

C.C.O.G.
COLOR COMPUTER OWNERS GROUP
NEWSLETTER MAY 1991

OFFICERS:		INDEX:
PRESIDENT	Bernie Patton	1. Pres. Comments
VICE-PRESIDENT	Chuck Goodwin	2. Meeting Minutes
SECRETARY	Marcine Glowicki	3. Beginners Corner
TREASURER	Bob Waite	4. Experts Corner
CORRESPONDING SECRETARY	Robert Gault	6. Viewpoints
LIBRARIAN	Bob Humphrey	7. Impressions
BULLETIN BOARD	(313) 292-4713	10. OS-9

PRESIDENTS COMMENTS:

It's almost June and Summer is in full swing this last week. My vacation is over and I will be back to work the same day as the meeting. We have had to change our meeting night to the fourth Tuesday for the time being. The VFW got a paying customer for the Hall for all Tuesdays of the month. So we will be meeting down in the FOXHOLE for a while. It's possible that we could even be bumped out of this arrangement, so we will continue to explore other options for our meeting place.

Rainbowfest is over and we have a couple of articles by members who attended. I was just a week out of surgery and was unable to attend. I really wanted to be there. It really looks like it will be up to the local clubs to "KEEP THE ADVENTURE GOING!". We will have to provide support for each other and try to encourage people to support the vendors that are still loyal to us.

The rest of this year will really be a challenge for CCOG. It is up to each member to do his part for the club to continue being the useful entity that it has been for over 10 years now.

This month we will be hearing more about RAINBOWFEST from the members that attended. And we will take a little time to discuss various printers and how to get the most out of them with the COCO.

The theme in the June issue of RAINBOW is PROGRAMMING. Let's have a good discussion this month on just how we can build a meeting around this theme.

I would also like to take this opportunity to encourage more members to get involved with the BBS. This is a great way for us to keep in contact with each other between meetings. It is also an excellent way for you to get technical assistance from some very knowledgeable people.

Bernie

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C.C.O.G. Minutes for April 16, 1991 By Marcine Glowicki

The meeting was called to order at 7:20 by president Bernie Patton. These were 21 people in attendance with 1 new face. Bernie introduced the officers and gave a short history of C.C.O.G.

The minutes for the last meeting, March, were approved.

A treasurer's report was not given but we are still in the black after paying all postage fees that Bernie submitted. An additional \$5 will be needed for this month's mailing. Bernie sent a "LAST NOTICE" to all clubs receiving our newsletters. If they have not reciprocated then they will be cut from the list.

New Business--Bernie was informed by the VFW that our Tuesday meeting date will not be available any longer. Another group will be taking over the whole upper floor. The options available are the 2nd and 4th Tuesday's and Friday's. Friday was quickly voted down. Bernie and Bob had conflicts with the 2nd Tuesday and since they are officers the membership decided to put a motion on the floor for the 4th Tuesday. This was seconded and passed.

Robert Gault is accepting money for subscriptions for RAINBOW on disk and the magazine. Because of his busy schedule he did not have a demonstration this month. Bob also suggested that you check the April RAINBOW 'Letters to the Editor' section. There is a show in Lansing, April 21st. (See RAINBOW for further info.)

Jim had a great demonstration on using the plug and power pack. He gave many ideas for its use.

Gus announced that the Livonia Radio Shack has great prices on COCO software. Many prices were unbelievable. It was not known if these prices are the same at all Radio Shack's.

Bernie continued the evening theme by demonstrating music.

Next month's topic will be discussion of RAINBOWFEST, rumors etc., as well as printers.

Remember the next meeting will be Tuesday, May 28, 1991. The date has changed.

\$12 was collected for the VFW.

There have been a spate of messages on our BBS recently on personalizing (configuring) an OS-9 system disk. Tom Napolitano and I have discussed the various things needed to make system disks and I don't want to repeat previous columns; so just some refreshers. If you don't have two disk drives, you might as well bite the bullet and get a second drive. Yes, you can run OS-9 (even Level II) without a second drive but let me assure you that you won't like it!

In the July 1990 issue, BEGINNER'S CORNER discussed making an OS-9 system disk (but assumed two drives.) In December 1989, making a BasicOS system disk was discussed for both single and dual drive systems. If you don't have back issues, contact our president. How you ask, do you do to make a system disk with a single disk drive? A facetious answer immediately comes to mind as expletives surely come to yours. Will those disk swaps never end?! There are ways to improve the performance of any program that copies information from or writes to a disk. Consider how OS-9 works. You ask the system to run a program, ex. COPY. The system checks to see if COPY is in memory; if not then the current command directory is checked. One way or another the program will be loaded into memory.

The system also checks the language the program is written in; machine language, BasicOS, Pascal. When necessary, language interpreters are also loaded into memory. Then the system checks how much data space the program needs. The program MUST request memory if it is going to have any. You can also request memory for the program from SHELL. This is done by adding #xxK to the "run" command, ex. COPY # 48K How does this relate to our problem? Any program that reads/writes the disk can only use the number of data bytes requested from the system. Say that information on the disk is 1000 bytes. If the reading program requested one byte of data space, then 1000 disk passes would be required. For single drive copies, 1000 disk swaps would be needed. Is some light coming through? If the program requests 1K of data memory, then only one disk pass (swap) will be needed. How much memory should you ask for, as much as you can get without the out of memory error. Suppose you want to use the above technique with CONFIG.

CONFIG is probably the easiest way for beginners to make a custom system disk in either Level I or II. Unfortunately CONFIG places a call to COPY without offering the user a way of requesting larger data spaces. (It may be that CONFIG automatically asks for the maximum space available but there is no documentation on this.) Remember I said that the OS-9 system checks all programs before running them to see how much data space they need? We can assure the efficiency of CONFIG by changing the defaults for COPY. In OS-9 Level II the most you can request for COPY is 48K ; that will serve as our example. We will need to change bytes \$0B and \$0C in COPY. These bytes indicate the permanent storage size (data space) needed by COPY. It is easy to do this with MODPATCH; one of the OS-9 Level II commands. You will need to BUILD or EDIT the following short script file; we'll call it Copy.patch .

```
* Copy.patch- modifies COPY for 48K permanent storage
* (l)ink to copy l copy
* (c)hange byte # from # to #
* change from 4K to 48K c b 10 bc
* (v)erify module v
```

Once you have created the above file, type MODPATCH copy.patch . Modpatch will run changing the permanent storage allocated to COPY and verifying the module. You probably won't want a permanent copy of the new module but if you do, just SAVE it. Each time you use CONFIG, run the modpatch file first. The results should be impressive. There is a second approach which will be even more impressive if you have 512K of memory. Get one of the RAM disk programs from our club library or BBS and use the ram disk (/r0) as an intermediary in CONFIGING a system. The simplest method will be to use a 35 track ram disk and have CONFIG configure the ram disk. Then format a new disk /d0 and BACKUP #56K /r0 /d0 .

If you want, you can stop CONFIG before any commands are transferred, backup a new disk without commands, and then use /r0 to copy or dsave selected commands to the new disk. I will not give much in the way of detail on this second method for they will be dependent on the version of ram disk you obtain. One requirement is that the ram disk simulate a true disk and not a directory, ie. you must be able to format it.

One point on OS-9.

The power of this system derives from its flexibility, but that also adds to its complexity. If you ever want to advance past the point of rank beginner, you must try to understand what you are doing and not memorize. There are several books available on OS-9 for beginners but if you follow these books blindly without question, your situation is hopeless. Even in the simplest examples, ask why the author chose his route. If I say to use BACKUP with #56K that does not mean you ask for 56K of data space with all programs or even with BACKUP. Command modifiers are use to optimize performance and should be tailored to your situation.

EXPERT'S CORNER by Robert Gault

While I was at the Chicago Rainbowfest 1991, I spent some time talking to Art Flexer about his ADOS 3 and Extended ADOS. Of course I tried to pump him for as much information as possible with out seeming to do so. One point that came up was how he handled his FAST and SLOW commands. When you change the clock speed of the Coco, all the timing loops in the ROM code are affected. That is why disk and tape I/O, the SOUND and PLAY commands, and printing are problematic at fast clock speed. While OS-9 has a byte in system RAM that contains a fast/slow flag, RSDOS has nothing. I was curious to know if Art had assigned a RAM variable to the speed or whether he just made assumptions. This was important to me, as in my own version of DOS, I had changed the clock speed to fast each time a disk was accessed. Not knowing the previous setting, I just left the clock at fast speed. That is not what is called "friendly" code. Art said he did not use a flag but tested the clock speed. Immediately my ears perked up because I had not thought of a way to do that. "Well", said Art, "I just check the horizontal interrupt with a timing loop." Amazing, how could I have been so blind! Art did not give any more information but that was all I needed. The result below is a short lesson in assembly language and a useful utility. Of course the best use can be obtained by incorporating part of the code into your own assembly programs. The code is written in MAS format but you can easily convert it to EDTASM+ format by adding line numbers and giving names to the local branches.

```

NAM          "CLOCK TESTER"
PRINT        EQU          $B99C      print string
DECMAL       EQU          $BDCC      print decimal value of reg.D
ORG          $7000
START        ORCC         #$50       Turn off interrupts to CPU
            CLRB         load B with zero
            LDA          $FF01       get HOR int. value
            PSHS         A          save value
            ORA          #1         turn on; %00000001
            ANDA         #$7F       and clear flag; %01111111
            CLR          $FF00       clear HOR interrupt
            STA          $FF01       set HOR int.
A@          LDA          $FF01       read " "
            BPL         A@         loop if no flag
            ANDA         #$7F       " flag
            CLR          $FF00       clear int.
            STA          $FF01       set HOR int.
a@          LDA          $FF01       and start timing
            BMI         B@         got a flag?
            INCB        then increase count
            BRA         a@         try again
B@          PULS         A          recover original value
            STA          $FF01       restore it
            LDA          $FF00       clear interrupt
            ANDCC        #$AF       turn on interrupts
            CMPB        #5         test the clock speed
            BHI         C@
            LEAX        SLOW-1,PCR point to message
D@          JMP          PRINT      send a message; exit to Basic
C@          LEAX        FAST-1,PCR point to message
            BRA         D@
SLOW        FCC         "SLOW CLOCK SPEED"
            FDB         $0D00
FAST        FCC         "FAST CLOCK SPEED"
            FDB         $0D00
            END          START

```

Have you noticed that Pres. George Bush is now joining the rest of us who enjoy computers? He now wants to become "computer literate". This was indicated by an article in the Detroit News on 4/29/91. He stated "I would like to report to you that I intend to undertake and fulfill that commitment". The article concluded "Press Secretary Marlin Fitzwater declined to identify the type of machine Bush has had installed for training in his hideaway office off the Oval Office." Whatever computer he is using, may it be as user-friendly as our COCO models have been to us.

I'm sure we will be hearing about the recent Chicago RAINBOWfest at the next CCOG meeting. Club member Karl Sefcik indicated that the "Rainbow" magazine no longer will appear on newsstands in the future according to what he heard at this fest. So the future looks a bit hazy at this time for the COCO user of this magazine unless the COCO4 type of computers take over. Time will tell!

Another interesting news article in the Detroit Free Press on 4/7/91, page 6H, recommended that electric surge suppressors are a must for today's homes since they can avoid damage to electronic circuitry. It was an enlightening news article. I assume this type of event is very likely during lightning conditions. I have one attached to my COCO which I purchased at Radio Shack. Is your computer protected for this situation? It looks like computers keep on moving forward.

Another article in the Detroit News on 4/21/91, by Betty DeRamus, indicated that AT&T will within one year introduce it's Smart Phone. It stated that at the push of a button you can automatically pay the electric bill, or order Pizza, or see on it's screen what's on sale at your department store. Other competing companies, including Japanese companies, are expected to introduce similar phones. So you can see from that what is in the future. Also a so-called "palmtop" computer is now available, about the size of a pocket calculator, which can transfer data or short programs one might write to a larger computer if desired much like the so-called "laptop" computers do. Maybe someone in the COCO community will one day determine how to interface such a small computer with the COCO3 or a future "COCO4" type of computer.

Since the wave of the future for the COCO hobbyist is in the world of OS9 software, I have been trying to become more educated with that system. In this regard I have received good support from CCOG club members. Now is the time to go in this direction since a lot of this kind of software is on sale at various Radio Shack stores. Recently I obtained a Radio Shack monitor for my COCO3 which was on sale for a much lower price. What a difference in that display compared to the past TV display I used. Now I can see the 80 column display very clearly which was very difficult to read on the TV display. You may want to get one of these while they are still on sale at Radio Shack if you don't already have one.

Membership is now open in the VFW to veterans of the Persian Gulf War. Their initial membership at the Livonia VFW Post 3941 is free. So if any of you have contact with such persons, let them know they are eligible now to join the VFW.

A reminder especially for new members of the CCOG, the VFW uses your money donations from our club in it's many charitable activities especially concerning unfortunate hospitalized veterans. It's all going