OS-9 Level One on your IBM ?

CoCo-2 emulation software available FREE for your IBM-PC (286, 386, 486). Download it now from an OCN Regional Libraries and on Internet: *wuarchive.wustl.edu.* The file is called *CoCo.EXE* and has been evolving. Here is a short list of what you can expect to see in the next upgrade, within the next couple of months.

Some of the features already written into the latest Version 1.40:

- SoundBlaster support with volume control
- Game port joystick support
- Read/write real CoCo disks from within the emulator (rather than having to use virtual disks, though they are also still available)
- Improved recognition of artifacting modes
- Supports non-standard graphics modes
- Load snapshots at the MS-DOS prompt with "COCO snapname"
- RETRIEVE, DSKINI, and emulator now support up to 80-track disks
- elect the disk's side with RETRIEVE and DSKINI; 1.2Mb drive calibration bug now fixed
- Keyboard layout cutomizer option
- Improved printer support: 8-bit capable, adding Fs to CRs is now optional, and the printer output can be disabled
- Cold restart option; warm reset now the more convenient SHIFT-F10
- A new option in the Options Menu to shell to the MS-DOS prompt without ending an emulator session
- Selectable interrupt frequency: 50Hz or 60Hz
- Optional ROM patch for Disk BASIC adds new commands LOADX, SAVEX, DIRX, LOADXM, SAVEXM, KILLX, DOSX to access files residing in your MS-DOS

directory. (DOSX is equivalent to the Quit option.)
- A new opcode which allows 6809-based programs to call 8086 code from within the emulator. (That's how the X commands access your MS-DOS directory.)

Other options I'd like to add:

- Built-in file import/export menu
- Ability to use Disk BASIC's DSKINI from within the emulator to format virtual or real disks
- Ability to retrieve CoCo II ROMs out of a CoCo III. They're in there, but not normally accessible
- CoCo III features??????

Actually, I may hold out some of the advanced disk features (e.g. direct access) for the shareware version, but I haven't decided yet. Anyway, just a note to let everyone know what's going on
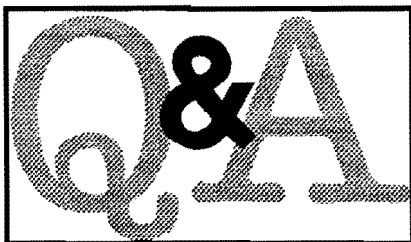
==Jeff Vavasour==

Q: I've come across an old IBM printer that has a serial connector (I think), but I can't get it to work with my CoCo when I hook it up. Could this be for parallel instead of serial?

==devin@cs.mun.ca==

A: I am not at all familiar with the pa ticular printer you ask about... at least, with ONLY a model number and no description, I have no idea if I've ever seen such a beast.

However, I can give you the following general advice:

(1) I've never seen a parallel printer that used a DB 25 connector for its interface. By VERY commonly followed convention, a DB 25 connector on a printer both now and in the "old days" meant a RS232 serial port and/or current loop port. So I'd be FAIRLY certain the that connector is for an RS232 port.

(2) It should be obvious how to confirm at least some aspects of this assumption: Just measure the voltage with respect to ground on some of the universally used RS232 pins (such as pins 2 and 3, especially... data in and data out). RS232 voltages will be -10 or +10 volts (plus or minus about 5 volts), where parallel port voltages, when you find them, will be between 0 and 5 volts.

If you have the pin out for a common RS232 port and a parallel port, it will take only a few seconds to confirm which of the two conventions the connector you have conforms to, if it conforms to one or the other. Only a VOM (Volt Ohm Meter) on 0 to 25 volts scale will be needed.

(3) If the printer IS serial, hooking it to a computer usually will require experience with serial interfacing, and often cannot be done without a manual for the printer. This is because you will have to set the handshake pin, handshake polarity, baud rate, and perhaps some other stuff... all of which is typically done with one of a number of DIP switches in the printer... or jumpers. If you don't have those documented, it can be hours of ones time (even if one is VERY experienced at this, as I am) to get things right. Indeed, if you don't have that information, I'd say TOSS the printer. It's not worth four hours of your time making a $5 ancient crummy printer work!

==Marty Goodman==
MARTYGOODMAN@DELPHI.COM

Q: I've been noticing a gradual abandonment from OS-9. Why? I think OS-9 is the best thing going. I realize OSK and OS9000 are way over priced, but so are other industrial type operating systems. What could be better then OS9 for the motorola 68xxx machines?

==Chris<COCO@pucc.Princeton.edu==

A: How about LINUX? Linux also works like unix. It is Multiuser,Multitasking. requires no Multiuser license. The software base is building rapidly through both the Internet and Public Access sites (BBS'S) And, by the way, the Infomagic two disk set is only $22.95 and this includes US Express Mail shipping.

It is not OS9 which I have enjoyed using but it is better than MESSYDOGS (MS-DOS) and/or SISSY-TEM/7.00342 (Mac's System 7). It even Beats OSSIFIED/2

Writing Basic09 Code

Basic09 CONTEST

Here is a Basic09 code listing for the speech sound pak under OS-9. Basically, all this code does is read a file of up to 100 words, one word per line, and then prints/echos them to the speech sound pak. You must **'iniz /ssp'** prior to using this code. Please feel free to modify the code to your own use.

```
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]
DIM tempword,filename: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
```

Here is an example of using Basic09 to send text files out to your speech sound pak. You could simply list the file to the speech sound pak. However, this is a good exercise in programming under Basic09. I hope you noticed that the code could be made more efficient.

Take a wack at improving this Basic09 listing. Some of the improvements are obvious, while other improvements might involve creative programming techniques. Give it a shot. **The Prize** *is a* __hard bound__ *edition of "The Basic09 Tour Guide".*

—=TonyS@MATT.KSU.KSU.EDU==
CoCoLIST@pucc.Princeton.edu

How I made a Parallel Printer Adaptor for the CoCo

by Mike Guzzi

Several articles have been written about adding a parallel port to the CoCo's bus. The advantage is you can use virtually any printer since that port is the standard. Another option is to buy a serial to parallel converter which works very well since you don't have to worry about software incompatability (especially under RSDOS). OS9 isn't usually a problem since most programs written will use the drivers provided in the bootfile.

Although a serial to parallel adaptor works very well, I was faced with two MINOR problems:
1: I have two printers, an Epson and a CGP-22Ø, it would be great to run both.
2: When outputting to my printer at 96ØØ baud, OS9 slows to a crawl.

Tthe serial port provided in the CoCo isn't a true serial port. Its nothing more then a PIA hooked to voltage level converters so the software has to do the timing to make sure the baud rates are correct. This means OS9 spends alot of CPU time outputting to the printer (and with IRQ's disabled!)

The solution was to build a true printer adaptor. I searched around for information and decided that the design used in the Eliminator is the best. The reason being is that it uses the data port of the PIA for the data, and the two control lines for BUSY and *STROBE. Also the eliminator software is freely available and the design of the software makes it easy to have 2 ports. The port uses a plain jane 68B21 PIA chip. The CoCo3 has one inside it (the other one used for the keyboard is similar). Ive seen designs where a PIA can be piggybacked on top of the one in the CoCo3 (*February 1993, OS-9 Newsletter*) but since I already have 1 meg it would make things messy. Plus, the PIA's inside the CoCo aren't fully decoded on the address bus. This means the addresses for the PIA ghost in several spots. My choice was to fully decode it and make it a plug in cartridge in the multipak.

The First thing that needs to be done is to choose where you plan to map the PIA. I prefer to fully decode devices since its cleaner and you don't need to mess with slot selection. Two chips usually will do the trick. On the multipak of the CoCo3 the address range of $FF4Ø-$FF7F is available. The disk controller usually occupies from $FF4Ø - $FF5F (its not a fully decoded device so it ghosts in several spots) My hard disk adaptor (Ken-ton) maps itself in at $FF76-$FF7E. Next is to check the RS232 paks. The tandy version and all 1ØØ% compatibles map in at $FF68 - $FF6B if you have a second port it usually occupies $FF6C - $FF6F. I have a COMM-4 which is 4 serial ports and it covers from $FF6Ø - $FF6F. So basically it left me with $FF7Ø - $FF76 open. What you choose depends on the hardware you have plugged in. If you have a Burke & Burke hard disk adaptor, its SCS decodes like the disk controller.

So I chose $FF7Ø - $FF73 (the PIA needs 4 bytes) to use for the adaptor. The next thing to do is convert this to binary like this.

```
$FF7Ø ---->    F        F        7        Ø
              1111     1111     Ø111     ØØØØ
```

Now we take them and show the address lines associated with these numbers.

A15	A14	A13	A12	A11	A1Ø	AØ9	AØ8	AØ7	AØ6	AØ5	AØ4	AØ3	AØ2	AØ1	AØØ
1	1	1	1	1	1	1	1	Ø	1	1	1	Ø	Ø	Ø	Ø

Two chips are used to fully decode the address bus. a 74LS133N and a 74LS4N. The 74LS133N is a 13 input NAND gate, the 74LS4N is a hex inverter (6 inverter gates). Ignoring A and A1 for now, everyplace you have a zero you feed it into an inverter first. The output goes into the LS133 chip. However not all address lines can fit (only 13 of them). A and A1 are used for the registers by the PIA (so the PIA can address 4 bytes) and are fed directly into the PIA. Looking at figure 1, you will see I fed A3 to A15 into the 74LS133N. Noting that A7 and A3 run through inverters first (since there is a zero in the address table). The output from the 74LS133 is fed into *CS2. (a * designates an active low pin, the pin is active when its a logic zero) CS2 stands for "Chip Select 2". This still leaves A2 hanging. No problem, I fed it to another inverter and then into CS. There is still the CS1 line from the PIA. Since we don't need it, we simply tie it to 5 volts to make it high all the time. (All chip enable lines must be active for the PIA to be active.). You will notice that *CS2 is active low so the output from the LS133 is inverted (since its a NAND gate) when the correct address of $FF7-$FF73 is shown on the bus. All Chip select pins are high except for *CS2 which is low and the PIA is active.

The AØ and A1 lines are fed into the RSØ and RS1 lines respectivly. These are the register select lines for the PIA. Next we wire in the data bus. Simply feed the DØ - D7 lines from the CPU to the DØ - D7 lines of the PIA, Read/Write to Read/Write, *RESET to *RESET. The E Clock from the CPU is fed into the ENABLE line of the PIA. We now have the PIA connected to the bus of the CoCo.

Now we will hook the other side of the PIA to the Printer. The data lines are easy: Use the 8 data ports to represent the 8 bit characters sent to the printer. The *STROBE line is from CA1 (and CB1 if a 2nd port is used). The BUSY signal is a bit stranger, if you look at the second picture you will see the E clock from the CPU is fed into an AND gate, and the BUSY signal from the printer is also fed into the AND gate. This means whenever the printer shows a BUSY signal the output from the AND gate is zero. When the printer is not busy the resistor pulls that side of the AND gate high and the output is a 2Mhz pulse. This is fed into CA2 to be picked up as a BUSY signal to the software. You will notice a tricky thing I did on the bottom. Since I had three spare gates from the 74LSØ4N chip, I decided to make use of them. There is a signal to the printer to initilize it (reset it). Its an active low like the reset signal for the CPU. So the idea hit me, if I connected the *RESET line from the cpu to the printers, anytime I hit the reset button or powered up the CoCo, the printers would automatically reset as well (in case its in graphics mode or whatever), so I could simply wire them together. However, I wanted some isolation from the reset line of the CPU, so with three spare gates available I fed the *RESET line from the CPU to an inverter, split it off into two wires and fed each of them into another inverter each. This cancels the inversion and makes them a mere buffer, and provides isolation from the printers to the CPU. The capacitor shown is for deglitching purposes, to make sure there is no noise on the 5 volt line and is a good idea to have (you will notice all your RAM chips have a capacitor next to them).

Once thats all hooked up the next step is software. The drivers are in the eliminator package. You need PPIA and P from that archive. To make a second port I made a copy of P and called it P2 and re-assembled it. (You can use EZGEN is you don't have an assembler.) I bumped the port address up by 2. (The PIA has two identical ports, each using 2 bytes of memory so it makes it easy as far as os9 drivers go!) If your running NITROS-9 remember to patch the PPIA module for 63Ø9 native mode!! Make up a new boot disk and it should work like a champ!
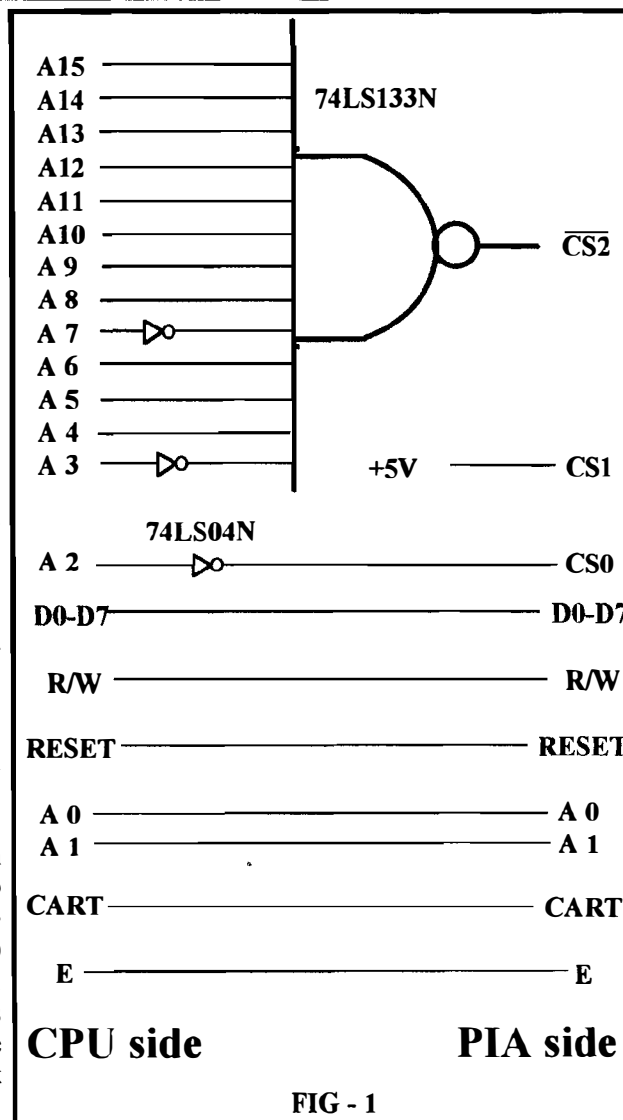

FIG - 1

These drivers are copyright by Bruce Isted, The Eliminator was sold by Frank Hogg. Thankfully they released the drivers to the public domain.

Pinout of PIA (MC6821, MC68B21)						
1	Vss	11 PB1	21 R/*W	31 D2		
2	PAØ	12 PB2	22 CSØ	32 D1		
3	PA1	13 PB3	23 *CS2	33 DØ		
4	PA2	14 PB4	24 CS1	34 *RESET		
5	PA3	15 PB5	25 Enable	35 RS1		
6	PA4	16 PB6	26 D7	36 RSØ		
7	PA5	17 PB7	27 D6	37 *IRQB		
8	PA6	18 CB1	28 D5	38 *IRQA		
9	PA7	19 CB2	29 D4	39 CA2		
1Ø	PBØ	2Ø Vcc	3Ø D3	4Ø CA1		

Pinout of CoCo Cartridge port				
1 +12V	11 D1	21 A2	31 A12
2 -12V	12 D2	22 A3	32 *CTS
3 *HALT	13 D3	23 A4	33 GND
4 *NMI	14 D4	24 A5	34 GND
5 *RESET	15 D5	25 A6	35 SND
6 E	16 D6	26 A7	36 *SCS
7 Q	17 D7	27 A8	37 A13
8 *CART	18 R/*W	28 A9	38 A14
9 +5V	19 AØ	29 A1Ø	39 A15
1Ø DØ	2Ø A1	3Ø A11	4Ø *SLENB

NOTES:

1. Pin 1 & 2 have no connection directly out of CoCo3, Voltages are present (+12 & -12) with the CoCo1 (grey cased CoCo) and Multipaks.

*2. DO NOT Connect the PIA's IRQ's to *NMI! The disk controller uses this and if the PIA generates an IRQ, the disk controller will get confused.*

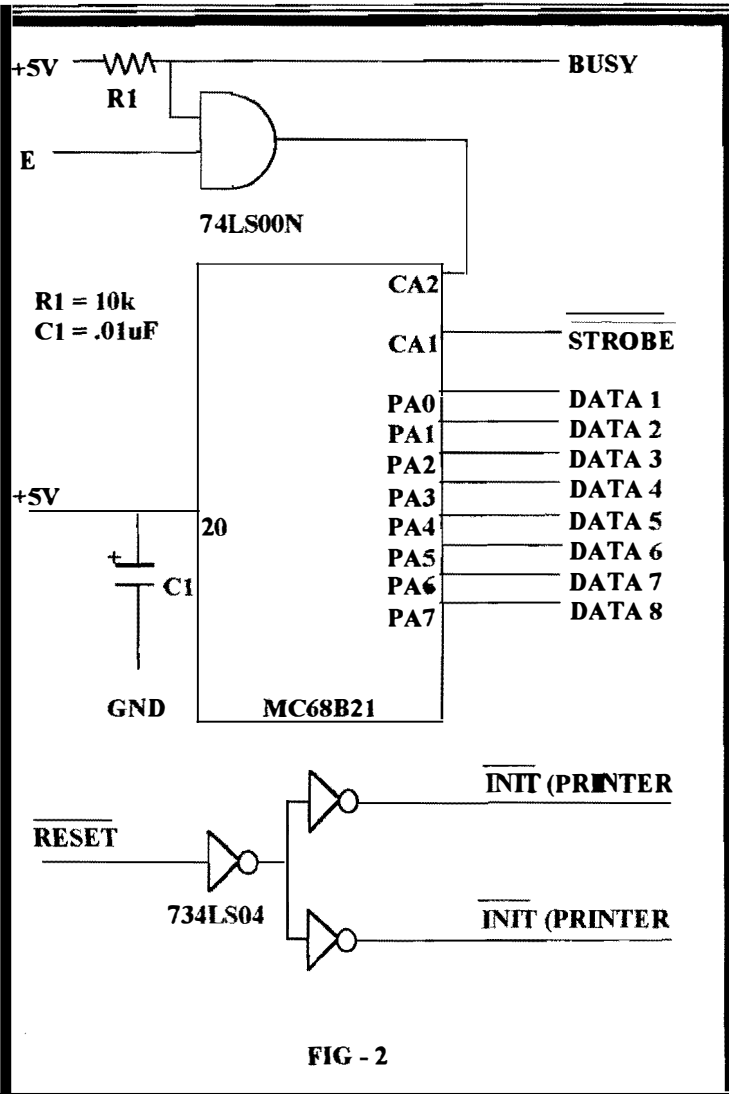*3. SND is a sound input (from devices like Speech pak and Orch-9Ø/CC.*

I don't really plan to go into contruction details. What I did was use a case from a FD-5Ø1 disk controller. I bought that IBM XT expansion board that Radio Shack sells and used a dremel to cut the board to size. I ran a ribbon cable out of the board to a DB-25 connector, from there it splits to two cables and goes to each printer. Radio Shack no longer sells the centronics solder type connector, I had to buy ribbon connectors. So you can use ribbon cable from the DB-25 to each printer cable.

Centronics Printer Connector

1	*STROBE	19	GND
2	Data 1	2Ø	GND
3	Data 2	21	GND
4	Data 3	22	GND
5	Data 4	23	GND
6	Data 5	24	GND
7	Data 6	25	GND
8	Data 7	26	GND
9	Data 8	27	GND
1Ø	*ACKNLG	28	GND
11	Busy	29	GND
12	PE (paper out)	3Ø	GND
13	SLCT	31	*INIT
14	*AUTO LF	32	*ERROR
15	NC	33	GND
16	ØV (logic GND)	34	NC
17	GND	35	+5V
18	NC	36	*SLCT IN

*INIT is used to reset the printers.

==Mike Guzzi==
Delphi:OS-9 Sig

FIG - 2

(IBM's OS/2), and it works on what is mostly avalible (No it doesnt work on an 8088 or 80286 system)
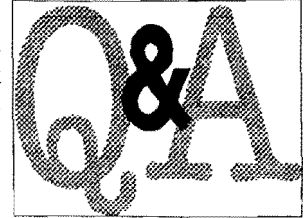
==Andrew Martin==
martin.a@fs.reid.wlu.edu

Q: I've tried everywhere to locate information on setting up a hard drive system for my color computer. I have written suppliers listed in the last few issues of *The Rainbow* but have not received any response. I know that IDE systems are cheaper to set up then SCSI. IDE hard drives are considerably cheaper, as are the controllers. Also, where can I get hard drive software....cheap!

==Jason<COCO@pucc.Princeton.edu==

A: There are no IDE based systems available for the CoCo, although Burke&Burke was working on one for a while. The B&B is an interface card that lets you plug in a PC controller (ST412/ST506). Disto works the same way, although it does not use PC cards.

One other option you might want to look into would be a KenTon interface, which is (I think) as close to a real SCSI interface as you will find for the CoCo. These are currently being sold through Farna Systems. Contact Frank Swygert (dsrtfox@

In my opinion, SCSI is definitely the way to go because of availability, and for future expansion. i.e., you should be able to conncct any SCSI device, and as an added bonus, the SCSI devices can still be used if you ever get a new machine.

Hard drive systems usually come with software. There are also a few after-market packages for SCSI drives that offer improved speed and reliability— SCSI47.ar (no longer

SCSISYS is a shareware package. My business, Northern Xposure, sells the registered version.

==Colin McKay==

Q: Iwas wondering where I could find informaion on the OS-9 Level II kernel and so forth.

==Dr. Franklin<COCO@pucc.Princneton.edu

●   a o o evin ar ing s nsi e   - details the memory addresses of the OS variables, the OS calls, bugs, and fixes.

Overall, it is an exccllent book and I would spend $30 on it if I needed the info. The book is about ¼" thick and packed full of theory and implementation details.

==Dave Halko==

Joint Press Release:
Sub-Etha Software and Blackhawk Enterprises *

Sub-Etha Software and Blackhawk Enterprises are pleased to announce additional free software being included with all new MM/1 computer systems.

Sub-Etha's flexible CheckBook+ program will now be included with all new MM/1 computer systems. CheckBook+ is an advanced checkbook balancing program to help out with your finances. Made popular on the Color Computer, CheckBook+ can not only balance your checkbook, but also help you visualize it with many different types of graphs. Search and sort your checkbook database easily, on any field!

Joel Mathew Hegberg has written several public domain programs for the MM/1 computer system, which are available on many information services. Now, he has compiled a collection of his most popular public domain software into a new disk called "Joel Mathew Hegberg's MM/1 P.D. Anthology Diskette," which will be included with all new MM/1 computer systems. Programs which will let you: play popular MOD song files, display a graphical clock, play games, vocally announce the time, display VEF picture files, several screen savers, and much more!

Sub-Etha Software's immensely popular MiniBanners multi-line banner program will also now come standard with all new MM/1 systems. With over 30 fonts included, MiniBanners allows you to create exotic text banners on ANY printer you may own. We even include a font preview program for MiniBanners' fonts.

BlackHawk Enterprises and Sub-Etha Software are pleased to make this software available to new MM/1 owners to help them get started with their computer right away. Existing MM/1 owners who wish to obtain Joel's P.D. Anthology may obtain it through BlackHawk Enterprises for a $12.50 media-copying-shipping fee. Existing MM/1 owners who wish to obtain CheckBook+ or MiniBanners for K-Windows may obtain it through Sub-Etha Software for $12.50 ($10.00 media-copying + $2.50 S&H). Addresses are listed below.

Sincerely,
Allen . Huffman, Sub-Etha Software
Joel Mathew Hegberg, Sub-Etha Software
David Graham, BlackHawk Enterprises

BlackHawk Enterprises
P.O. Box 10552
Enid, OK. 73706
(405) 234-2347

Sub-Etha Software
OSK/Midwest Division
936 North Twelfth Street
DeKalb, IL. 60115-2516
(815) 748-6638

Review

DISKCAT
written by Bob van der Poel

I received a disk from Bob van der Poel shortly after the PNW CoCoFEST. The disk contained C source code files for a new disk cataloging program for 6809 OS-9 and OSK. After compiling the files, two binary executable files were produced: *Diskcat* and *Rendisk.*

Diskcat is the main program that read disk and creates a database data file, *Rendisk* is used to rename disk label names since the database uses the disk name as a record name for database reference, since you can't have two records with the same name, you must use *rendisk* to rename disk with duplicate disk names.

I did come across one bug while running the program. Apparently (at least with the 6809 version) insufficient data buffer space is assigned and you get a "STACK OVERFLOW, Error #207 - Memory Full" error when attempting to start the program from the OS-9 prompt. Problem was solved by adding a memory allocation argument in the startup command:

      diskcat #8k

Figure 1 shows a sample of the menu options.

```
(C) 1994, Bob van der Poel Softwareystem


    <U> Update disk catalogue
    <S> Search disk catalogue
    <C> Change catalogue file
    <L> List disk names
    <O> Set output for search reports
    <H> Help
    <Q> Quit . . . .
        >>> Choice >>>



                    Fig. 1
```

The Update option is used to update or add a disk to the catalog. When you select this option you are prompted to enter the *"Device to archive:"* For testing purposes I chose to archive to the database the complete OS-9 Users Forum's Public Domain Library. This consisted of 14 3-1/2inch 720K disk. I was very impressed with the speed, each disk was scanned and recorded to the database. The largest disk was scanned and recorded in less then 25 seconds. This disk contained 73 files and 12 directories. Disk with fewer files took less time. The database recorded its data to a file called

Control Your Printer

It seems that Basic uses the C convention of terminating its strings with a NULL, but using PUT to send each byte individually. It works fine and here's how I did it:

```
PROCEDURE ptrctl
PARAM path:INTEGER
PARAM action:STRING
PARAM onoff:STRING
DIM number:INTEGER
DIM count:INTEGER
DIM char:BYTE
DIM found:BOOLEAN

(* PTRCTL - send printer control *)
(* character strings to printer *)
(* By Bob Devries. InterNet: *)
(*bob@splat.paxet.com.au      *)
(* PUBLIC DOMAIN - 22nd July, 1994 *)

found = FALSE
IF action = "expand" THEN
        found = TRUE
        IF onoff = "on" THEN
                RFSTORE 100
        ESE
                ESTC  110
        ENDIF
ENDIF
IF action = "underline" THEN
        found = TRUE
        IF onoff = "on" THEN
                RESTORE 120
        ELSE
                RESTORE 130
        ENDIF
ENDIF
IF action = "condensed" THEN
        found = TRUE
        IF onoff = "on" THEN
                RESTORE 140
        ELSE
                RESTORE 150
        ENDIF
ENDIF
IF action = "compressed" THEN
        found = TRUE
        IF onoff = "on" THEN
RESTORE 160
        ELSE
                RESTORE 170
        ENDIF
ENDIF
IF action = "doublestrike" THEN
        found = TRUE
        IF onoff = "on" THEN
                RESTORE 180
        ELSE
                RESTORE 190
        ENDIF
ENDIF
IFaction = "emhasized" THEN
        found = TRUE
        IF onoff = "on" THEN
                RESTORE 200
        ELSE
                RESTORE 210
ENDIF
ENDIF
IF action = "doubleheight" THEN
        found = TRUE
        IF onoff = "on" THEN
                RESTORE 220
        ELSE
                RESTORE 230
        ENDIF
ENDIF

READ number
FOR count = 1 TO number
        READ char
        PUT #path,char
NEXT count
END

(* The first data statement is the *)
(* number of code bytes that follow *)
(* for the selected code            *)

(* These codes are for a Tandy DMP202 *)
(* set up as as an IBM ProPrinterXL    *)

(* modify the code below for your *)
(* own specific printer needs      *)

(* "expand" "on" code *)
100 DATA 3,$1b,$57,$1
(* "expand" "off" code *)
110 DATA 3,$1b,$57,$0
(* "underline" "on" code *)
120 DATA 3,$1b,$2d,$1
(* "underline" "off" code *)
130 DATA 3,$1b,$2d,$0
(* "condensed" "on" code *)
140 DATA 1,$f
(* "condensed" "off" code *)
150 DATA 1,$12
(* "compressed" "on" code *)
160 DATA 2,$1b,$3a
(* "compressed" "off" code *)
170 DATA 1,$12
 (* "doublestrike" "on" code *)
180 DATA 2,$1b,$47
(* "doublestrike" "off" code *)
190 DATA 2,$1b,$48
(* "emphasize" "on" code *)
200 DATA 2,$1b,$45
(* "emphasize" "off" code *)
210 DATA 2,$1b,$46
(* "doubleheight" "on" code *)
220 DATA 9,$1b,$5b,$40,$04,$0,$0,$0,$22,$2
(* "doubleheight" "off" code *)
230 DATA 9,$1b,$5b,$40,$04,$0,$0,$0,$11,$1
```

==Bob Devries==
Australian National OS9 Usergroup

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

The July meeting of Port O' CoCo was more of a planning meeting than a doing meeting. It was also a review meeting. The review was of the PNW CC FEST IV held three weeks ago. Although the attendance was down a little, the event was a success. First it was a financial success. None of the reserve funds had to be used to support the costs. Also we have a couple hundred dollars tied up in inventory (a few T-shirts and several dozen mugs). When those are liquidated there will be a handsome sum for future events. We can fairly say WHEN these items are liquidated because we made a brief presentation at the Kitsap Computer Seniors at their general meeting and sold $160 worth in a matter of minutes. At that rate it won't take long to turn these items into cash.

After the general meeting of KCS, which had just under 90 people present, the board of KCS voted to have another FEST next year, PNW CC FEST V. The probable dates are June 23rd and 24th. The location is Marcus Whitman Junior High in Port Orchard. Mark your calendars now!

We have only five of the CoCo T-shirts left. The design is the graphics of the famous three programmers who sneaked their picture into the RAM chip of the CoCo. If there ever were a collectable T-shirt, this is it! The master silk screen is already gone so these five are it. They sell for $10 plus $4 UPS shipping. The mugs with the puzzle on them are $5 plus $4 UPS shipping. The T-shirt and mug together, while the supply lasts, are $15 plus $4 shipping. Make all money orders or checks out to K.C.S. and mail to Donald Zimmerman, 3046 Banner Rd SE, Port Orchard WA 98366-8810.

Some of those present were not aware that Rodger Alexander is seriously discussing stopping publication of this newsletter after December of this year. There were expressions of disappointment and offers of assistance. Buzz happened to bring his complete collection of the newsletter over the years. It is impressive! The group wanted more information about the whys. Maybe this could appear as an editorial soon.

Then we discussed an article that appeared in the local paper about BBS. In the article it listed 59 BBSs available in Kitsap County. Most of them are individual hobbyists and free. A few are commercial ventures. Lists like this are probably available at local libraries for your area.

The next topic of discussion was what we are going to do in the months to come. **Buzz Jones** has assumed the role of coordinating events, speakers, topics for Port O' CoCo. He started with three great suggestions:

1. A detailed, hands-on demonstration on how to read and write to PC formatted disks on the CoCo.
2. An exploration into connecting an optical scanner to the CoCo. (An extension of that work would be to have OCR (Optical Character Recognition) software for the CoCo.)
3. For those who have a built in clock in their CoCo to be able to display the day of the week as well as the time and date.

Other topics suggested for the months to come were:

1. An in-depth discussion of what the B&B hard drive interface does and how it does it.

2. Linking a graphics or word processing program to a fax modem on the CoCo.

Finally, we discussed a project by Rick's Computer Enterprises in Liberty KY. He is attempting to amass a data base of anyone and everyone interested in the CoCo. He will mail a copy of this data on disk to anyone with two updates over the next several months for only $12. The disk will also contain commercial information for those who are supporting the CoCo. His address is Post Office Box 276, Liberty KY 42539. We are going to mail him all the names an addresses we have to assist in his efforts. We wish him the best of success!

Our next meeting is August 15th.

=Donald Zimmerman=

Seattle 68xxxMug

Donald Zimmerman displayed COC0 Fest Mugs and T- shirts left to sell (3-4 Mugs and 7 T-shirts). **Rodger** and **Donald Zongker** showed off Donald's final installation of his CoCo into a tower case. A bug still exist that causes the computer to lock up or go to extended basic (instead of disk basic). When you push the reset switch . Members in attendance proposed possible causes with the consensus that the multipak is causing the problem. Possibly a bad PAL upgrade chip.

John Schliep brought up the possibility of using a Y cable and asked Rodger to demonstrate **Bob Vander Poel's** Magazine Index to look up the Rainbow article that explained how to use a multiple Y cable as a multipak. this served as an excellent introduction to Bob Vander Poel's latest O-S 9 program:

Disk Cataloguer. Bob sent the source code and gave permission to freely distribute the compiled executable file. **Jesse Obeureiter** planned on compiling the source code for part of the meeting but was not available. Maybe next meeting.

Next session of the meeting dealt with *termcap files*. It would be nice to have the club's **"PDS Database"** use termcap files so that the screen display would be generic for any terminal running OS-9, not just the CoCo. It would be possible to edit the *EDIT* procedure using specific ESCape codes for each terminal used, i.e., VT100, Zenith, etc., but you would have to rewrite the ESCape sequences each time you changed the terminal, or have multiple versions of the *EDIT* procedure to accommodate different terminals. Jesse was also going to address the parameters for this project which would involve rewriting the *EDIT* procedure in C. This would allow the flexibility of the C Library files to link to related parameters in a termcap file. Since Jesse was not available, we had to postpone this part of the meeting until next month.

The meeting ended on a BIG PLUS when **Pat** announced that he had a trunk full of CoCo software, hardware and magazines to give away! One of Pat's neighbors had a house fire and needed to get rid of the CoCo stuff salvaged from the fire. We immediately adjourned the meeting and went down to Pat's car. Truly a trunk full of *Rainbow Magazines, Rainbow on Disk*, boxes of software, manuals, books, two CoCo-2's, a thermal printer, CoCo X-Pad, and a bag full of miscellaneous cables and electronic parts. What a reward for coming to the July meeting. Even Jesse showed up in time to take advantage of the booty.
===Barbara Alexander==

OCN NETNEWS

OS-9 COMMUNITY NETWORK

ON-LINE MONTHLY NEWSLETTER

FIDONET OS-9 ECHO

A SUBSIDIARY OF OS-9 NEWSLETTER

REVIEW: *Diskcat*

diskcat.dat in a directory called */dd/DATA*.

The Search option prompts you for a search string or several search strings separated by a space. You can search on filenames or a portion of a filename or directories or a portion of a directory. The search option is also very fast. I searched the entire 12Meg *PD_Library* for any filenames with "LZH" as its name or part of its name. The search was completed in 4 seconds and listed 13 instances in less then 4 seconds. VERY FAST! Next I tried "lzh lha". In just a little more then 4 seconds I had 15 complete pathnames showing me where *lzh* or *lha* as filenames or extensions of files or part of a filename were found.

The List option is self explanatory and simply list out all of the *Continued from Page 8* the disk names that have been scanned. For those of you who are into databases, keep in mind that the <u>disk names</u> are actually the <u>record names</u> that *Diskcat* stores the <u>filenames</u> under.

The Change catalogue option permits you to look or update/add records to a different data file. Remember the default data file is *diskcat.dat*. After I scanned all of the Public Domain disk, I renamed the data file to *"PD_Lib.dat"* in order to keep the PD Library separate from future *Diskcat* sessions. However anytime I want to search or update the *"PD_Lib.dat"* records, all I have to do is select "Change disk catalogue". Unfortunately, *Diskcat* does not list the data file names for you to choose from. You will have to switch to another window and do a *DIR* of the */dd/DATA* directory to see which files are available. Also, it is necessary to give the complete pathname. Since the data files are expected to be stored in the */dd/DATA* directory, I felt that requiring the complete filename was a little annoying. I hope Bob upgrades this function in future versions.

The Output option is obvious. When you select this option you are prompted for the output device. You can specify a filename or an output device such as the printer (/P) or the serial port (/T2). The menu returns to the screen again, but this time, the output device or filename is included: *<O> Set output for search reports (/P)*. Now when you select the Search option the results will be routed to your file or output device *(/P)*.

The Help options provided a very detailed text explaining each option making this program very easy to use.

I did manage to crash the program by asking it to find *"ar"*. Since most of the older files are archived using the *AR* utility, I knew that there were probably more then 100 files with *"ar"* extensions. After about 15 seconds of listing more then 150 pathnames, the program locked up repeating the same pathlist over and over. I had to *Kill* the process to terminate the program. Under realistic conditions, this would never happen, so I don't consider it a "bug", just an over taxing exercise on my part.

Overall, *Diskcat* is a welcome addition to my hard drive. It is incredibly fast, compared to two other similar type utilities I have reviewed and is simple to use. This is a shareware product and is available on CIS and Delphi OS-9 SIGs under the name of *DISKCAT.LZH*. Bob van der Poel is asking a $20 registration fee and includes a registration form text file in the archive. This is an excellent product that serious OS-9 users should have. So get it and make sure you register with Bob. My only reservation is the memory parameter that's required when calling up the program, and a personal preference to have the Change option list a directory of the /dd/data directory.

==Rodger Alexander==

I'm done!

Washington State BBS List

COLUMBIA HTS. BBS
-- Longview/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

PERMANENT CREW REST
-- Tacoma --
RiBBS (FidoNET)
(206) 472-6805

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

OS-9 Newsletter
3404 Illinois Lane
Bellingham, WA 98226-4238