

# OS-9 Newsletter®

Volume V Issue 11

Bellingham OS-9 Users Forum

November 30, 1994

## ONE-BYTE PATCH

My previous announcement of '19.2k on a stock Coco3' is one-upped by this announcement. I haven't verified 19.2k on stock OS-9, but from the numbers, I don't see why not. This one-byte hack saves 80% of the time of the more involved patches I've done to NitrOS-9 v1.21.

### First... a little background.

I've claimed that the people who ported OS-9 to the Coco didn't know what they were doing, but I'm not sure this hack fixes a Microware 'feature' in OS-9.

**The fix to OS9p1:** use this *modpatch* script file.

```
os9p1.patch
l os9p1
c $0D80 $17 $8C
v
q
```

After patching, re-verify and put on the boot track. If you have the 'md' device descriptor, this hack can be put in as the system is running by '*ded*'ing sector \$07Fd, offset \$80.

Older versions of NitrOS-9 (or hacked stock systems) can look for the bytes: \$84 \$DF \$A7 \$0C \$17 change to \$8C, in sector \$0d of OS9p1.

**This patch is a MUST!**

### What it fixes:

Stock OS-9 de-allocates and then re-allocates the Task number and DAT image pointer EVERY TIME a system call or IRQ occurs. All I can say is "Huh?"

I've timed it on my system, and this ONE-BYTE hack saves about 350 clock cycles. It may not sound like much, but look at it this way:

1. 9600 baud, 960 IRQ's/second, 15% of ALL cpu power is saved.
2. 19200 baud - 1920 IRQ's/second, 30% of all CPU power is saved.

And the more system calls you do, the more free CPU power this saves for actually doing useful things. And I've gone over the source code and don't see this hack blowing anything up. Heck, if it works at all, it'll work forever, that's the nature of the change. And it works on my system just fine.

==Alan DeKok.==

Ooops!

## NITROS VERSION 2.0

### BUG UPDATE REPORT

I was making up a new boot disk last night, and realized that *cobbler* wasn't exactly written properly. Everyone knows it's called "clobber" if you use it on a hard drive, but the addition of one line of code could have fixed that. The error message "*cant do hard drives*" is in the program, but the check for hard drives is never performed.

In addition, I realized that my changes to REL confused *cobbler*, and caused it to create non-bootable disks without printing out any error messages. This may be some of the reason why people have trouble installing *NitrOS-9 v1.20*. Please accept my abject apologies.

The short-term solution is to use another kernel utility (*Kutil*) to write the boot track, which *cobbler* won't do properly. The long-term solution is that I've fixed *cobbler* so it works properly, and so it will also be safe to use on hard drives. This version of *cobbler* will be included on the *NitrOS-9 v1.21* distribution disk.

*NitrOS-9 v1.21* will be distributed as a bare-bones bootable disk, which you add modules to as desired. Distributing it this way should make installation much easier than before.

==Alan DeKok.==

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**NEWS RELEASE NEWS RELEASE**

The Glenside Color Computer Club of Illinois  
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For further information, general or exhibitor, contact:  
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DELPHI-THESCHU

**OS-9 Newsletter**

**Editor: Rodger Alexander**

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*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) Internet (ralexander@nikita.bham.wednet.edu). 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 will have the admiration and appreciation of all of our readers.

The *Bellingham OS-9 Users Forum* 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 its members.

**Software Report:****"Speak" for you Sound Pak**

Ok folks, here's some more new stuff. I have uploaded *Speak\_v10.ar* to the incoming directory on chestnut.cs.wisc.edu. (This is an internet FTP site)

The file contains my new speech driver for the Speech Sound Pak for OS9 Level2 with the CoCo-3. Source code is included. Fast and Slow utilities are included for those of you who cannot modify your Speech Sound Pak. Perhaps the best part of all is a text file which shows you how to build my Speech Sound Pak hack which will allow the Sound Pak to work at any CPU speed (within reason ;) and still work perfectly. Even the tones will have the correct pitch.

Version 1.0 of Speak does not support sound effects. If future versions are released, sound effects will probably be added. I also forgot to mention that the Speech Sound Pak hack does not involve switches. you do not have to set anything when you change CPU speeds. The Speech Sound Pak will appear totally stock from the outside.


==Mike Shell==

**SPECIAL NOTICE**

The December '94 issue of the *OS-9 Newsletter* will be the last publication. Due to declining subscriptions and an increased demand of my time on other computer systems, I find it necessary to bring the *OS-9 Newsletter* to an end.

Renewals and new subscriptions will not be honored. Rebates will be paid to subscribers who's subscriptions go beyond the December '94 issue.

# Dragon Emulator



I'm pleased to announce that I have finally completed my Tandy CoCo II and Dragon 32/64 emulator. Many thanks to all those who have tested and responded to the beta versions since my postings a year ago appealing for feedback.

**PCDGN200.ZIP** is now available from \*SimTel. Emulated features include keyboard, cassette, cartridge, printer, joystick, interrupts, text screen, and all 56 graphics modes. Artifacts of monochrome graphics modes may be enabled at the users option.

The emulator also includes a built-in debugger and disassembler, integrated support for Motorola's freeware assembler, programmable colors and function keys, and snapshot facilities fully compatible with Jeff Vavasour's CoCo2 emulator versions 1.2 to 1.4. The package includes utilities to read and write cassettes using a SoundBlaster Pro card or a parallel interface cable. A comprehensive manual is included in both postscript and plain text format.

Please note that a valid ROM image is also required to use the emulator. Instructions for obtaining the image from a real machine are provided, but copyright prevents the inclusion of the ROM in the package. The emulator requires EGA and a fast PC; expect only 40% of real speed for 486DX-33.

The program is freely distributable (charityware). Uploaded by the author. Comments and bug reports are welcome at the above address.

==Paul Burgin==

*NOTE: \*SimTel BBS source unknown. We will track this down and publish the phone number as well as download and post to the Data Warehouse BBS for inclusion in the OCN Library.*

## AM Computer Show & Sales

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# FIRQ vs IRQ

????????????????????????????????

The FIRQ is just like the IRQ, except

- It only stacks the PC and CC registers (Faster than IRQ)
- It has a different vector address
- It has it's own mask bit in the CC register, so a 3-level interrupt priority structure (IRQ FIRQ NMI) can be implemented

The GIME has this wonderful "FEATURE" that is supposed to take all of the CoCo-3 interrupt inputs (keyboard, 60Hz. 15.7KHz, serial, GIME timer) and make them either a FIRQ or an IRQ. Unfortunately, the serial interrupt triggers on the wrong edge, because it was really designed to sense the BUSY signal from a serial printer, not the START bit of a RS-232 data stream. To get around the problem, I jumpered the 4-pin connector so that the input data also went to the CD line, which feeds into the VDG PIA which can generate a FIRQ on either edge of the input line.

This solves one problem but creates two: The first was obvious; OS-9 has **NO** support for the FIRQ. The kernel will CRASH anytime a FIRQ is received, so I made a patch for the kernel that stacked all of the registers in the proper order, set the 'E' bit and then jumps to the regular IRQ vector.

I didn't want to do that. I wanted a special FIRQ handler. Except that sometimes, I don't know how or why, the GIME generates a spurious IRQ from the serial data stream that comes at the same time as the FIRQ from the PIA, and it then crashes the whole system. It literally took over a year of fiddling around (and 100s of exciting crashes) to discover that this was what was going on. When I did, I wrote a buggy kludged patch and was surprised that it worked at all and left it at that for a year. Then I got to feeling guilty about the kludge, so I disassembled OS9P1 completely and wrote a proper patch for the interrupt handler.

The 6309 has a feature which will re-map all FIRQs to IRQs; that would require a -MUCH- smaller patch (like 1 byte), but I doubt if any 6309 users are running BitBang anyway.

==Rich Kottke==

## Terminatiion Notice

The OS-9 Newsletter will publish it's last issue at the end of this year. Customers who's subscriptions go into the next year will be reimbursed for the balance of their subscription or may choose to trade the balance of their subscription for past issues of the OS-9 Newsletter (January 1990 - December 1994).

Direct your questions to Rodger Alexander, OS-9 Newsletter, 3404 Illinois Lane, Bellingham, WA 98226

# Exploring Termcaps

## Subj: termcap and arrow keys

Here's the source for my keyboard reading demo using termcap. This works correctly from a keyboard, but *\*NOT\** from a serial port, since the serial port sends a signal for *\*EVERY\** character received, and the keyboard driver sends a signal for every *\*KEY\** pressed!

```

/* Demo programme to read arrow keys */
/* using the Termcap entries      */
/* By Bob Devries, 17th Oct, 1994  */
/* placed in the public domain    */

#include <stdio.h>
#include <sgstat.h>
#include <termcap.h>

#define TCAPSLLEN 400
#define KRDY 160
#define STDIN 0

extern char *getenv();

char tcapbuf[TCAPSLLEN];

int keyin = 0;

char PC_; /* Pad char */
char *BC; /* Backspace char str */
char *UP; /* Up cursor */
short ospeed; /* Terminal speed */
char *KU, /* Sent by Up arrow key */
    *KD, /* Sent by Down arrow key */
    *KL, /* Sent by Left arrow key */
    *KR, /* Sent by Right arrow key */
    *CL, /* Clear screen */
    *HO, /* Home cursor */
    *CM; /* Cursor Movement */

struct sgbufold, new;
    /* signal intercept routine */
keyrdy(signal)
int signal;
{
    keyin = signal;
}
    /* the next two functions are from the OSK manual
*/

int tputc(c)
char c;
{
    return write(1, &c, 1);

```

```

}
putpad(str)
char *str;
{
    tputs(str, 1, tputc);
}

main()
{
    int num;
    register char *term_type, *temp;
    char tbuf[1024];
    char buff[80];
    char *ptr;

    /* if no TERM env var, exit */
    if((term_type = getenv("TERM")) == NULL) {
        fprintf(stderr, "Environment variable TERM not
defined!\n");
        exit(1);
    }

    /* if no termcap entry for term_type, exit */
    if(tgetent(tbuf, term_type) <= 0) {
        fprintf(stderr, "Unknown terminal type '%s'\n",
term_type);
        exit(1);
    }

    _gs_opt(STDIN, &old); /* get a copy of the opts */
    _gs_opt(STDIN, &new); /* and a second for modifying
*/
    new.sg_echo = 0; /* set echo off */
    new.sg_kbach = 0; /* set abort off */
    new.sg_eofch = 0; /* set eof off */
    _ss_opt(STDIN, &new); /* write new options */

    ptr = tcapbuf;
    /* get the termcap entries we're interested in */

    if(temp = tgetstr("PC", &ptr)) PC_ = *temp;
        /* pad char */
    KU = tgetstr("ku", &ptr); /* entry for Up Arrow */
    KD = tgetstr("kd", &ptr); /* entry for Down Arrow */
    KL = tgetstr("kl", &ptr); /* entry for Left Arrow */
    KR = tgetstr("kr", &ptr); /* entry for Right Arrow */
    CL = tgetstr("cl", &ptr); /* entry for Clear Screen */
    HO = tgetstr("ho", &ptr); /* entry for Home Cursor */
    CM = tgetstr("cm", &ptr); /* entry for Cursor Move */

    putpad(HO); /* home cursor and ... */
    putpad(CL); /* clear the screen */

    putpad(tgoto(CM, 10, 5));

```

(Continued on page 5)

(Continued from page 4)

```
puts("Arrow Key Test Programme\n\n");
putpad(tgoto(CM,10,6));

puts("Press ^C to quit.\n");
intercept(keyrdy); /* set up keyboard intercept */
do {
    keyin = 0;
    _ss_ssig(STDIN,KRDY); /*tell driver to send sig */
    do {
        sleep(0); /* just sleeping in this demo */
    } while (!keyin);
    num = _gs_rdy(STDIN);
        /* find number of chars waiting */
    read(STDIN,buff,num); /* read only that number */

    if((strcmp(KU,buff)) == 0)
        /* compare with TC entry */
        printf("You pressed Up Arrow\n");
    if((strcmp(KD,buff)) == 0)
        printf("You pressed Down Arrow\n");
    if((strcmp(KL,buff)) == 0)
        printf("You pressed Left Arrow\n");

    if((strcmp(KR,buff)) == 0)
        printf("You pressed Right Arrow\n");
    } while (buff[0] != 3); /* exit if key = ^C */
    _ss_rel(STDIN); /* release the signal handler */
    _ss_opt(STDIN,&old); /* set opts back to normal */
}

== os9ers@zog.wa.com ==
```

## 68K Products

from

### Bob van der Poel Software

Ved/68xxx Text Editor	\$59.95
Update to current version	\$19.95
Vprint/68xxx Text Formatter	\$59.95
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## UP TIME

### Subscription Notice

#### Up Time Magazine Termination

I am pleased to announce that all remaining *UpTime* subscriptions will be filled by "*the world of 68' micros*". This will begin as soon as I get a complete subscriber list from Jordan (UpTime).

For every two issues subscribers were to get of *UpTime*, they will receive one issue of *268'm*. This is more than fair, considering *UpTime* averaged 8 pages while *268'm* averages 28. I made the offer to fill *UpTime* subscriptions at my printing/shipping cost. In fact, I'll be "losing" 10 to 15 cents for every issue. But hopefully the reward will be in more subscribers in the end. Those who already subscribe to "*68'micros*" will have their subscriptions extended number as stated above.

**EFFECTIVE JANUARY 1st** the subscription rate for "*68'micros*" will go up to \$25 per year. This is in part to accommodate rising production and shipping cost. This increase is totally unrelated to the *UpTime* merger. You will start to find more CoCo Basic support in the future while I retain the amount of OS-9/OSK support. I do expect to keep all issues in the future at 30 pages or more. As long as subscriptions hold over 200, this will be no problem.

Right now, current subscriptions are around 225 with 40 new due. Reminder cards have been sent. If subscriptions drop below 200, another price increase of \$3 per year will have to be levied. It costs me .25 each to send third class, .75 first (3rd class requires over 200 pieces). The only thing I make on each issue is the 50 cents saved in postage by sending 3rd class. I can't put a publication out on a break-even basis! It takes 24 hours to put each issue together. At 250 issues, that's only \$5.20 per hour. And that doesn't include ANY overhead costs (various necessary supplies, on-line time, research, etc.).

So it is really half of that amount (\$2.60/hr). Anyone want to do 24 hours hard work at that rate? In order to keep YOUR costs down, please subscribe or renew your subscription NOW!

Also, from now until the end of the year, I'll send a FREE sample issue to all who request it and let me know their primary interests: OS-9, OS-9/68K, or CoCo Basic. I'll send a back issue with the regular mailings (first of December, mid-January). Send \$1.00 (to cover postage) if you prefer having an issue sent first class immediately.

FARNA Systems  
Box 321  
Warner Robins, GA 31099

Phone 912-328-7859

## NitrOS-9 v1.20 Upgrade Form

Please send me the NitrOS-9 v1.20 upgrade, including the new manual. Enclosed is \$5.00 US check or MO payable to: Northern Xposure, 19947 Greenboro Crest, Ottawa, ON; CANADA KIT 1W6 (613) 736-0329

If you did not purchase NitrOS-9 from Northern Xposure, please include proof of purchase, such as the receipt, or a page from the manual, which will be returned.

Send the upgrade on (check one):  40 track, double sided disks;  36 track, single sided disks

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Prov: \_\_\_\_\_ Country: \_\_\_\_\_

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### DECLARATION OF SOFTWARE OWNERSHIP

I, the undersigned, hereby declare that I own legal copies of the following software packages:

OS-9 Level Two  Multi-Vue  OS-9 Development System  Home Publisher  Flight Simulator II

I understand that I will be supplied with those NitrOS-9 modules that are related to the packages checked off, as well as those NitrOS-9 modules that are sufficiently different from the original as to be considered as reverse-engineered rather than derivative.

Signature: \_\_\_\_\_

### CONFIGURATION

Please indicate your system configuration. This will enable us to provide support for all systems, as well as giving us an idea of what areas to concentrate on. Please indicate the brand and model where appropriate.

Computer:  CoCo 3  TC-9

Expansion Card:  None  SlotPak  MPI  Y-Cable

Memory:  128K  256K  512K  1Meg  2Meg

RS232/Serial:  Tandy  Other]

Joystick:  Joystick/mouse      Sound Card:  Speech Sound Pak

Hires Interface       Orchestra 90

Serial Mouse       Other

Drive Controller Floppy: \_\_\_\_\_ Hard: \_\_\_\_\_

Number, size and capacity of floppy drives: \_\_\_\_\_

Number, size and capacity of hard drives: \_\_\_\_\_

## The GREAT OS-9 Newsletter BASIC09 CONTEST

### REMEMBER?

Last July, we ran a full page article enticing you Basic09 fans to try your hand at improving a very simple, but poorly written Basic09 program. The inefficiently written code is listed below. The problems are obvious and the prize was GREAT! Yet we have received few submissions and they were far from GREAT! Surely you must be able to improve on the below sample.

The prize is a Hard Bound copy of the *BASIC 09 TOUR GUIDE* by Dale Puckett. Have you ever seen a hard bound copy? Very rare!

Here is the Basic09 code that you are to improve. The program reads a file of up to 100 words, one word per line, and then prints/echos the words to the speech sound pak. Yes, Yes, I know that simply *LIST*ing the text file to the Sound Pak will accomplish the same thing, but that is too easy.

### PROCEDURE talk

(\* Declare all variables \*)

**DIM count,wordcount:INTEGER**

(\* These are input/output variables \*)

**DIM spak,infile:BYTE**

(\* This is an array for 100 words up to 20 characters in size \*)

**DIM wordarray(100):STRING[20]**

(\* Get the name of a file that has up to 100 words in it, one \*)

(\* word per line only! \*)

**PRINT "Please enter the name of the speech text file: "**

**READ #0,filename**

**OPEN #infile,filename:READ**

**count:=1**

**WHILE NOT(EOF\*#infile)) DO**

(\* Get all the words from the file (or just the first 100) \*)

**READ #infile,tempword**

**wordarray(count) = tempword**

**count = count + 1**

**ENDWHILE**

**wordcount = count**

**CLOSE #infile**

**OPEN #spak,"/ssp":WRITE**

(\* Send the words to the speech pack for talking \*)

**FOR count = 1 TO wordcount-1**

**tempword = wordarray(count)**

**PRINT #spak,tempword**

**NEXT count**

**CLOSE #spak**

**END**

Take a wack at improving this listing. Some of the improvements are obvious, while other improvements might involve creative programming techniques. Give it a shot!

Original code by "TonyS@MATT.KSU.KSU.EDU"

## CoCoPRO Software STILL AVAILABLE

<i>Data Windows</i>	\$39.95
<i>Multi-Menu</i>	\$14.95
	together: \$15 + \$2 S/H
<i>Newspaper 09</i>	\$34.95
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	together: \$15 + \$2 S/H
<i>OS9 Level II BBS</i>	\$19.95
<i>Disk Manager Tree</i>	\$18.95
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<i>Level II Tools</i>	\$19.95
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# Club Activities Report

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

## Port O'CoCo

Two new records were set at the daytime meeting of Kitsap Computer Seniors (KCS). The group was the largest so far with 106 people getting together to exchange computer pointers. The second record was set during the meeting. The membership was about 490-some people at the start of the meeting. For well over the last year KCS has grown each and every month. This growth is in spite of the hard-nose policy of dropping those who do not keep their membership paid up without any more notice than the date on the newsletter mailing label.

There were so many visitors who were impressed with the meeting and the range of knowledge about computers that they joined on the spot, putting the membership over the 500 point!

Another factor in this continued growth is due to the exposure gained by having a space at the Computer Swap Meet at the Kitsap Pavilion two weeks before, and for handing out information about the group at the opening of Star Trek: Generations at South Sound Cinema in Port Orchard. Several hundred people were contacted because of participation in these events.

The speaker at the morning meeting was **Jim Kendall** of Kendaco TeleByte NW ((206) 613-5220). He spoke about Internet, what it is and what it isn't. He will be offering an Internet node to the Kitsap area by the time you read this. His internet address is [jkendall@telebyte.com](mailto:jkendall@telebyte.com).

**Gene Elliott** brought our CoCo tower and set it up on a corner table. Although we were not a presentation at this meeting, we did attract a fair amount of attention and impressed a few of the PCers. We will be giving a presentation before the whole group early in 1995.

Our Port O' CoCo meeting in the evening was well attended and offered a range of topics. **Tom Brooks** had a day off. He was able to attend our meeting for the first time in many months. **Terry Laraway** was back from San Diego so he was able to attend. **Gene Elliott** brought our nearly completed tower. We have all the goodies working, except the hard drive. That will be tested in the next week or so. We are able to run all RS-DOS programs and get into OS-9 on floppy. The final step is making sure we don't have a dead hard drive and get it going so we can cut up the electronic turf.

We reminded everyone that the last Computer Swap Meet before Christmas is December 10th at the Kent location. KCS will not be officially represented there, but there will be a lot of Kitsap people there looking for bargains.

We discussed a flyer that most of us received recently. Elite Software is offering a Color Computer File Transfer Utility called Elite\*Xfer. This MS-DOS utility allows you to move our CoCo files to MS-DOS and back again. The utility is only \$29.95 (+\$5 S&H). Orders can be on a bankcard using 1-800-745-8491 or writing Elite Software, Post Office Box 11224, Pittsburgh PA 15238-0224.

**Rodger Alexander's OS-9 Newsletter** has announced the end of his publication with the printing of the December 1994 issue. Everyone agreed that Rodger has provided a wealth of information, support and leadership via his publication. We thank him and his staff (family) for their 5 years of devotion to the CoCo and OS-9. The 60 issues he put out will service as a resource for years to come.

**Jeff Vavasour** of Canada wrote about

his *CoCo emulators*. He is offering a greatly enhanced version of the CoCo II emulator. This freeware now includes SoundBlaster and joystick support. It can access real CoCo disks directly from within the emulator. A virtual cassette menu is available to support the CLOAD and CSAVE commands, with external utilities that can actually read and write real CoCo audio cassettes via a cassette recorder connected to a SoundBlaster. Other features include a customizable keyboard layout, a support CoCo/MS-DOS file transfer program callable from the emulator, the ability to SHELL to MS-DOS from within the emulator, and more.

The new emulator is available on Internet at FTP site [oak.oakland.edu](ftp://oak.oakland.edu) in the directory [pub/msdos/emulator](ftp://oak.oakland.edu/pub/msdos/emulator) as *coco2-14.zip*.

Jeff has volunteered to provide our group with a copy of this utility at no cost. We will have it available at the next meeting.

The *CoCo 3 emulator* has been completed and is currently in beta testing. Hopefully, the utility that turns a PC into a CoCo 3 will be available during December. It will be a shareware offering with a \$25 registration fee. The CoCo 3 emulator requires a minimum of MS-DOS 3.3, 333K of free DOS memory and standard VGA. MS-DOS 5.0 and 384K of EMS memory is also recommended if you wish to operate the emulator as a full 512K CoCo rather than as a 128K CoCo 3. Jeff is interested in making a presentation to our CoCo group in the very near future.

Jeff Vavasour's address is 206-2233 Allison Dr, Vancouver BC V6T 1T7. He is willing to speak before our group as soon as we can lock in a date with is

*(Continued on page 9)*



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schedule. January 16th looks like the first possibility.

A brief topic of discussion was the difference between BACKUP and COPY. The issue came up when we needed to make copies of program on different sized disks. Between disks with a different number of tracks or between disks of different sizes, i.e. 3 1/2 and 5 1/4 BACKUP will not work. What BACKUP makes is a duplicate of the original in all ways. COPY on the other hand will make an exact transfer of a file or program, but not locating it in the exact place and spacing found in the original. So COPY between disks of different track numbers or different sizes is not a problem.

The remainder of the meeting was devote to a presentation by Les Bulyar on the purpose and inner workings of the BOOT disk for OS-9. Les' presentation covered the system booting via the DOS command and kernel load from track 34. The kernel modules prepares the system for the loading of the OS9BOOT file itself. It also loads the system modules that are in the OS9BOOT and the various options for user and system specific modules. Special attention was given to patchable modules in the boot that would help a user configure the boot for those specific system tasks.

The talk covered various patches such as using /h0 patched to be /d0 and copying that /d0 and patching it to be /dl so that out of the box programs such as "Kings Quest" could be run off a single hard drive system. Other patches to system modules and building boots (user or task specific) were also covered. Questions were fielded and a good time was had by all.

Our next meeting is December 19th with the usual time and place. □

==Donald Zimmerman==

## Seattle 68xxxMUG

The November meeting of the Seattle 68xxxMUG was well attended and devoted to user hardware problems. Dale Hawley brought a hard drive setup that he

purchased at last year's PNW CoCoFEST and Donald Zongker brought both of his CoCo's that had suddenly quit without even a puff of smoke.

Dale's hard drive purchase consisted of a Seagate ST-225 20 Meg MFM Hard Drive installed in a large case with a beefy power supply complete with fan. Also included in the package was a Western Digital GEN MFM Controller Card and a Burke & Burke hard drive interface. Everything was complete except the cables.

Donald Zongker pulled the hard drive cables from his system to show exactly what cables are required for MFM or RLL hard drives. They're are two ribbon cables used on a MFM/RLL hard drive. The large cable is a 34 conductor ribbon cable with a card edge connector on one end (same as a floppy drive cable) and a 34 pin dual in-line connector at the other end that matches the 34 pins on the controller card. The smaller cable has a 20 conductor card edge connector on one end that goes to the hard drive and a 20 pin dual in-line connector that is matched to the 20 pin header labeled "H1" on the controller card. The cables can be purchased at any electronic surplus store for under \$5.

The Burke and Burke software disk and book was included in the package. The disk actually contains a "HD" descriptor specifically for the ST-225 hard drive, so Dale is well on his way to a working system. Hopefully Dale will bring his hard drive back to the next meeting with the required cables and an OS-9 boot disk so that we can EZGEN a hard drive boot for his CoCo-3.

Donald Zongker's problem was a little more baffling. One of his CoCo's was mounted in a tower case but was not able to read floppy disk correctly. OS-9 would not boot and RSDos directory listings were corrupted. All the files had each letter in the file names double. A file called DBASE.DAT appeared to as DBAASSE.DDA. **Rodger Alexander** and **Jesse Obereuter** isolated each section of the computer eliminating the multipak and

the floppy controller. Switching RAM chips on the motherboard and the GIMME chip had no effect. Could it be a bad 6809?

The second computer had faulty joystick ports. No matter how you move the joysticks (or Color Mouse) the only result that could be achieved was a diagonal movement from the top corner to the bottom corner. However, when we plugged in the computer we could not even get the Tandy screen to appear. Switching the 512K RAM board solved that problem. We ran out of time and couldn't get to the joystick problem. Hopefully someone will have a solution at the next meeting.

**Scott Honaker** announced that he has been assigned a new position at Microsoft working on the *Windows-95 Marvel* telecommunications project and the development of *Microsoft Network* sysop tools. "I don't plan to see the light of day for several months to come." As a result, Scott will no longer be able to attend the meetings and resigned his post as President of the Seattle 68xxxMUG.

Scott has been the club President for the past 2-1/2 years and has provided us with a wealth of knowledge about OS-9, the CoCo, Basic09, Microsoft and anything you want to know about computers. Scott will be sorely missed. No decision was made to elect a new officer at this time. The future of the club and selection of a new president will be the topic of business at the December meeting.

They say "When it rains, it pours." On top of Scott's announcement, **Rodger** officially announced the last issue of the *OS-9 Newsletter* will be the December '94 publication that will be mailed out the beginning of January.

==Barbara Alexander==

## OCN NETNEWS

OS-9 COMMUNITY NETWORK

ON-LINE MONTHLY NEWSLETTER

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-- Longview/Kelso --  
RiBBS (FidoNET)  
(206) 425-5804

### **DATA WAREHOUSE BBS**

-- Spokane --  
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(509) 325-6787

### **BARBEQUED RIBBS**

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

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