 1)

USENET.PRIMER

This document is not intended to teach you how to use USENET. Instead, it is a guide to using it politely, effectively and efficiently.

### **SIDE TWO**

USENET.GROUPS.2                      (Directory)

A compilation of Usenet Groups you'll find on the Net (Part 2)

## **DISK 3INET.13**

### **SIDE ONE**

USENET.GROUPS.3                      (Directory)

A compilation of Usenet Groups you'll find on the Net (Part 3)

USENET.OVERVIEW

In order to enjoy the full benefits of Internet, uninitiated TCS Explorers will find it ESSENTIAL to understand as much as possible what is available among the approximately 15,000 news groups that exist on Internet. The following compilation tries to provide a summary on this subject.

### **SIDE TWO**

USENET.GROUPS.4                      (Directory)

MOD.NEWSGROUPS

This article contains the location of archives for moderated Usenet newsgroups.

BOOKLIST.1

First of two files containing a more comprehensive listing of books about the Internet.



## **DISK 3INET.14**

### **SIDE ONE**

#### **BOOKLIST.2**

Second of two files containing a more comprehensive listing of books about the Internet.

#### **INET.BBS.LIST**

Zamfield's Wonderfully Incomplete, Complete Internet BBS List

#### **INET.FUN.LIST**

These are ftp, telnet and email sites all over the world having all kinds of neat resources available, and can mostly be accessed from any internet node.

#### **LIBRARIES.INET**

This is a collection of internet electronic libraries where some of them may require authorizations for use.

### **SIDE TWO**

#### **LYNX.GUIDE**

A users guide to Lynx - a program that allows Apple II and /// users to access the Internet.

#### **LYNX.FAQ**

A short info sheet about Lynx and its latest version.

#### **SMITH.INET (Directory)**

A series of selected tutorials by Prof. Richard Smith called "Navigating The Internet - an Interactive Workshop."

## **DISK 3INET.15**

### **SIDE ONE**

#### **INET.PRIVACY1 (Directory)**

Information on email and account privacy, anonymous mailing and posting, encryption, and other privacy and rights issues associated with use of the Internet and global networks in general.

## **SIDE TWO**

INET.PRIVACY2 (Directory)

PART.6

Resources; Miscellaneous

HHIKERS.GUIDE

Yet another Internet Guide for your consideration.

## *Getting the Most Out of the Internet: Filtering Usenet Messages*

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*(By WCO Staff) Copyright (c)1995 by WCO*

*From: Charles T. (Dr. Tom) Turley, Ph.D.  
Executive Coordinator - 1WSW  
email:xxx@wco.com*

The following is an exact word-for-word extract content and review of a service, I was turned onto by Mark Shapiro, Editor of West Coast Online, my Internet server.

He gave me permission to post it for everybody to review and use, if they wished. So, I promised Mark I'd give them a good PLUG, so here goes: If you want an easy access, reasonably priced Internet server, then consider WCO (West Coast Online). Give 'em a call at 1-800-926-4683. Their service, support and expert T1 line connectivity is the best I've ever had.

This article, which I took advantage of and subscribed to from Stanford University's Electronic Library project, is FREE, and will save you many hours of needless wading and reading with your Usenet groups, you may subscribe to.

For posting and/or FREeware distribution with authors permission.

---

Stanford University's Electronic Library project provides free filtering of Usenet news for individuals. By sending a simple profile to the service, you receive only the news articles that match your interests. The service filters out the rest. The news is delivered by Internet email at no cost.

### **How it works**

Stanford University builds and maintains a database of recent messages in Usenet groups. Stanford's database engine compares each message against its collection of user search profiles. Matching messages are forwarded to the user.

Subscribers use the filtering system through Internet email. Anyone can subscribe by sending a structured message to [netnews@db.stanford.edu](mailto:netnews@db.stanford.edu), or using the form on the web at <http://sift.stanford.edu>. Your message is a series of commands to the automated service. For instance, by sending the following message you would receive every 5 days excerpts of all Usenet news messages about online information services.

**To: netnews@db.stanford.edu  
subscribe online information services  
period 5**

The body of each message must include a command to the service. You can put more than one command in a message, but each must start on a new line with no leading spaces. If a command is too long for one line, continue on the next line, starting with a space or a tab. The system ignores the subject field and the case (upper and lower) of the letters in the message body.

The service addresses mail to the return address on your request message, which your email system attaches automatically. Be sure to send requests from your own account. You can refine your search profile using the commands TYPE, LINES, PERIOD, EXPIRE, and THRESHOLD. Table 1 lists their acceptable values. Suppose you request, for the next 200 days, the first 10 lines of articles related to "food recipe" but not "fish" (using a boolean search). Send this message:

```
To: netnews@db.stanford.edu  
subscribe food recipe not fish  
lines 10  
expire 200  
end
```

For the next 200 days you will find recipes in your email. The articles will be limited to 10 lines, which is enough to give you a flavor. When you want an entire article, use the GET command.

## **BIG RESPONSES**

It saves time to view excerpts of articles. You can tell in a few lines if an article interests you. This is particularly important when you have to handle 50 or more messages a day. You can request an entire article through email using GET, followed by one or more article numbers in the message body. For example, you want the full text of article 3670 from the news.announce. conferences Usenet group. Send this message:

```
To: netnews@db.stanford.edu  
get news.announce.conferences.3670  
You can retrieve several articles in one message. For example:  
To: netnews@db.stanford.edu  
get misc.activism.progressive.11965  
ca.politics.38420
```

Best results occur when you learn to tune the search profile to separate the wheat from the chaff. Stanford's filter engine can help you refine your profile using message templates.

When you like an article you read, notify the filter service with the commands FEEDBACK and LIKE. The service will use that article as a template for refining your profile. FEEDBACK identifies the subscription profile and LIKE identifies the template article. For example, this message says that article news.announce. conferences.3670 should be a template for subscription 1: To: netnews@db.stanford.edu feedback 1 like news.announce.conferences.3670

The service conducts two types of search: Boolean keyword and weighted text. You can manually tune your profile with the commands TYPE and THRESHOLD. Experiment -- If you don't like the results, you

can change settings easily with the UPDATE command.

A boolean search compares the list of keywords in your profile to the content of articles. Those matching are forwarded to you. For example, the profile "travel hawaii" in the boolean mode matches articles that contain both words "travel" and "hawaii." Both words must be present in each forwarded article but the proximity or frequency of these words is not considered. You can also use the boolean "not" operator to exclude keywords.

For example, if you want to read about underwater fishing from any sources except the newsgroups named alt, use the profile "underwater fishing not alt."

The weighted text search is more refined. Your profile lists a number of words and a threshold number. The search engine calculates a score based on the frequency of these words in the article. If that score is higher than the threshold number in your profile, you receive that article.

You control the amount of chaff you receive by setting the threshold. Be careful! Set it too high, and you'll eliminate much of the wheat, too. Set it too low and your in-tray could be inundated with garbage. Rather than wait a day, you can test your threshold setting immediately by using the SEARCH command.

### **SEARCHING YESTERDAY'S NEWS**

You can search for recent articles already in the Stanford database. The SEARCH command looks at the database once with the given query. Structure your profile as you would in a SUBSCRIBE command. For example, to search for articles related to "information filtering," send:

```
To: netnews@db.stanford.edu
search information filtering threshold 54 end
```

### **MAKING CHANGES**

You can modify your filter profiles with the UPDATE and PROFILE commands. UPDATE requires the subscription id (SID), assigned to each of your filter profiles by the service. UPDATE must be followed by one or more of the commands PERIOD, EXPIRE, THRESHOLD, LINES, TYPE or PROFILE. PROFILE specifies a new list of keywords. For example, to update the period and the threshold of your third profile:

```
To: netnews@db.stanford.edu
update 3 period 1 threshold 45
end
```

### **ADDITIONAL OPTIONS**

If your email system automatically tags your email signature to the end of outgoing messages, use the END command to have the news filter ignore any text that follows. The HELP command returns information on using the server. CANCEL ends a subscription. LIST shows you all of your subscriptions.

The Stanford Newsfilter service is on the worldwide web. You can find it at: <http://sift.stanford.edu>. There you can fill out filter requests using a form on the Web page. Some related papers on information

filtering technique are available by anonymous ftp at [db.stanford.edu/pub/yan](http://db.stanford.edu/pub/yan).

The Stanford library offers a companion filter for computer science technical reports ([elib@cs.stanford.edu](mailto:elib@cs.stanford.edu)), and a search server at <http://elib.stanford.edu>.

(Please put this into a separate table)

Table 1: STANFORD NEWSFILTER COMMANDS

Option Value	Function
<b>CANCEL SID</b>	End a subscription
<b>END</b>	Marks end of the command, negates your signature
<b>EXPIRE</b>	in days Subscription duration (default 9999)
<b>FEEDBACK SID</b>	Refine search profile, use with LIKE
<b>GET article ID</b>	Retrieve entire article
<b>HELP</b>	Call the fire brigade
<b>LIKE</b>	article ID Identify template article for search
<b>LINES</b>	1 to 60 Excerpt length (default 20)
<b>LIST</b>	Lists all subscriptions
<b>PERIOD</b>	in days Search frequency (default 1)
<b>PROFILE</b>	keywords Modifies profile keywords, follows profile
<b>UPDATE SEARCH</b>	Do one search of recent news profile
<b>SUBSCRIBE</b>	Create a filter request, (use options).
<b>THRESHOLD</b>	1-100 Minimum relevancy score (default 60)
<b>TYPE</b>	weighted boolean Search technique (default Boolean "and")
<b>UNSUBSCRIBE</b>	Delete all profiles
<b>UPDATE SID</b>	Modify profile

*Note:* The SID (Subscription ID) identifies a particular search profile. You have one SID for each search profile you create with the SUBSCRIBE command.

*Note 2:* Apple // and /// users: with the WAP TCS's Premium Service - that includes e-mail, you can take advantage of this Stanford University service without any additional requirements. Give it a try!

*By Dave Ottalini, WAP /// SIG*

Yes it IS possible to be a SARAsaur and part of the Internet. All you have to do is pay for the WAP TCS option that allows you to send E-Mail on the Internet, or join any other on-line service with Internet access. From there, you can join the Apple /// discussion group at West Virginia University. Send a message to APPLE3-L@WVNVM.WVNET.EDU and request that you be placed on the Apple /// mailing list. You'll get back a message that explains a little bit about the discussion group, and what is available to you.

Our Apple ///s do not have all the special software needed to take full advantage of the Internet - for example, accessing the "World Wide Web" that you've heard about. BUT we do have access to the Usenets (on the TCS, for example) and can communicate with other ///ers. It will take a Mac or PC to upload or download files, though - even from the Apple /// discussion group. The exception is straight ASCII files, which can be uploaded and downloaded from services like CompuServe.

Now, when you send your request to join the Apple /// Discussion Group, here's the message you'll get back:

**You have been added to the APPLE3-L mailing list (Apple III Discussion Group) by Jeffrey Fritz <xxxxx@WVNVM.BITNET>.**

Please save this message for future reference, especially if you are not familiar with LISTSERV. This might look like a waste of disk space now, but in 6 months you will be glad you saved this information when you realize that you cannot remember what are the lists you are subscribed to, or what is the command to leave the list to avoid filling up your mailbox while you are on vacations. In fact, you should create a new mail folder for subscription confirmation messages like this one, and for the "welcome messages" from the list owners that you are will occasionally receive after subscribing to a new list.

To send a message to all the people currently subscribed to the list, just send mail to APPLE3L@WVNVM.WVNET.EDU. This is called "sending mail to the list", because you send mail to a single address and LISTSERV makes copies for all the people who have subscribed. This address (APPLE3-L@WVNVM.WVNET.EDU) is also called the "list address". You must never try to send any command to that address, as it would be distributed to all the people who have subscribed. All commands must be sent to the "LISTSERV address", LISTSERV@WVNVM.BITNET (or LISTSERV@WVNVM.WVNET.EDU).

It is very important to understand the difference between the two, but fortunately it is not complicated. The LISTSERV address is like a FAX number, and the list address is like a normal phone line. If you make your FAX call someone's regular phone number by mistake, it will be an unpleasant experience for him but you will probably be excused the first time.

If you do it regularly, however, he will probably get upset and send you a nasty complaint. It is the same with mailing lists, with the difference that you are calling hundreds or thousands of people at the same

time, so a lot more people get annoyed if you use the wrong number.

You may leave the list at any time by sending a "**SIGNOFF APPLE3-L**" command to `LISTSERV@WVNVM.BITNET` (or `LISTSERV@WVNVM.WVNET.EDU`). You can also tell LISTSERV how you want it to confirm the receipt of messages you send to the list. If you do not trust the system, send a "**SET APPLE3-L REPRO**" command and LISTSERV will send you a copy of your own messages, so that you can see that the message was distributed and did not get damaged on the way. After a while you may find that this is getting annoying, especially if your mail program does not tell you that the message is from you when it informs you that new mail has arrived from APPLE3-L.

If you send a "**SET APPLE3-L ACK NOREPRO**" command, LISTSERV will mail you a short acknowledgement instead, which will look different in your mailbox directory. With most mail programs you will know immediately that this is an acknowledgement you can read later. Finally, you can turn off acknowledgements completely with "**SET APPLE3-L NOACK NOREPRO**".

Please note that it is presently possible for anybody to determine that you are signed up to the list through the use of the "**REVIEW**" command, which returns the e-mail address and name of all the subscribers. If you do not want your name to be visible, just issue a "**SET APPLE3-L CONCEAL**" command.

More information on LISTSERV commands can be found in the LISTSERV reference card, which you can retrieve by sending an "**INFO REFCARD**" command to `LISTSERV@WVNVM.BITNET` (or `LISTSERV@WVNVM.WVNET.EDU`).

Finally, congratulations to Seth Mize, who has become the latest /// SIG member to join the Listserv!



*by Jeff Marraccini, System Administrator, the OAK Repository  
(oak.oakland.edu)*

The Internet. It originally meant network of networks, but these days The Internet seems to be associated more with "make a quick buck in the World Wide Web", the chaos of 15,000+ Usenet news groups, and the ever-diminishing value of the Family Vacation (after all, The Internet is supposed to keep one in touch with The Company wherever one travels, so there's no longer any excuse to being out of touch with the office...)

With the huge amount of media attention given to the Internet, it's sometimes difficult to sort through the endless articles about the latest new nifty Web page, X Corporation's latest electronic mail/groupware package for that three-letter computer, etc. to find the gem that will help us really improve our lives. Yet, as one of the people involved in bringing the Internet to thousands of users, I can safely say that there ARE gems out there, and your Apple /// (with a bit of help from a host system) can find them for you.

#### **But what about PPP? What about Mosaic?**

It's doubtful that PPP (Point to Point Protocol, a popular method used to connect personal computers and small computer networks to the Internet over a modem, ISDN, or leased-line connection) or popular Internet navigation software such as Mosaic will ever run on the Apple ///. For one, most of these tools have been written, for good or ill, for computers with large memory address spaces. While the Apple /// can take us to 512 kilobytes of memory, today's graphics-rich World Wide Web pages need a browser program (and computer system) with address space in the megabytes.

Yet, if you poll users that have Internet access in their homes (using modems) you'll find that most users end up getting frustrated by the long delays endemic in bringing down these graphics-rich pages, even if they have the latest three-letter computer. Most users I've worked with quickly end up disabling graphics most of the time to keep performance up as they access the World Wide Web.

Other than the Web, most other Internet services are text based, and as mentioned above, even the Web seems to be most useful with graphics turned off, at least when using slower modem connections! So, what's all the hoopla? Apple ///'s do a terrific job with text-based applications. Who needs Mosaic?!

#### **A Friendly Helping Hand: The Host**

Even though we've dismissed Mosaic and graphics, the Apple /// still is missing a few pieces of critical software. The most important is the lack of a TCP/IP (Transmission Control Protocol/Internet Protocol) suite for SOS. TCP/IP is the underlying set of protocols that Internet services, including electronic mail, the World Wide Web, and other services are based on. Internet hosts (and alas, those three-letter computers) speak TCP/IP to each other.

Yet, if you use the Apple /// as an intelligent terminal and dial up an Internet host, the lack of TCP/IP no

longer is a problem. The /// has full access to the Internet using the host as an intermediary.

The world's most popular Internet hosts are still Unix computer systems. Unix systems have traditionally integrated well into the Internet, and plenty of text-based Internet software is available on these hosts to enable your Apple /// to become a powerful Internet surfer. Other types of hosts running other operating systems may have similar capabilities, if you use a non-Unix system to gain access to the Internet it's best to check with the system management staff to find out which text-based Internet applications are supported.

On a typical Unix Internet host, you'll find the following tools:

- 1) **Electronic mail.** The elm and pine programs are very popular. They are text-based programs and work well with Apple Access /// in ANSI emulation (see below.)
- 2) **File transfer.** For transferring files from other Internet hosts (including the popular names.wvu.edu Apple /// site) the ftp program is a staple. It has a cousin that is a bit more friendly to use, ncftp. Both are text-based and work under any Apple /// communications program.
- 3) **World Wide Web.** Sorry, you cannot run Mosaic through the Apple ///. However, the lynx program can handle any World Wide Web page, is text-based, and is very fast. Suggest using lynx under Access /// in ANSI emulation mode. Sometimes lynx will display a garbled screen: press Control-L to ask lynx to erase and re-display it.
- 4) **The Usenet.** Several text-based Usenet readers are available. The author's favorite is nn, short for "No News is good news." Other alternatives include tin, rn, and trn. Each has a slightly different user interface. nn is Apple /// friendly and works well under Access ///.

In most areas of the United States Internet host access is available for under \$20.00 a month. Similar service for similar prices can be found in most places in the world. Normally called "shell" access, an Internet provider generates an account for you on their host(s). Then, using the Apple ///, a modem, and a communications program such as Access /// or The Communications Manager, you call into their host and begin using the programs above in any combination to explore the Internet. In some areas popular systems known as FreeNets are available. These offer free, text-based access to the Internet and generally have the same capabilities as any other Internet host.

While you are connected to the host, the normal Apple /// abilities of capturing or printing information, switching programs, and the extraordinarily comfortable keyboard of the /// are available to you. However, most of the actual work of bringing Internet information to you is being off-loaded to the host system.

### **How do I transfer information from the Internet to my ///?**

The Internet host system acts as an intermediary. When you access files from other Internet systems, you will still need to download the files to your Apple ///'s diskette drives, ProFile, or hard disk. Unfortunately, one of the best communications programs for the Apple /// (Access ///) lacks the ability to download anything except simple text files. It may be necessary to switch to another

communications program such as Xmodem /// when file downloads are necessary.

The author prefers to use Access /// most of the time. After gathering a number of files that need to be downloaded, the author will disconnect from his Internet host, switch to Xmodem /// using BOS, and begin a downloading frenzy after re-connecting to his Internet host. When the files are all safely on the ProFile, it's time to return to Access ///.

Most hosts support Xmodem downloading and uploading capability. Often the **sx** and **rx** commands handle sending and receiving files via Xmodem, respectively. If not, check with the system managers for the correct command.

### **Access /// and Host terminal settings**

The author uses the following Access ///, modem, and host terminal settings when surfing the Internet:

#### **Access ///**

Set ANSI mode, Do NOT send LF after CR, 8 bits per character, Enable XON/XOFF, Normal Video, Full Duplex, Normal Keypad, Normal Cursor Keys, No wraparound, Standard character set, Speed 9600, Parity None

**Modem** (I use a USR Sportster V.32 14.4Kbps modem)

```
AT &H2 &I2
```

The above command string should not be used with Xmodem ///. It is only useful with Access /// to ensure that the modem does not get too far ahead of the Apple ///. It prevents garbled screens and dropped characters.

#### **Internet host**

Terminal type is set to vt100. On hosts that don't prompt for a terminal type, vt100 is usually the default.

### **So, why use the /// for Internet access?**

The /// makes an excellent smart terminal for Internet host access and maintenance. The author uses his /// to help maintain the oak.oakland.edu archive site. Since an extensive amount of information needs to be typed in to maintain a large Internet system such as oak.oakland.edu, the ///'s excellent keyboard is a perfect match for massive typing sessions. In addition, the ///'s terminal emulation is adequate to the task of handling electronic mail and other text-based Internet applications.

### **Surfin' with the ///**

Using the tools mentioned above, Internet access via the /// is both viable and enjoyable. The lack of graphics seldom is a barrier. The /// and its communications software is definitely equal to the task of accessing an Internet host to "surf the Internet", so if you haven't tried it yet, give it a go!

*Jeff Marraccini*  
*Network Projects Manager*  
*Oakland University*  
*<xxxxxx@oak.oakland.edu>*  
*<http://www.acs.oakland.edu/~jeff/>*

*Edited by Dave Ottalini*

Where are the best places on the Internet (they're called FTP - File Transfer Protocol - sites) to find Apple // family software? That was the question recently on Comp.Sys.Apple2 - the Usenet board where all sorts of questions about the Apple // family get asked – and answered (its available on the WAP TCS - System 6).

Hallvard Tanger (xxxxxx@oslonett.no) found his answer by way of INETer Neil Parker's list of FTP sites (xxxxxx@cie-2.uoregon.edu)

### **The Big Seven**

apple2.archive.umich.edu	/archive/apple2
brownvm.brown.edu *	LISTSERV.193
f.ms.uky.edu	/pub/appleII
ftp.cco.caltech.edu	/pub/apple2 (mostly GS, some non-GS)
grind.isca.uiowa.edu	/apple2
plains.nodak.edu	/pub/apple2
wuarchive.wustl.edu	/systems/apple2, /usenet/comp.binaries.apple2

\* Files on brownvm.brown.edu are stored by serial number.

For a human-readable directory, send e-mail with the text "**INDEX APPLE2-L**" to [listserv@brownvm.brown.edu](mailto:listserv@brownvm.brown.edu).

Note that there are many, many more sites for Apple // software - these are just considered to be the "best" sites (at the moment!).

## **NEW VIDEO CARD FOR THE //e AND //gs ANNOUNCED**

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*From an announcement on the Comp.Sys.Apple2 Usegroup*

*Edited a tad by Dave Ottalini*

Sequential Systems is pleased to announce that the Second Sight SVGA card for Apple II computers is now shipping. It will take some time for us to clear our backlog, so please be patient. However, rest assured that cards are shipping.

Below is an updated feature list for Second Sight.

SecondSight\* SVGA Board  
Specifications & Features

### **SECOND SIGHT**

#### **A 24-bit video card for Apple II computers**

##### **Monitors**

Works either with standard VGA/SVGA monitors, or with the standard IIGS RGB ("AppleColor RGB") monitor & compatibles.

##### **Modes**

The following existing Apple II and IIGS video modes are emulated for display on an SVGA monitor.

- 40 & 80 column text
- Lores / double lores
- Hires / double hires
- 320x200x16
- 640x200x4/16

The card is capable of the following SVGA video modes:

- Graphics
  - 320x200
  - 640x200
  - 640x400
  - 640x480\*
  - 800x600\*
  - 1024x768\*

## Text

40x25  
80x25  
80x43\*  
80x50\*  
80x60\*  
132x25  
132x60\*

There are three basic graphics modes: Indexed (palette), Hi-Color, and True-Color.

In Indexed mode, each pixel can be one of 256 colors that are specified in a palette. Each of these 256 palette entries can be one of 16.7M colors. (All modes)

In Hi-color mode, each pixel can be any of 32768 direct colors (no index or palette lookup). (Resolutions up to 800x600)

True-color mode is similar, but each pixel can be any of 16.7M (million) colors. (Resolutions up to 640x480)

*(Note: existing software titles will not automatically use the high-resolution modes).*

*(\* indicates that the mode is not available when used with an AppleColor RGB monitor.)*

*(Since the VGA chip is completely programmable, there are actually a potential of millions of different text and graphics video modes – the above list is just the most commonly used ones).*

## Software Support

SecondSight comes with an image viewer program that supports GIF and 8-bit TIFF images. A Photo-CD viewer will be forthcoming soon.

A programmer's library with on-disk documentation is also available, to facilitate the development of third-party software for the card.

At the current time no QuickDraw II support is provided.

## Cost

Pricing will be detailed in a future post; or feel free to call Sequential \*toll-free\* at 800-759-4549 for prices.

Also available from Quality Computers.

## Expected Third Party Software Support

Sequential Systems

discQuest(tm) and discQuest Encyclopedia(tm)

Procyon

GNO/ME (high resolution text drivers)

Todd Whitesel

Lord High Giffer (GIF image viewer)

Tim Meekins

imageQuant

Aurora Software

dungeonQuest

Digisoft Innovations

Twilight II

### **Common Questions and Answers**

#### **Q. How much video memory can the Second Sight support?**

A. 1MB (megabyte). The card comes standard with 512K (Ile) or 1MB (IIGS), enough to support up to 1024x768x256 resolution.

#### **Q. Does the Second Sight have a "blitter" chip on it?**

A. Yes and no. There is no dedicated hardware "blitter" chip, but the 20MHz Zilog Z180 processor, in conjunction with the Oak VGA controller, can quickly perform many blitter functions.

#### **Q. How fast is the Second Sight blitter?**

A. The Z180 can copy one byte of memory in 6 20MHz clock cycles. This works out to around 3.3 MB/s. Using the help of the VGA controller to do read/modify/write cycles, you can get about 5MB/s blitter action.

#### **Q. What types of operations can the Z180 do?**

A. The Z180 can scroll screen data, accept blocks of screen data from the IIGS, clear the screen, perform and/or/xor operations on screen data, etc.

#### **Q. What kind of developer information is available for Second Sight?**

A. A System Tool set is provided, along with documentation on using it. The tool set takes care of most common tasks programmers will do. Programmers can upload their own Z180 code to the Second Sight card to completely customize the card, or provide brand-new features (a sprite manager, for example).

#### **Q. How many colors can Second Sight display at one time?**



A. VGA mode:

256 at a time (256 colors per pixel, or 8-bit pixels) from a total of 16.7 million colors (up to 1024x768 resolution)

HighColor:

32768 direct colors (up to 800x600 resolution)

TrueColor:

16.7M direct colors (up to 640x480 resolution)

**Q. Do existing applications, like Finder or AppleWorks GS, take advantage of the higher resolutions, like 640x480 or 800x600?**

A. No. There is no support for patching the IIGS' QuickDraw tool, which is what would be required for current programs to automatically use the Second Sight board's special features. Such a patch isn't impossible, and we will work with programmers who would like to attempt it.

**Q. What kind of monitor do I need, if I want to buy a new one?**

A. Any "VGA" or "SVGA" monitor will work fine. Any monitor sold for use with an IBM PC clone (386/486) computer will work. You want a monitor with a small dot-pitch; .39 dot pitch is not very good; .28 dot pitch is better, and .23 dot pitch is best. Sequential Systems is selling a very high quality Samsung 14" Multi-Sync monitor; call for details.

**Q. Do I have to use two monitors with Second Sight, one for VGA graphics, and one for regular IIGS graphics?**

A. No. The Second Sight "shadows" existing IIGS video modes onto the card, and emulates them through the VGA monitor. If you want to, you can run two monitors off your GS, one from the built-in video, and one from the Second Sight. There might be some interesting applications possible with this setup. In short, all your existing IIGS applications and games will work with Second Sight, and on a VGA monitor.

**Q. How is existing software improved by the Second Sight?**

A. Existing software is not generally improved automatically, except for one thing: because the IIGS's super hires mode is simulated using a 640x400 mode in the VGA controller, there are no black lines running through graphics or text.. pictures and text are solid on a VGA monitor.

**Q. Can I use Second Sight on my Apple IIe?**

A. Yes. The IIe's video modes are emulated just as they are on a IIGS. Second Sight will allow IIe users to view quality pictures, such as GIF images, for the first time. Die-hard AppleWorks users on IIe's will now be able to use large paper-white monitors. This will also have applications in large monitors for people with handicaps.

**Q. I want better graphics, but I can't afford to buy the card and a new monitor. Can I use the Second Sight on my current Apple RGB monitor?**

A. Yes, although you are limited to 640x400x256 interlaced, in graphics mode, and 80x25 in text mode.

**Q. Does the Second Sight have a graphics "overlay" mode, like the Video Overlay Card?**

A. No.

**Q. How will existing programs that directly access the IIGS video hardware work with Second Sight?**

A. Second Sight watches the IIGS I/O bus for writes to the IIGS video memory, and when they occur, it copies the data onto the card. Software on the card then updates the VGA memory periodically to correspond to the IIGS screen information. This process is called "shadowing".

**Q. What happens if I run a program that needs a high-res video mode on an Apple RGB monitor?**

A. The program will most likely return an error. The Second Sight card will prevent any possibly damaging video modes from being sent to an Apple RGB monitor (as long as you use the card's firmware to set the video mode).

**Q. Does Second Sight have to go in a particular slot?**

A. Yes. On a ROM 01 IIGS, the card must go in slot 3. On a ROM 03 IIGS, the card may be in any of slots 1 through 6. In a IIe, the card can be in any slot.

**Q. Why is the //e card cheaper than the //gs version of Second Sight?**

A. Because we can offer a lower price on the 8-bit version. This will be especially good for IIe users, IIGS users on a tight budget, and schools.

**Q. Is there a performance difference between the two?**

A. Nope. Same card, different DACs, slower DRAMs. (In 640x480 TrueColor mode, the DAC is receiving data at 78MHz).

by Dave Ottalini

As I've written before, there are always questions about the Apple II family of computers that folks are asking on the Comp.Sys.Apple2 Usenet Discussion Group. Of course, that's one of the reasons it's there - for Apple II enthusiasts to ask questions - and get answers. There are so many experts that I've rarely seen any question go unanswered for very long.

The neat thing is, you have complete access to it by being on the TCS. Just go to System 6, Board 1 and you've got it all. There are a bunch of other great Apple II discussion groups on System 6 as well - including everything from Apple II emulations to Unix (GNO/ME) on the GS. Apple /// questions also get answered on Comp.Sys.Apple2 as well on occasion.

Here are some of the latest Qs - and their As - that you might find interesting:

#### **WOZ GS**

WAP has one - the first edition of the GS. It's even signed by WOZ (Steve Wozniak) himself. BUT folks have been asking lately about how many were actually produced and how would one even know if he/she HAD one.

David Empson answered it this way:

***I don't think (the total number) was ever officially announced. Estimates on this newsgroup have varied between 10,000 and 100,000. As for the original WOZ edition, he says there are quite a few in New Zealand, as we got a large batch when the IIgs first came out.***

\* Are they more valuable to folks now?

***Doubtful. I know of people who have deliberately swapped lids to keep the "Woz" signature when getting another IIgs (e.g. a ROM 3).***

***All it means in practice is that the machine is very old, more likely to need a battery replacement (if it hasn't already been replaced), and is more likely to have the original ROM (00) and/or VGC (with faulty monochrome double hi-res mode and sometimes 80-column text mode).***

\* For that matter, how can I upgrade the ROM 1 in it to something newer (what is the newest, and what are the advantages/disadvantages to the newer ROM's?)

*The only newer version (publically available) is the "ROM 3". You cannot "upgrade" a ROM 1 to a ROM 3, as the latter has twice as much ROM and a new motherboard. You can do a motherboard exchange, e.g. through Alltech Electronics.*

*Most of the new stuff provided by the ROM 3 is available by using the latest system software with a ROM 1. The only significant things that are missing are the extra RAM (1MB vs 128k of "fast" RAM) and ROM (QuickDraw runs noticeably faster in a ROM 3 than a ROM 1 with System 5.0 or later, because code is faster running from ROM than from RAM).*

## **APPLETALK ON A IIE**

Dave Empson also tackled a question from Neil Brown <xxxxxx@waikato.ac.nz> about whether there's a way to hook up a Iie to an Appletalk network. Dave says it is possible, as long as you have an enhanced Iie:

*You need an "Apple II Workstation Card". It provides the necessary hardware support. It has its own microprocessor, and implements the AppleTalk protocols in the firmware on the card.*

*You also need the software that goes with the card, which ties the card firmware into ProDOS, and provides utilities for logging on to file servers, choosing printers, and naming printers.*

*The card allows access to Mac file servers running AppleShare or System 7's File Sharing. You can boot over the network if the server is running AppleShare 2.x or 3.x.*

*You can access networked ImageWriter II printers, and probably also ImageWriter LQs. It is also possible to access a LaserWriter, either in its native Postscript mode (very little software supports this) or by downloading an "ImageWriter Emulator", which allows the LaserWriter to emulate an ImageWriter II.*

*Other printers, such as networked HP DeskWriters, will be next to impossible to use, unless special software is written to choose them (the Apple chooser only knows about the ImageWriter II, LQ and LaserWriter) and to send the appropriate command sets. An HP LaserWriter with PostScript might work, but I've had mixed results using one from a IIGs, and it didn't support the ImageWriter emulator.*

*Given the necessary technical documentation ("Inside AppleTalk", published by Addison-Wesley, and the "AppleShare Programmer's Guide for the Apple II Family", available from Byte Works), you can also write your own programs that make direct use of the AppleTalk protocols to communicate with other computers on the network.*

## IMAGEWRITER II MAGNETS

Tony Yung (xxxxxx@gpu1.srv.ualberta.ca) asked recently:

*Today I went to my Apple dealer, Westworld computers, up here in Edmonton, Canada. I was looking for a simple part, that tiny magnet that goes on the cover of the ImageWriter II (none of my fridge magnets were powerful enough), guess how much they wanted for that? Thinking they would give it to me for free, they wanted \$11 Cdn plus tax for a magnet that only costs 10 cents! I might as well go to McDonalds and ask for a free 'treat-of-the-week', hopefully this week they'll hand out those fridge magnet toys.*

Dave Althoff, Jr. (xxxxxx@freenet.columbus.oh.us) offered two suggestions:

- a. Radio Shack sells a tiny, powerful magnet that might be a suitable replacement. I don't know the cost, but it is certainly less than \$11.*
- b. How about a permanent solution...open the case up and short out the switch so that the IW][ thinks that the cover is always in place even when it isn't. Cost: \$0 if you have a 1/2" bit of wire laying around...*

## 3.5" DRIVES

**What's the best way get a 3.5 drive hooked up to an Apple IIe?** John L. Graham  
<xxxxxx@adbbs.antioch.edu> asked about that - because his local school wanted to connect one of the drives to their A2. Dave Empson's reply indicated that it isn't easy to do that anymore:

*There are three basic types of 3.5" drive which support 800K disks that are relatively easy to use on an Apple II:*

- *UniDisk 3.5*
- *Apple 3.5 Drive*
- *Apple SuperDrive*

*There are also third-party clones of the Apple 3.5 Drive and SuperDrive.*

*External and Internal Mac drives used with the Mac SE and Mac II are generally Apple 3.5 Drives, but might be SuperDrives. Later machines support both types, with the internal drives being SuperDrives. This applies to all models up to about 1993, when external drive support was dropped, and the internal drives started changing to a new cheaper mechanism. Current drives sold by Apple do not work on the Apple II at all.*

*There is a fourth type of drive which is less easy to use: the Macintosh Plus 800k Drive. The Mac Plus is able to use an Apple 3.5 Drive as well.*

*There are four types of 3.5" drive controller:*

- *Apple UniDisk 3.5 Controller (officially called the "Apple 3.5 Floppy Disk Drive Interface Card", also known as "Liron", which is written on the back of the card).*
- *Universal Disk Controller, originally sold by Central Point Software.*
- *Apple SuperDrive Controller (officially called the "Apple II 3.5 Disk Controller Card").*
- *The PC Transporter, from Applied Engineering.*

*The UniDisk 3.5 Controller only supports UniDisk 3.5 Drives. It works in a ILe, and probably also a II+. It doesn't work in a IIgs (but you don't need it).*

*The Universal Disk Controller supports the Apple 3.5 Drive, Macintosh 400K and 800K drives and 5.25" drives. If you use a SuperDrive, it is limited to supporting 400K and 800K disks. The card works in a ILe, probably a II+, and probably a IIgs.*

*The SuperDrive Controller supports the UniDisk 3.5, Apple 3.5 Drive and SuperDrive. It is the only way to connect a SuperDrive to an Apple II with the ability to access MFM disk formats (720K and 1.44 MB). The card works in an enhanced ILe or IIgs.*

*The PC Transporter supports the Apple 3.5 Drive when used as an Apple II disk controller (it is VERY slow, and I would recommend an alternative controller if possible). It also supports PC-compatible drives, and can use the Apple 3.5 Drive to access 720K PC-compatible disks when running as a PC. The PC Transporter works in a II+, ILe or IIgs.*

*None of these cards are made any more. The SuperDrive card was only sold for a couple of years, and is rather rare. The UniDisk 3.5 Controller is probably more common.*

*Note also that the IIc, IIc+ and IIgs have built-in support for some 3.5" drives.*

*The IIc requires any ROM version apart from the original ROM, and it will support a UniDisk 3.5.*

*The IIc+ has a built-in Apple 3.5 Drive and supports an external Apple 3.5 Drive or UniDisk 3.5.*

*The IIgs supports both of these types of drive through the built-in drive port (or you can use a SuperDrive card to fully support the SuperDrive).*

*All three computers also support external 5.25" drives on the built-in drive port.*

*In addition to the above drives, there are alternative drives and controllers that can be used, such as:*

- *the "BlueDisk" card in conjunction with a PC-compatible 3.5" drive.*
- *a SCSI card in conjunction with a Floptical drive.*

*Neither of these options will allow access to standard Apple II 3.5" disks, which use GCR formatting and hold 800K. They can only access MFM disks (720K for double density, 1.44 MB for high density). The Floptical can also use its own special 21MB magneto-optical disks, again in MFM format.*

## **IIc+ SPEED**

Just how fast is a IIc+? It has a 4 MHz 65C02 CPU, meaning it can run applications faster than an out-of-the-box //gs. But, Nathan Mates, <xxxxxx@cco.caltech.edu> (on the WWW: <http://www.ugcs.caltech.edu/~nathan/>) writing to Douglas Nonast <xxxxxx@netcom.com>, added:

*That's maximal performance, not valid if you hit the I/O space, i.e. do things like trigger the speaker, access the 5.25" disks, etc. Also, I think the motherboard may be at 1 MHz also (like the ZipChip for the //e and //c), and if so, you get 4Mhz only when running a program out of the (8K?) cache onchip.*

*Real performance may be roughly 2 MHz for games that hit the speaker every once in a while, closer to 3-3.5 for smaller loops like spreadsheet recalcs. Basically, since the underlying hardware is speed-locked to 1 MHz, only by getting away from it as much as possible could you get near 4 MHz.*

## **ONE MORE IIC QUESTION...**

J. L. Walters <xxxxxx@MCS.COM> had some questions about the IIc and its use of modems. He asked:

*Jumping in where I have little experience, I seem to remember that the original //c had a mother board problem with speeds greater than 1200 (2400??) and had to have a FREE mother board swap at their friendly Apple dealer. Is this offer still good? Is it needed in this case?*

Dave Empson replied:

*The upgrade was only free if you could demonstrate the problem with your hardware. I'd be surprised if it is still available, as it is ten years since the motherboard replacement was first*

*available.*

*It isn't anything to do with the specific speed. The problem is that the original IIC motherboard uses the wrong clock frequency for its serial chips, so it generates baud rates that are about 3% too slow.*

*For dumb 300 bps modems, this is no problem - the data is sent directly, and the computer at the other end will usually be able to cope with the speed difference (likewise for received data).*

*It is also not likely to be a problem with a serial printer, as they tend to be less fussy about exact bit timings.*

*The main problem is with some 1200 bps and faster modems (intelligent): they are fussier about the character timing, and may misinterpret characters if the bits are too far out of tolerance, especially with continuous data transmission. The result is that characters get corrupted and/or lost. The same can happen in the other direction: the characters sent by the modem to the computer are a little too short for the IIC's serial chip, and it may miscount the bits.*

*I have a IIC that has the original motherboard, and it works fine with a direct serial connection to my IIGs at 9600 bps. It also worked fine with my ZyXEL U-1496E, with a 19200 bps connection to the modem.*

*It really depends on the specific modem and IIC.*

*The gruesome details:*

*The original motherboard generates the serial clock by taking the system 14.31818 MHz clock and dividing it by eight, producing 1.7897725 MHz. The serial chips are supposed to be clocked at 1.8432 MHz.*

*In a PAL version of the IIC, the system clock is probably a slightly different frequency. The PAL IIC uses 14.25 MHz (this also affects the CPU speed - it is 1.01786 MHz instead of 1.02273 MHz). If used in a IIC, this would result in a serial clock frequency of 1.78125 MHz, an error of 3.4%.*

*In the revised IIC motherboard, the serial chips are clocked directly by a 1.8432 MHz crystal, eliminating the problem.*

## **FINALLY: APPLEWORKS IIGS UPGRADE**

Our last question this go around centered on attempts to upgrade Appleworks IIGS. Karl Horster <xxxxxx@attila.stevens-tech.edu> writing:



***Is there anyone work being done on a Appleworks GS update to kill some of the bugs, or any new versions coming out?***

Dave Empson one more time - to the rescue:

***No. Quality Computers made an effort to do a new version, with several teams of programmers having a go at it, but it was eventually put into the "too hard" basket.***

***From what I remember about the discussion at the time, the whole program was written in poorly commented assembly language without any associated maintenance documentation. Each module had been written by different people, and there wasn't much in common between them.***

***Even just to get the source code to a state where it would assemble and produce the existing AppleWorks GS 1.1 was a major effort. It still required some manual patching to get the whole thing to tie together.***

###

*Edited by Dave Ottalini*

Larry Powell <xxxxxx@cello.gina.calstate.edu> has a problem:

***I have been trying to use Applewriter 2.1 on a GS but have run into a problem. When printing a large document, data is lost. I presume some kind of handshaking related problem although I thought I had fixed it. Anyway, I vaguely recall something about some kind of patches for AW2.1.***

Dave Empson <xxxxxx@actrix.gen.nz> came to the rescue on the Comp.Sys.Apple2 Discussion Group:

***Yep. I got them (and AppleWriter 2.1) from Resource Central.***

***Here is the text file describing the patch. It was called AWPATCH.TXT.***

***I'll shrink and BinSCII all three files and post them to comp.binaries.apple2 shortly.***

IIGS APPLE WRITER PORT PRINTING PATCH

---

USE OF THESE PATCHES ARE \*\*\* NOT \*\*\* RECOMMENDED  
IF YOU HAVE ACCESS TO A POSTSCRIPT BASED LASER PRINTER.

By far the OVERWHELMINGLY best way to run Applewriter in a IIGS environment is with a Super Serial Card. This is especially important for the recording and viewing of returned PostScript messages and data.

Reprinted from ASK THE GURU I, available via [SYNERGETICS] email or (602) 428-4073 for \$24.50 VISA/MC, US only.

Original Postscript code Copyright c 1992 by Don Lancaster. All rights reserved.

This text file based written by Timothy Tobin (GENie: A2.TIM) and is based on Don Lancaster's code. Used with permission.

Free help line and additional info: (602) 428-4073.

---

Name of textfile: AWPATCH.TXT  
Source: SYNERGETICS  
Author: Don Lancaster, with modifications by Timothy Tobin  
Desc: Apple Writer patch for IIGS  
Date: August 8, 1992  
Release: 1.0  
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intact. PostScript Secrets Book + Disk costs \$29.50.  
VISA/MC.  
Keywords: AppleWriter, IIGS, patch, comm, PostScript, modem,  
Guru, word, processor

### Can I run Apple Writer On an Apple IIGS?

Except for one tiny and nit-picking detail, ProDOS Applewriter 2.1 runs reasonably in the fast mode on a IIGS. The only trivial hang-up is that Apple Writer blows up the IIGS when you try to print. I can't imagine any of you diehards fussing over such an insignificant bug, but for those of you purists and perfectionists out there that absolutely insist that a word processor should really be able to print as well as to process words, a few minimal printing patches are shown below for ProDOS Apple Writer version 2.1. These patches perform by defeating the testing made for the Super Serial Card. If this test fails, no 6551 serial port firmware will be assumed, and no damaging pokes will be made to exactly the wrong place in the IIGS. Thus, no blowups will occur. Be sure to use the control panel on the IIGS to set your printer values. Option [O]-J is no longer active. Use the Super Serial Card instead of these patches for any and ALL serious PostScript work!

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This patch is for ProDOS Apple Writer 2.1 version AWD.SYS only. AWD.SYS runs only on the 80 column IIC or the 128K IIE. The patch allows printing on a IIGS by defeating any attempts at setting serial data values to a non-existent 6551 port chip. It works by trashing the i.d. bytes for the super serial card and by aborting any [O]-J.

1. Make a third or higher backup copy of ProDOS Applewriter 2.1 using the filer utilities. Plainly label this disk FOR IIGS ONLY!

2. Get into /BASICS.SYS. Then CALL -151 to get into the monitor.

3. BLOAD AWD.SYS, A\$2000, E\$6020, T\$0C

4. Verify 4DC7- A0  
Change 4DC7: 60

5. Verify 4F7E- 01  
Change 4F7E: 10

6. Verify 4F85- 31  
Change 4F85: 13

7. UNLOCK AWD.SYS

8. BSAVE AWD.SYS, A\$2000, E\$6020, T\$0C

9. LOCK AWD.SYS

As an alternative, you can use the Applesoft patch program (AWPATCH.BAS) to do the patch automatically. This Applesoft program was provided with this text file (AWPATCH.TXT) as well as the Postscript command file (AWIIGSFX.PS) which is the original source for each.

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