OS-9 Newsletter ©

OS-9 Level III

It's time has come......

OS-9 Level III

your response to this article is requested

To say that OS-9 Level II has matured since its release from Tandy is an understatement. Since its release, the somewhat clumsy looking level II has, piece by piece, been patched, rewritten, and hacked at, and now, a few years older, has really begun to let it's true potential shine with those modifications that Tandy preferred not to pursue. Level II is now, quite a slick system with those patches, new drivers and descriptors, and other modifications installed. Not only is this true with Level II but with Color Computer hardware itself.

We have seen quite a few neat developments come down the line since we entered the orphanage, too many to list here. I know this is old news to many of us so I should just make my point. As great an improvement this has been there is a downside. The confusion and possible incompatibilities involved with all those modifications that are available is a major turn off, not only for any newcomers or novices in the community, but even the system veterans tend to have problems keeping everything together. As far as solving this problem, I think that Farna Systems 'PatchOS9' is a step in the right direction, but in my opinion I think it's about time to move ahead and decide on our OWN Level III.

It's been a long time since we've seen an upgrade and since it is unlikely that either Tandy or Microware will have any part of such a process, it is about time we take this upon ourselves. We have a lot to work with, and with a little work on some of the modules and hardware, a good long thought out voting process, and working alongside other on-line users from Compuserv, Delphi, Fidonet, and the Internet, as well as off liners possibly through the various OS-9 magazines and newsletters, and also working with the various vendors, this could very likely be done.

What would make this better than having it done by Tandy or Microware (yes, BETTER) is that *WE WILL DECIDE* what is best for our computer and Operating System as a community. Since we are the ones who held it up for so long, and since we are carrying it into the future, we indubitably know what is best better then anyone. Why do I think this is necessary? Because it makes things much easier and flexible for both Programmers and End users without the hassle of making a million different modifications just

for a program to work with an operating system that has many different versions. Programmers are unwilling to go through all this, and no one can blame them. How will we go about doing this legally? It will be simple actually if my idea works out.

Once the final format of Level III is decided upon (which I guess will take a good amount of time), it would be distributed on a similar disk such as the *PatchOS9* disk I previously mentioned. Hopefully one or of the vendors would offer the service of installing these patches once the user sends his original master disk. The disk would contain all the patches and modifications installed on the original LEVEL II disk, and the result would be LEVEL III. Programmers advertising their programs could simply say **"Level III required"**. I would like to know how you all think we should go at this? I think my ideas are valid and the *PatchOS9* disk brings us very close. The only thing we would need to do is finish making whatever modifications we feel are still necessary (new drivers, etc.). Try to get as much of that unofficial upgrade that hasn't been released yet as possible, and then decide upon the hardware standards. I think now is a good time to start this subject as we have waited too long.

It is time to end the confusion and obstacles of sticking to a

OS-9 Level III ???? *Continued from first page*

system this old. I am glad I brought this up now, since recently we have begun once again talking about the feasibility of deciding on a Standards Committee. Such a committee would prove VERY instrumental in this process. We do need an official group to look up to, since at this time it really seems as if we have only ourselves to pat on the backs <Grin> and someone in a leadership position, maybe through the voting process, would help boost moral activity. We definitely have some GREAT people here supporting us in the community (vendors, magazine publishers, etc.), but unfortunately it is very hard for them to keep in consistent contact with their community with so much work to do. That would be ANOTHER job where the Committee will come in handy.

The "deafening silence" that seems to be in the community right now doesn't mean doom. It's far from it actually, but there is just no committee of community representatives to pull us all together, and in our case we need that. We are too big not to have it.

Chris "THETAURUS";Delphi/OS-9 Group

Editor's Note: *Chris would like your input. Leave your comments on the Delphi OS-9 Group Forum to: **THETAURUS**. 150 messages per day are posted on the OS-9 Forum on Delphi, and all of those messages pertain specifically to OS-9 or OSK.*

OS-9 Newsletter
Editor: Rodger Alexander

Submissions are welcomed in any format and can be mailed to the above address or sent via electronic mail to the editor: Rodger Alexander, on Delphi (UserID:SALZARD) or Fido-NET at: (1:301/3401@fidonet.org) or on Internet at: (9040180@nessie.com.wwu.ed). Unfortunately, we do not have funds to reimburse authors of selected articles, however a complimentary copy of the *OS-9 Newsletter* containing your article will be mailed to you, PLUS the satisfaction that you have the admiration and appreciation of all of our readers.

The *Bellingham OS-9 Users Group* is a hobbyist club, organized for the purpose of providing information, services, products and events that support the OS-9 operating system for 6809/68xxx based computers. Our efforts are not intended to earn or generate any profit for the club or any of it's members.

Super High Speed I/O
coming soon from CoNect

This information in this message may not be news to most of you, but for those who do not know about, it looks like there will be a new perihperal available very soon that should make the CoCo under OS-9 capable of extremely high speed operation with a 9600bps or faster modem.

First, let me say that this is not an advertisement. I do not work for the company putting this out. I get no discount for saying anything about it. It helps me not one whit to see that this product is successful except that maybe it will have as much impact on the extended life of the CoCo as the 6309 revelation did. Well, maybe.

Just about the largest complaint that I hear (at least in my circle of influence) is that the CoCo under OS-9 cannot handle fast modems and that any amount of multi-tasking makes matters even worse. Not being a real techie, I hadn't given much thought as to why this must be. I had just thought that OS-9 took SO MUCH work that it was expected that fast incoming serial data should be a problem. A lot of folks had actually devoted a minute or three to thinking about this and probably realized that moving 8k of data per second should be a breeze. Heck, our hard drives handle about 25k per second of incoming data with no trouble.

The thing that makes it so hard for OS-9 to handle modem data under the current setup is that an interrupt is service for EVERY SINGLE byte from the modem. That means that when you receive a YModem block (that takes about 1 second at 9600 baud), for each byte that is received, the OS must drop what it is doing, save its current configuration to the stack, reset some pointers, move the byte to an inbound buffer, restore the stack, reset the pointers again, and pick up where it left off. (It is actually a bit more complicated than this, but you get the idea.) This whole sequence will take place 1024 times per second at 9600bps (roughly). And that is in addition to everything else the CoCo is running.

Anyway, it seems that many of our PC friends have been using serial cards with a much more advanced UART chip in them called the 16550. It has 16 bytes of inbound and outbound buffering and can be configured to trigger an interrupt only after a specified number of bytes have been received in the inbound buffer. To make a long story less long than it could be, some fellas with CoCo's decided to play around with this and (if all goes as planned) the CoCoIO cart will be available in just over a month from now (in time for the Chicago Fest.) The prototype boards they
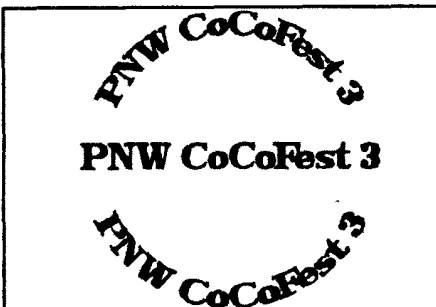
Super I/O *Continued*

are using now (and the accompanying drivers) when mated with the CoCo under OS-9 has had no trouble receiving data at up to 57,600 baud without tripping the flow control and halting the data stream. They were even able to do a blind dump from a CoCo RAM Disk to an MM/1 at 115,200k baud so quickly that the MM/1 was not able to handle the incoming data without halting. As you can tell, this is a HUGE performance increase over what we are used to and should lead to more and better protocols becoming common for our use in the near future. Even with heavy multi-tasking, it is estimated that 38,400 (a common setting with V42bis) should present no problems to the CoCo.

The board is designed with two (2) RS-232 ports and a parallel printer port and comes with 6809 and 6309-native versions of the drivers. The expected selling price is $130 (compared with the $80 Tandy "Deluxe" RS-232 Pak... this is not a bad price in my opinion.) Manufacturing these in small quantities is not cheap.

None of this is private or secret stuff. Rick Uland and Randy Wilson have had open discussions about this in non-private Delphi conferences for weeks now. I'm not trying to "plug" anything. I merely want those who might have considered switching platforms because of the serial data speed problem to know that a solution is almost here and to give those who might be interested a bit of lead time to save up for this device should they wish to obtain one.

As soon as CoNect is ready to take orders on this, I'll try to let everyone know.
= Charles West; FidoNET:OS-9 Echo =

PNW CoCoFest 3

Allen Morgan's

FHL's Kix\30 *report*

Editor's Note:Allen's continuing updates on his new KIX\30 machine have almost become a monthly feature. As he experiments, expands and modifies, we in turn learning a great deal about the latest OSK machine. A special thanks to Allen and the rest of the guys in the Longview/Kelso group for keeping us iinformed.

NO DISPLAY YET

I am still waiting for a video board from Frank Hogg. It seems he has changed his plans and is looking at a VGA board instead of a MM/1 compatible multi-media board. I'm not too impressed by that! On the other hand, he is talking of 40 frames/sec using this board. There would only be monaural audio (out only). I usually have had my fill of VGA by the time I get home from work. I was more interested in the multimedia concept.

I have obtained most of the TOPS library and the EFFO disks. There is plenty there to keep us busy.

HOW FAST?

I recently ordered crystals for 25, 33, and 40MHz operation and might have a line on a 50MHz rated CPU and Floating point unit; I am running at 16MHz now. 40MHz would theoretically be a 250% speedup. The main thing keeping me from trying for 50MHz is difficulty in locating 100MHz TTL oscillator chips. **Mark Johnson** and **Steve Hammond** have been helping out a lot. I loaned Mark the Microware manuals while I was gone on a trip for a week and he logged onto the Kix\30 over a modem and got me all set up with the Bourne shell. I like it quite a bit better than Microware's Level I shell.

Allen Morgan:FidoNET:OS-9 Echo
Longview/Kelso CoCo Club

OS9 Lev II Update

UNDELETE Utility

by Kevin Darling

Greetings, and Merry Christmas! In the tradition of releasing pieces of the fabled Level-II Upgrade each year (until there's no more to give out :-), herewith is probably its best part for your daily OS-9/6809 enjoyment: *UnDel*ete

DESCRIPTION
UnDel undeletes files in a directory. It scans the directory for any deleted files and checks to see if they can be undeleted. Undeleted means that the file has been removed from normal directory access operations but the space allocated has NOT been re-used. *Undel* is interractive (it prompts the user for information) and is not recommended for use in shell scripts. If *UnDel* discovers a file that is deleted and the space allocated to the file is available (not re-used) it prompts for the first character of the file (deleted files have the first character of the filename set to NULL). If an UPPER CASE letter is entered in response to this prompt, *UnDel* replaces the NULL with the character entered and re-allocates the file as a DIRECTORY. If a LOWER CASE letter is the response, *UnDel* reallocates the plain file. If ENTER is the response, *UnDel* leaves the file deleted.

UnDel will NOT recover a file unless ALL of the clusters are marked as free in the bitmap, including the file descriptor.

UnDel has no way of knowing that a file may have previously been a directory since the DIR attribute is no longer present in the File Descriptor.

If you know a directory has been deleted, *UnDel* will set the DIR attribute if you use an UPPER CASE letter to recover the file. Lower case is used for normal files. If you accidentally make a normal file a directory, you MUST use *FsEdit* or a disk editor to remove the DIR attribute. If you accidentally undelete a directory using lower case, delete the file again with Del and use UnDel again with UPPER CASE. After a directory has been undeleted, UnDel may be used on the newly recovered directory to restore any needed files there.

Examples:
Assuming that there exists a file "testfile" in the current working directory and a file that was deleted sometime ago with the name "oldfile". Note that creating or expanding a file after deleting a file will lessen the chances that the deleted file will be recoverable.

    del testfile
    Undel
    To undelete ?estfile, enter UPPER CASE letter for DIR,
    lower case letter for plain file or ENTER to skip: t
    Sorry, ?ldfile IS NOT RECOVERABLE! (FD
    ALLOCATED)

In the above example, "testfile" was recoverable and merely entering the first char of the name allows *UnDel* to reinstate the file. "oldfile" had its file descriptor allocated to some other newer file and was not recoverable.

    Undel /DD/TESTDIR
    To undelete ?estfile2, enter UPPER CASE letter for
    DIR,
    lower case letter for plain file or ENTER to skip: t

The above example shows the optional directory path that UnDel will search for recoverable files.

UnDel may also display the following messages:

"Cluster number out of range!"
    if a cluster number is outside of the scope of the disk's
    bitmap. This can happen if the file descriptor has been
    re-used to store ordinary data for a newer file.

**"Sorry, ... IS NOT RECOVERABLE! (FD
ALLOCATED)"**
    if the file descriptor has been re-allocated to a newer
    file.

"Sorry, ... IS NOT RECOVERABLE!"
    if any of the clusters that used to be part of the deleted
    file and are now marked as allocated in the bitmap.

"No deleted files found"
    if no deleted files were found in the directory.

"Illegal response. Please use a letter."
    if you tried to recover a file without using a letter as the
    first character.

INSTALLATION
To make *UnDel* work, you will need to unarchive *rbf30.ar* with the *AR* utility and *Ipatch* your original *RBF* module in the OS9Boot file. *AR* and *Ipatch* are available on most BBS networks. Type *Ipatch* by itself to get the necessary help (or ask on the nets). The usual command syntax will be:

    ipatch rbf30.ipc rbf.mn rbf.30

This will create a new module "rbf.30" from your original edition 28 "rbf.mn" using the "rbf30.ipc" patchfile included in the archive. Now make a new bootdisk using the new rbf in place of the old one.

Ident of the Original RBF module before patching
    Header for: RBF
    Module size: $122E   #4654
    Module CRC: $EFBE13 (Good)
    Hdr parity: $D4
    Edition: $1C   #28   Stock RBF Edition 28
    Ty/La At/Rv: $D1 $81
    File Man mod, 6809 obj, re-en

OS-9 LEV II Update:

Review: SCF-Edit

by Rodger Alexander

In keeping with the OS-9 Level II Update theme, I have chosen to review a public domain utility written by Kevin Darling way back in 1987. This is a keyboard buffer editing enhancement utility that I originally chose to ignore since I am a fast typist and saw no real need to add editing features to the keyboard buffer. But perhaps I was wrong.

As most of you know, holding down the "CRTL" key and then pressing the "A" key will cause the last command entered on the keyboard to reappear. This saves you the effort of having to re-enter the same command line again when copying files or some other repetitive task. Most of us use this feature often.

One trick is to back space and retype the file name leaving the command part of the line in tack. This works great unless you have to modify the command part of the line, then you might as well just retype the whole line.

FEATURES:

SCFIX2 adds the following line editing features to the keyboard buffer:

left	: move left within line
right	: move right /redisplay chars
shift-left	: to beginning of line
shift-right	: to end (like old ctrl-A)
ctrl-left	: close up line
ctrl-right	: open up line
ctrl-up	: stay in place, show rest of line
<enter>	: take up to <enter>

tmode bsb reprint=04 dup=01 will disable editor

I actually thought I would never use any of the above editing features, but now of course I can't imagine not having these features. I use the "ctrl-left" and "ctrl-right" features constantly to delete and insert command portions of the line. The <enter> option, which seems superfluous, actually saves deleting the unnecessary extension to the desired command line.

You might want to sit down at your CoCo-3 with OS-9 Level Two booted and type in a few command lines. Use the CTRL-A feature to retrieve your previous entry. Now take a look at the above editing features and imagine how you might take advantage of these option. Nah! Pretending to have those features doesn't really work does it. You will simply have to try it to appreciate it. Best of all, it's FREE!

INSTALLATION:

Kevin Darling really broke the mold when he figured this one out. The installation process is different from any other I've seen in OS-9, but it's also the easiest:

1. Boot into Level Two
2. Load the *scffix* program
3. CHD to the directory you wish the new SCF to go
4. Enter: **scffix**
   This will convert SCF and write a file called *scf.kd* into your current data directory
5. OS9gen a new disk using the new scf in place of the normal one
6. Now boot the new disk and load *Cobbler* and *Xmode*. Keep the bootdisk in drive 0 and unprotected
7. For each device.. TERM, W, W1-7, type:
   xmode /device -bsb reprint=9 dup=19
8. Now "del /d0/os9boot; cobbler /d0"
   This will replace your bootfile with a new one of the same size, but the devices will all now have the new editing capabilities.

An easier method would be to use *EZGEN* or *QWIKGEN* to "update" the SCF module in your existing OS9Boot file with the *scf.kd* module created in step 4. You could then *tmode* your devices (TERM, W, W1- 7) in your startup file. Or go ahead and continue with steps 6 - 8 above to make the device changes permanent.

==Rodger Alexander;Bellingham OS-9 Users Group==

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*UnDel*ete

Ident of the RBF module after patch-ing with *IPatch:*
Header for: RBF
Module size: $12CB   #4811
Module CRC: $4B1153 (Good)
Hdr parity: $31
Edition: $1E   #30
Ty/La At/Rv: $D1 $81
File Man mod. 6809 obj. re-en, R/O

==Kevin Darling;Delphi\OS-9==

USING MICROWARE'S C COMPILER
BY RANDY KIRSCHENMANN

The first hurdle a potential programmer faces when learning a new languageis learning the operation of the compiler software. Let's examine the mostwidely used C compiler for the COCO 3 under OS-9, the one developed byMicroware Systems Corporation.

This software is distributed on two singlesided 35 track diskettes. The first of these contains a directory named CMDS which has in it the executive module, *ccl*, and six support modules which do the actual compiling. The second diskette contains three main directories, two of which concern us at this time, LIB and DEFS.

LIB contains the C library of standard and system functions which make the job of C programming so much easier. Also found in LIB is a module named *cstart.r* which is called by the linker in the final stages of compilation to build the necessary routines which initialize the variables you name in your source files. DEFS contains the header files you will be using when certain of the functions in the standard C library are needed. We'll not be discussing the DEFS library in this article.

As with all software, the first thing to do is make backups of your distribution diskettes. Then store the originals in a safe place. This compiler is designed to run on a two floppy drive configuration whose devices are named /d0 and /d1, but is easily modified to run from a hard drive or other named devices. I'll get into that a bit later. Place the disk with the CMDS directory in /d0 and the other disk in /d1. Use the OS-9 command, "CHD", to set your current working directory to the directory which contains your sourcefile(s). At the OS9 prompt, type: **ccl <source_file.c>** and press <ENTER>. Of course for <source_file.c> you will type the file name of your own source file, which must have the C-file designator, ".c" as its last two characters. Seems simple enough, doesn't it? So what happens?

The module *ccl* will build a script file in your working directory named *c.com* which will contain the OS-9 commands necessary to call and execute the various modules, in the proper order, to compile and link your source file. Unfortunately this is a slow and tedious way of doing things. For those of you that have 512K systems there is a snappier way of getting the job done...use the ram disk! However, this takes a bit of setup. So reserve this method for those sessions where you plan on doing a bit more work than a simple compile. The setup consists of the following:

1. build a ram disk of approximately 200K bytes.

2. create a directory in ram named CMDS.

3. using dircopy, copy the CMDS directory from the C compiler distribution disk to /r0/CMDS.

4. place the (copy of the) distribution disk containing the directories DEFS and LIB in /d1.

5. chx /r0/CMDS

6. chd /r0

7. ccl <path/source_file.c>

The output file, if your compile was successful, will be written to /r0/CMDS. You will find that working in the ram drive speeds the compilation process up considerably. Be sure to remember to save your final output file from the ramdrive before you delete it. Those of you fortunate enough to own hard drives will find the execution of the compiler to be tolerably fast enough without resorting to the ram drive. There are a couple of patches that need be made to *ccl* and *c.prep* before the compiler will run on the hard drive, however. I found DED to be an excellent method to accomplish these changes.

First, lets assume that your hard drive is named /h0, and there is a default drive descriptor, /dd, in your bootfile for your hard drive. Next, take the (copy of the) distribution disk with the CMDS directory and place it in /d0. From the OS9 prompt, type: **cd /d0   dsave /d0 /h0 ! shell** Place the (copy of the) distribution disk with the directories LIB, DEFSand SOURCES on it into /d0. Then type: **dsave /d0 /h0 ! shell** Next, you will need to patch *ccl* and *c.prep* in /h0/CMDS. From the OS9 prompt, type: **ded /h0/CMDS/ccl** then hit s; and type **0E <ENTER>** Type: **e**; then hit **break**. Using the arrow keys, move the cursor to address 0EE6... change the 1 to d ($31 to $64). If you want, you can change the string "/d1" to "/h0", but I like "/dd" better. Finally, hit **enter**, then type **w** and answer the prompt: "Are you sure?" with **y**. Then type **v** to write the updated CRC value to the file. Now type: **q** to quit and you're back at the OS9 prompt.

The same change needs to be made in */h0/CMDS/prep...* the address of the character to be changed is found at $135D. Follow the procedure described above for *ccl*, substituting *c.prep* for *ccl* and the correct address in sector $13. Again, be sure to write the updated CRC to the file before quitting. Once the proper directories have been created and the patches made to *ccl* and *c.prep* you are ready to go.   Using CHD change your working directory to the directory containing your source files and type: **ccl <source_file.c>** as described above for the floppy drive configuration. There is another method available to optimize the compilation process. Rick Adams has written a compiler executive program, using C, which can be found in the OCN library, in the OS9_PRO directory, named *cc2.pak*. This archive contains the complete source, the executable and a docs file. It streamlines the compilation process by piping the output from one module into the next, thus speeding things up. I use this method myself all of the time. If possible obtain this archive. At the OS9 prompt, simply type: **cc2 <source_file.c>** instead of ccl... This discussion isn't intended to be an exhaustive description of all of the ways Microware's C compiler can be used. There is much left unsaid about multiple source compilation, building function libraries, etc. I hope it has helped the beginner to get started, however. There is much to be learned from the C language, but you need to experiment to get the most out of it.

==Randy Kirschenmann;Mt. Rainier CoCo Club==

Q&A

Q: *Why did my old boot disk let* **ident** *work just fine but now it doesn't work? Again, the only thing that changed was to replace* cc3disk, clock, *and* sacia *in the* bootfile; *and to add* date *to* stdutils. *It still remains the same number of blocks.*

A: Adding *date* to *stdutils* is what killed it. OS9 reserves the top 512 bytes of each process map. It has to, 256 bytes are the kernel code for switching task maps, and the other 256 bytes are for the operating system hardware. Now, OS-9 is smart enough to load the program right up to this boundry, if it can. If it can't, that whole block gets wasted for 512 bytes used, and the program is loaded one block lower. This is why the magic formula is **(n * 8K) - 512** for merging files. Previously, your *stdutils* was less than 15.5Kbytes, so it coexisted in the top two blocks with the 512 reserved bytes. Adding *date* made your *stdutils* file size greater than 15.6Kbytes, so it wouldn't fit within two memory blocks. Three memory blocks were required just for your *stdutils* file. One too many blocks. There was no longer enough system memory left to permit you to *ident* system modules.
==Randy Wilson:Fidonet\OS-9 echo==

plus

When building up groupings of utilities like your *stdutils*, you can either stick to the 8K-512 byte limit (7680 bytes), or divide the utilities into two groups:
 - those that can make use of extra memory (*backup, copy,* etc.), or must map modules into their memory   map (*ident, save,* etc.)
 - those that do neither of the above (*shell, dir, del, procs,* etc.) These are generally ones that don't   benefit from the "#24k" type of command line to give them more memory.)

When grouping utilities from the first set, the 7680 rule should be followed. For the second set, that rule can be bent, but I suggest that the total file size be kept below 24064 bytes (so that utilities like ident and save can still map the group into their workspaces). Note that some utilities (like 'sort') allocate additional memory as they run, so should be considered as part of the first set.
   The problem is, you must know which set a utility falls into. Unless you are sure, it is best to follow the 7680 rule.
   Hope I haven't confused things even more. (Shouts of "heresy!" anticipated for even suggesting sizes of 7681 to 24064 for the second group...)

== Ken Scales:Fidonet\OS-9 echo ==

New CoCo magazine debuting in August of 1993

Editorial
Magazine Info
Feature Article (to be determined)
CoCo Q&A Column
"C" Programming series (featuring the DECB and OS-9 compilers)
Beginners Showcase (similar to Rainbow's "Novices Niche")
Beginning OS-9 series (really down to earth starting from scratch with
OS-9 for 6809 and/or 68000... emphasis on CoCo version)
Reviews!! (planning at least 3 per issue)
Telecommunications (BBSs and what goes on of interest to CoCo/OS-9/OSK users on the major boards and networks, including new BBS listings)
MicroNews (new products announcements, show announcements, any tid-bits of info of interest to readers)
OS-9/OSK Q&A Column
Swap Shop (classifieds for SUBSCRIBERS ONLY. Used software will be allowed for sale/trade, ORIGINALS ONLY. Any proof of pirating will end this, period. No actively supported products will be allowed. No complete systems allowed, although you can sell individual components. If you want, you can sell a system piece by piece in a series of ads over a period of months.

Why this unusual rule? The idea is to promote USE of and SUPPORT FOR the CoCo, not to help users get rid of their systems! If you luck across spare hardware, sell it piece by piece though. Classifieds will cost 20 cents per word (name, address, and telephone number free). Subscribers will be credited with 30 words per year free of charge. These can't be compiled from year to year.... must be used for current subscription. Minimum ad size will be 20 words ($4). DEALERS MUST USE DISPLAY ADS.

That's three feature articles in the very first issue (C programming, Beginning OS-9, and TBD), plus six regular columns/areas! Not bad for starters!

I have lined up a professional printer. The mag will be put together using Aldus PageMaker, for those who know what that is! First issue will be at least 24 pages. Subscription rate will be $23/year, with 8-9 copies delivered, one every six weeks. This gives the publisher time to create a QUALITY publication without going bi-monthly. Once subscriptions build to a high enough level, publication will go monthly with a minimum price increase... NO INCREASE IF FINANCIALLY POSSIBLE!

Advertising rates will be kept to a minimum... enough to cover the printing the additional pages and that's about all. Will start at $80/page, $45/half, $25/quarter... all copy ready. There will be a $15 typesetting fee for quarter and half pages, $20 for fulls. NO DOT MATRIX ACCEPTED. Exceptions will be made for very high quality 24 pin printers. If deemed not acceptable, advertiser will be billed for typesetting fee, so send a sample first! There will be a SURCHARGE of 50% for non-CoCo/OS-9/OSK related items, regardless of percentage of ad content (i.e.- a full page ad with MS-DOS computers will cost $80 + $40 surcharge, total $120).

NOTICE: I realize it will be hard to get many to part with hard earned money for an untried product. We need your support to continue providing information for the CoCo, so a special trial subscription of four issues is being offered for $12. This option will allow those on a budget a little more flexability. Only new subscribers will be allowed this option... renewals must be for one year ($23... or two payments of $12 , the first due on order, second two weeks after the first issue is delivered. Second payment must be received before the second issue is delivered. Notice will be sent with first issue.).

ALSO: A sample issue may be purchased for $3.00. I suggest ordering the first issue (so you don't miss anything!) WELL IN ADVANCE of publication date (August 1993). Presses will run at least two weeks in advance of that date. Back issues will sell for cover price of $3.95 ($4.95 Canada) plus 25 cents shipping per magazine ordered.
    This will be a QUALITY MAGAZINE! In many ways, it will be similar to Rainbow. Rainbow may not last much longer, this will be there when Rainbow does go down. Nothing will ever take the place of The Rainbow. I don't think it is possible to replace a friend of 12 years standing. It will continue in the Rainbow's tradition of CoCo support though....
    The name? "THE WORLD OF 68 MICRO"... supporting the Tandy Color Computer, OS-9, and OSK. The emphasis will be on the CoCo, of course! At least 70% of the magazine will be CoCo support, 80% of that Disk BASIC (RS-DOS). The rest will be OS-9/OSK. Note that the subscription rate alone will be enough to support a 24 page magazine. This is bigger than you

think! There will be NO filler material, and only a couple pages of ads (at first). Twenty of those pages (after editorial, info, ads, and other necessary information) will be filled with articles in three column text- just like the 8.5"x11" Rainbows (65 lines of approximately 7 words each... each page approximately 1150 words plus illustration/photo and heading). Will be on bond paper to start, (8.5"x11" size) upgrading as the number of subscriptions and finances allow. The content percentages will change with subscribers also. Surveys will be held on occasion to see what the subscribers want. Those who write aren't always the majority, this I know from writing for antique/special interest car club (my other hobby!) news letters. The majority that is content usually doesn't write in to say a whole lot, those who AREN'T satisfied with the status quo DO write... a lot. Hopefully periodic reader surveys will solve this problem. A DECB/CoCo OS-9 disk will also be offered at $6 per copy, $40 per year. Both formats will be on the same single sided disk.

Reader submissions are welcome! They are needed for "Beginners Showcase" and also for feature articles and possibly future columns. Submissions should be made on disk or tape in ASCII FORMAT ONLY. CoCo, CoCo OS-9, and MS-DOS formats can be accepted. Include a brief letter describing the program or article and make multiple copies of the text and program files. All submissions become the property of the magazine once printed. Payment discussed on an individual basis. Please state is payment is desired. Include SASE if any material to be returned. Send your hardware and software for review! Hardware will be returned if requested and return postage included.

I have the support of several well known CoCo authors.... I hope to have yours also! I can't mention names as of yet, but will as soon as possible. Feel free to leave E-mail or send me a letter... need mail for the first issue anyway! Checks should be made out to FARNA Systems. Please note on your check that it is for the magazine subscription. Your cancelled check will be your receipt. Canadians add $5 for air mail... NO SURFACE (also Mexico). Other countries add $5 for surface, $15 for air delivery.

OS-9 Tid Bits

by Allen Morgan

This month's Computer Design magazine has a nice article titled: "Multithreading support grows among realtime operating systems". Its' about 6 full pages. The very first photo is of Peter Dibble at the "black board". The caption says "As chief scientist Peter Dibble illustrates, Microware's primary goal in designing OS-9 and OS-9000 was to strike a balance between the high performance of threads and the protections provided by processes." The article goes on to discuss threads and various ways they are implemented. Of interest also is that Windows NT and OS/2 are also covered. .."OS/2, for example, specs a context switch time of 225 us, a worst case preemption latency of 6 Milliseconds (1/2 ms typical) and a worst cast interrupt disable time of 400 us."

All I can say about the OS/2 data is, boy IS That Slow? No wonder they give it away!

In the back pages of the same issue, I noticed a new OS-9 vendor that someone here may be interested in. They show a motherboard design that fits to PC-clone dimensions, uses 8 & 16 bit ISA slots, runs a 25Mhz 68020 and a 68882 FPU. Price is $699 with 0k ram, OS-9 optional. Their phone number is 404-973-2170.

I am in no way connected with them, so you're on your own!
==Allen Morgan:Fidonet\OS-9 echo==

OS9 COMMUNITY NETWORK LIBRARY

Try the number in this list that you can reach the easiest and cheapest

Sysop	BBS Phone #	Town
John Reece	619-272-3643	San Diego CA
Kerry Kowalski	414-684-4115	Whitelaw WI
Brian Steward	413-593-3944	Chicopee MA
Mark Johnson	206-425-5804	Longview WA
Dave Spicer	205-598-2100	Ft Rucker AL
Dennis Mott	509-325-6787	Spokan WA

The OS-9 Community Network (OCN) is a world wide organization setup to facilitate communications between OS-9 Users via a world wide telecommunications network on FidoNet. OCN public domain libraries are available in many locations around the U S and Canada. Plus the Netherlands and Australia. You may access any OCN BBS like any other BBS. Fill out an application (there are no fees) and have immediate access to the download area. All OCN libraries are formated the same. That is 'cprep14' will be in the same sub library on all BBS's.

Dave Kelly, OS9 Community Network, Region 19 Coordinator.

Club Activities Report

Bellingham OS9 Users Group - Longview/Kelso CoCo Club
Mt. Rainier CoCo Club - Port O'CoCo Club - Seattle 68xxx Mug

Bellingham OS-9 Users Group

While the Longview/Kelso group works in the future realm of OS-9 with the Kix\30 machine, we work in the past hacking away on our two GIMIX machines. Our problem this month was the physical crash of one of the hard drives. Hard Drive capacity on the GIMIX is a little more than 15 Megs. However when the hard drive was removed, we found it to be a MiniScribe 3650 (40 Megs). We located a Seagate ST-225 20 Meg Hard Drive and spent the entire evening trying to format the ST-225.

We checked out the hard drive descriptor and found that it was set up for 309 tracks, 32 sectors/track and 6 heads. We tried to format the ST-225 to it's full capacity of 615 tracks to yield more than 20 Megs, but we constantly got an Error #247. Maybe the ST-225 was bad.

We pulled the ST-225 out of the GIMIX and stuck it into a CoCo-3 and a Burke and Burke hard drive set up (CoCo-XT). The drive formatted properly. We even replaced the MFM controller card with an RLL card and formatted the ST-225 to 30 Megs. No problems. So we stuck it back into the GIMIX to try again.

Perhaps the GIMIX controller card was "hard wired" or otherwise limited to 15 Megs? So we got out our calculators and figured out that a format of 458 tracks instead of 615 would give us just over 15 Megs or just slightly less than what the capacity was of the crashed drive.

Debug would not work properly. We needed to change byte 17 of the hard drive descriptor, so we loaded the old descriptor into memory and typed:

DEBUG
L HD

```
. .+17
=01
*&%@# ---- C R A S H !!!!!
```

Fortunately, **Wes Payne** is familiar with some of the specific GIMIX applications and called up the utility *PATCH*. I'll try to remember to review this product next month if it can be made available to public domain. It's very easy to use and had no problem modify the hard drive descriptor module. BUT, the hard drive still refused to format......End of Meeting

On to Denny's to drown our sorrows in a combination milk shack and super grand slam <Ugh!>

==Rodger Alexander==

Longview/Kelso CoCo Club

The Longview/Kelso group apparently is still meeting off and on unofficially. The center of their efforts is **Allen Morgan's** Kix\30 68K machine. Check out the article on page 3 for more detailed information.

Port O-CoCo

The March 15th meeting started promptly, more so that usual. There were 11 to start and later 12 CoCo supporters. We started with the blue news, that is, those who were feeling blue. **Bud Helck** is in the process of shaking pneumonia. We sent him a get well card. **Terry Laraway** crashed with some kind of bug just the afternoon of the meeting so he was among the unliving at least for the evening.

On the upside we had two birthdays in March. **Bill Barker** received free tickets to South Sound Cinema 6. **Ina Knight**, one of our older members, was not in attendance so we sent her one just to let her know we remember her.

Gene Elliott gave an update on our Club system. The 85 meg hard drive we purchased is too large for the space in the tower. We would have to sacrifice one of the two 5 1/4 floppies to get it in. That would make the system less usual under RS-DOS so we don't want to do that. **Roger Van Hoover** offered an exchange for a half high drive in the weeks to come so we could get a HD in the tower. Gene promised to have the system complete enough to be able to run. We have been between working systems for a couple months. That does not serve the interest and needs of the membership.

Gene also mentioned that he has been trying to get a hold of **Chris Burke** for weeks. Today he wrote a letter to him trying to get some response. Someone else believed that he had seen Chris on one of the morning TV shows talking about computers and kids. If this is true, Chris is busy making the media circuit and understandably is not home much.

Tom Brooks brought to our attention that we have not had a working computer at the meeting for the last couple months. This is not serving the group. Also Tom, as an RS-DOS based user, felt that the attendance was dwindling because the meetings were drifting more and more toward OS-9 issues. OS-9, he stated, was not easy to understand and lost more people than it gained. He, and others, were concerned about the pattern of programs and expenditures were developing. He was not alone in his feeling of being left behind. After much discussion it was concluded that Tom, **Phyllis Armstrong** with the assistance of Gene would handle the topics for the

next four months. They will take into account the lead time needed to get word out to people and the notice we make on this ECHO. As for the expenditures, it was concluded that the money was of universal benefit for both RS-DOS and OS-9. The development of our own system will continue.

In the middle of this discussion of who we are and where are we going a late attendee arrived. He had good reason to be late. He had come from Atlanta! Actually, **Damon Hill** had moved from Atlanta to Lynnwood a few weeks ago. But even to come all the way from Lynnwood to our meeting was a great show of commitment to the CoCo. He was not along in this commitment. **Tom Nails** had traveled by bus from near SeaTac to downtown Seattle, Seattle to Bremerton via big ferry, Bremerton to Port Orchard via little ferry, bus to the South Kitsap Mall and then walked the half mile to our meeting place! Damon was kind enough to help Tom get closer to home when the meeting was over. Thanks, to both Damon and Tom.

Bill Barker showed off his new tower. Although he had ordered the tower Gene had found for the CoCo, this tower was even wider and configured a little differently. Apparently, the other arrangement is no longer available. We don't know if this new tower is a real advantage over the older one or not. Bill will be putting in drives et al in the weeks to come. We will learn from his experience.

Although we talked about a local CoCo based BBS the hopes of us having one were dashed by the announcement that **Dave Baldridge**, who was seriously looking at starting a board will be moving away soon. We wish him well and will miss him.

As mentioned before, Terry Laraway was on the sick list so we did a physical demonstration of how a data base could handle a series of magazines and newspapers. Each of the 12 people present were given a card with the name and frequency of a publication. We discussed how these could be organized. The first idea was alphabetically by title. So everyone moved around the room into

that order. But what about frequency? So everyone shuffled around until they were in order from the daily newspaper to the bi-monthly magazine. What about by subject? So, again, everyone moved around and comparing what they had to what their neighbor had until everyone was in order (A human bubble sort, you might say!) Many of the words used with computers are just jargon or fancy way to say something we already understand. A data base system is nothing more than an electronic filing system!

The latest word on the PNW CoCoFest III is that it will be held at **Marcus Whitman Junior High School on June 25th & 26th, Friday evening and Saturday**. The night before, Thursday, the largest tent circus in the world will be in Port Orchard for three shows. We also have permission from the school to have campers and RVs in their parking lot. So consider bringing the whole family! Check with the PNW OS9 Echo on FidoNet for announcements on speakers and topics. It will be the Best event west of the Rockies!

Chris Johnson brought a bunch of monochromatic terminals from the **Computer Bank Charity**. Nothing fancy and it all found a home for $3 each. There was also the sale of a color printer for $75 and a 2400 baud modem for $30. We have hot sales just about every month! Join us next month on April 19th.

==Donald Zimmerman==

←——————————→

This was our second meeting in Sieg Hall, Room 125. The room is "cozy" (it's small), but it is costing us about $8/hour, so beginning in April we will return to Guggenheim Hall on the third floor in the lecture hall.

Our March meeting opened with a display and quick explanation by **Rodger Alexander** of his piggy back parallel port that was featured in the February *OS-9 Newsletter*. Rodger had not been able to get a 68B21 PIA chip to test out the circuit but it was all wired in and ready to go. Rodger had handouts of the circuit diagram so that

everyone could follow along.

The second part of the meeting was a brainstorming project conducted by **Scott Honaker**. The subject area was a continuation of Scott's packet radio demonstration in December. Packet radio is like a standard BBS except instead of using telephone lines to connect to a Bulletin Board, the computer is connected to an amateur radio transceiver. Scott proposed that a voice mail type of BBS should be possible, using a computer, to digitize audio messages inputted from a ham receiver, store them and transmit them through a ham transmitter. Using a 100 Meg Hard Drive should be able to store about 300 short messages.

The brainstorming problem was: "How should an Audio Packet BBS be set up? Here are some suggestions we came up with:

Club echo's, with each club having it's own "SIG"
**Classified Adds**
Calendar of Events
Private E-Mail (pretty hard to set up, but it could be done)

April's meeting will return to Guggenheim Hall in the top floor lecture hall. We will be reviewing some of the CoCoPro OS-9 applications that are being closed out.

Rodger will have the club public domain library for anyone want access to files. Also, if there is enough time, there may be a demonstration of Multi Media Laser Disk (12 inch type) controlled by a CoCo using an OS-9 Terminal Package.

Individuals with specific hardware or software needs are encouraged to bring their problems to the meeting. Discovering the solution to your hardware or software problems is knowlege gained by everyone.

==Barbara Alexander==
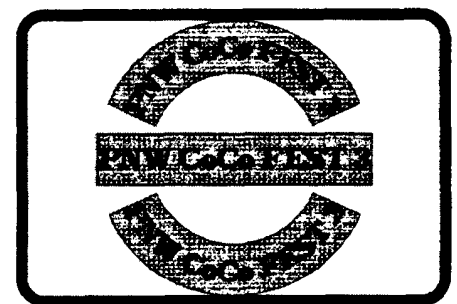
Washington State BBS List

COLUMBIA HTS. BBS
-- Lonview/Kelso --
RiBBS (FidoNET)
(206) 425-5804

DATA WAREHOUSE BBS
-- Spokane --
RiBBS (FidoNET)
(509) 325-6787

BARBEQUED RIBBS
-- Bellingham --
PC-Board (PC-Net) - CoCo Conference #5
(206) 676-5787

OS-9 TACOMA BBS
-- Tacoma --
RiBBS (FidoNET)
(206) 566-8857

ULTIMATE EXPERIENCE BBS
-- Anacortes --
RiBBS (MaxNET)
(206) 299-0491

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Bellingham, WA 98226-4238